

# Author index

Entries refer to chapter number

- Aalten, D. M. F. van, 21.1  
Aarts, E. H. L., 18.2  
Abad-Zapatero, C., 13.4  
Abagyan, R. A., 21.1, 21.2  
Abbate, M. J., 6.2  
Abbey, C. K., 19.6  
Abdel-Meguid, S. S., 1.3, 10.2,  
11.2, 11.4, 11.5, 13.4  
Abe, S., 1.3  
Abe, Y., 21.2  
Abele, U., 4.2  
Abelson, J. N., 3.1  
Abola, E. E., 21.1, 21.2, 22.4,  
23.1, 24.1, 24.3, 25.2  
Abrabshahi, A., 4.1  
Abraham, D. J., 1.3, 12.1  
Abraham, E. P., 26.1  
Abrahams, J. P., 1.3, 8.1, 13.1,  
14.2, 15.1, 25.1, 25.2  
Abrahams, S. C., 11.4, 18.4, 18.5  
Abrahamsen, L., 1.3  
Abramowitz, M., 11.3, 18.2  
Abresch, E., 4.2  
Abscher, R., 20.2  
Achari, A., 1.3  
Acharya, K. R., 1.3, 8.1, 20.2  
Acharya, R., 8.1, 22.1  
Achiwa, N., 6.2  
Ackermann, G., 6.1  
Adachi, K., 1.3  
Adachi, M., 1.3  
Adachi, S., 8.1, 8.2, 19.3  
Adachi, T., 1.3  
Adair, G. S., 5.2  
Adair, M. E., 5.2  
Adamiak, D. A., 12.1  
Adams, M. D., 1.3  
Adams, M. J., 1.2, 1.3  
Adams, M. L., 19.3  
Adams, P. D., 17.1, 18.1, 18.2,  
18.4, 21.1, 25.1, 25.2  
Adman, E. T., 1.3, 12.2, 22.2  
Adrian, M., 19.2, 19.6  
Aebi, U., 19.6  
Aertgeerts, K., 1.3  
Ævarsson, A., 1.3  
Agar, A. W., 19.6  
Agard, D. A., 14.2, 15.1, 19.6  
Agarwal, R. C., 15.1, 18.4, 21.2,  
25.2  
Agbandje, M., 13.4  
Agbandje-McKenna, M., 19.6  
Ageron, P., 6.2  
Aggarwal, A. K., 24.4  
Aggerbeck, L., 19.4  
Agmon, I., 8.1  
Agrawal, R. K., 19.6  
Agre, P., 19.2  
Ahmadian, M. R., 1.3  
Akcasu, A. Z., 6.2  
Åkervall, K., 5.1  
Akeson, A., 1.3  
Akimoto, T., 13.4  
Akiyoshi, T., 6.2  
Akker, F. van den, 1.3, 21.1  
Al-Khayat, H. A., 19.5  
Alard, P., 21.2  
Alber, T., 4.3, 22.2  
Alberi, J., 6.2  
Albright, D. T., 4.1  
Aldag, I., 19.3  
Alden, R. A., 1.2, 1.3  
Alderson, R. H., 19.6  
Alderton, G., 26.1  
Alexander, R. S., 22.2  
Alexandros, J., 4.3  
Alexandrov, N. N., 25.1  
Allaire, M., 1.3  
Allen, F. H., 17.1, 18.2, 18.4,  
18.5, 21.1, 21.2, 22.4, 24.2,  
24.3, 25.2  
Allen, J. P., 4.2  
Allen, K. N., 23.4  
Allewell, N., 22.3  
Allewell, N. M., 1.2, 1.3  
Allinson, N. M., 8.1  
Allison, T. J., 1.3  
Allocati, N., 1.3  
Allured, V. S., 1.3  
Almassy, R., 1.3  
Almassy, R. J., 1.3, 19.3  
Almo, S. C., 1.3, 8.2  
Almond, J. W., 1.3  
Alpaugh, M., 1.3  
Als-Nielsen, J., 14.2  
Alsmiller, R. G., 6.2  
Altbauer, A., 5.2  
Altendorf, K., 19.3  
Altomare, A., 25.1  
Altona, C., 23.3  
Amado, A. M., 22.4  
Amara, J. F., 1.3  
Amaral, A., 23.4  
Amegadzie, B. Y., 1.3  
Amemiya, Y., 7.1, 8.1, 9.1, 19.3  
Ammon, H. L., 15.1, 21.1, 24.4  
Amorós, J. L., 8.2  
Amos, L. A., 1.3, 19.2, 19.6  
Amos, W. B., 19.6  
Amrhein, N., 1.3  
Amzel, L. M., 1.3  
Ananthanarayanan, V. S., 18.3  
Andersen, H. C., 22.1  
Anderson, B. F., 1.3, 5.1, 18.5,  
22.1  
Anderson, C. F., 22.3  
Anderson, D. H., 16.1  
Anderson, D. L., 19.6  
Anderson, I. S., 6.2  
Anderson, J. E., 24.4  
Anderson, L. J., 1.3  
Anderson, P. S., 1.3  
Anderson, W. F., 4.3, 15.1, 25.1  
Andersson, K. M., 18.4  
Ando, M., 6.1, 8.1  
Andracki, M. E., 3.1  
Andreu, J. M., 19.3  
Andrews, P., 22.4  
Andrews, S. J., 8.1  
Andries, K., 1.3, 13.4, 22.1  
Androphy, E. J., 1.3  
Ankilova, V., 23.2  
Ansevin, A. T., 23.3  
Antosiewicz, J., 22.3  
Antson, A. A., 1.3  
Aoki, Y., 19.6  
Aoyagi, M., 1.3  
Aoyama, H., 4.2, 8.1  
Appella, E., 1.3, 23.4  
Appelt, K., 1.3  
Apweiler, R., 17.1  
Åqvist, J., 22.3, 23.2  
Arai, M., 19.3  
Arakawa, T., 4.1  
Arata, Y., 24.5  
Araujo, A. P., 1.3  
Aravind, L., 1.3  
Archer, D. B., 26.1  
Archer, J., 19.5  
Archontis, G., 23.4  
Aree, T., 16.1  
Argos, P., 4.3, 12.2, 13.1, 13.4,  
22.1, 22.2, 23.1, 23.4  
Arita, M., 1.3  
Ariyoshi, M., 24.4  
Armstrong, G. D., 1.3  
Armstrong, R. N., 1.3, 21.1, 24.4  
Arnal, I., 19.6  
Arndt, U. W., 6.1, 7.1, 8.1, 9.1,  
11.4, 26.1  
Arnez, J. G., 10.2  
Arnold, E., 1.1, 1.2, 1.3, 1.4, 4.1,  
8.1, 11.5, 12.2, 13.1, 13.4, 22.1,  
25.1, 25.2  
Arnold, G. F., 1.3  
Arnold, S., 18.4  
Arnott, S., 19.5, 23.3  
Arnoux, P., 1.3  
Arosio, P., 4.3  
Artymiuk, P. J., 4.3, 20.2, 21.1,  
22.2, 23.1, 23.4, 26.1  
Arvai, A. S., 1.3  
Ascenzi, P., 23.1  
Aschaffenburg, R., 26.1  
Ashford, V. A., 1.3  
Ashida, T., 22.4  
Ashraf, K., 16.1  
Ashton, A., 9.1  
Assaf, J. E., 6.2  
Astbury, W. T., 1.2, 19.5  
Asthagiri, D., 4.1  
Astier, J. P., 4.1, 20.2  
Asth, G., 19.6  
Aston, C., 1.3  
Ataka, M., 4.1  
Athanasiadis, A., 1.3, 24.4  
Athappilly, F., 1.3  
Athay, R., 12.2  
Atiemo, A., 1.3  
Atkinson, D., 19.4  
Atkinson, R. A., 19.3  
Aubry, A., 1.3, 4.1, 18.4  
Auer, M., 19.2  
Auerbach, T., 8.1  
Auf der Heyde, T. P. E., 22.4  
Aukhil, I., 4.3, 12.1  
Aust, R. M., 4.3  
Austen, D., 12.1, 14.2  
Austin, R. H., 19.3  
Ausubel, F. M., 3.1  
Avey, H. P., 1.3  
Avila, H., 8.1  
Avilés, F. X., 5.1  
Avis, J., 23.2  
Axe, J. D., 6.2  
Axel, M. G., 1.3  
Axelsen, P. H., 16.1, 22.1, 23.4  
Axelsson, O., 25.2  
Azza, S., 1.3  
Baalham, C. A., 22.4  
Bab-Moussa, L., 1.3  
Babcock, M. S., 23.3  
Babu, Y. S., 1.3, 8.1  
Baca, A. M., 1.3  
Baccanari, D. P., 1.3  
Bacchi, A., 18.4, 21.1  
Bachelier, L. T., 23.4  
Bacher, A., 12.2  
Backmann, J., 1.3  
Bacon, D. J., 22.1, 25.1, 25.2  
Bacon, G. E., 6.2, 19.1, 19.4  
Bacquet, R., 1.3, 23.3  
Badasso, M. O., 1.3  
Badcock, K., 1.3  
Badger, J., 12.2, 23.4  
Bae, D.-S., 18.2  
Baez, A. V., 6.1  
Baggio, R., 16.1  
Bahl, O. P., 12.1  
Bahner, I., 16.1  
Baikalov, I., 23.3  
Bailey, K., 19.5  
Bailey, M., 17.2  
Bailey, M. J., 3.1  
Bailey, R. L., 6.1  
Bailey, S., 9.1  
Baird, J. K., 4.1  
Bairoch, A., 17.1, 21.1, 24.1  
Bajaj, C. L., 17.2  
Bak, H. J., 13.4  
Baker, D., 14.2, 15.1  
Baker, E. N., 1.2, 1.3, 5.1, 9.1,  
18.5, 22.1, 22.2, 23.4, 24.1  
Baker, E. S., 4.1  
Baker, H. M., 1.3, 22.2  
Baker, K., 1.3  
Baker, P. J., 8.1, 21.1  
Baker, T. S., 13.4, 19.6, 22.1  
Balaram, H., 16.1  
Balaram, P., 1.3, 16.1, 21.1  
Balasubramanian, R., 21.1, 22.4  
Bald, W. B., 10.1  
Baldeschwieler, J. D., 8.1  
Baldwin, E. T., 1.3, 4.1  
Baldwin, J. J., 1.3  
Baldwin, J. M., 4.2, 19.2, 19.6  
Baldwin, J. P., 19.4  
Balendiran, K., 24.4  
Ballantine, S. P., 1.3  
Ballou, D. P., 1.3  
Bamblin, S. J., 1.3  
Bamford, D. H., 19.6  
Ban, N., 1.3, 8.1, 19.6  
Banaszak, L. J., 13.2  
Banbula, A., 1.3  
Bancel, P. A., 4.1  
Banci, L., 19.7  
Bancroft, D. P., 1.3  
Bandeckar, J., 22.4  
Banks, T. M., 1.3  
Banner, D. W., 1.3, 23.3, 24.4  
Bannikova, G. E., 24.4  
Bansal, M., 18.3, 19.5, 23.3  
Barbosa, A. F., 7.1  
Barclay, M. T., 1.3, 4.2  
Barford, D., 8.1  
Barker, J. E., 1.3  
Barker, V., 25.2  
Barker, W. C., 21.1  
Barlow, D., 22.2  
Barlow, T., 1.3  
Barna, S. L., 7.1, 7.2, 8.1  
Barnett, J., 4.2  
Baron, C., 12.1  
Barrell, B. G., 1.3  
Barrett, A. N., 19.5  
Barrett, M. P., 1.3  
Barrett, R. W., 1.3  
Barrick, D., 3.1  
Barry, C. D., 17.2  
Barry, C. E. III, 1.3  
Bartels, H., 8.1  
Bartels, K., 13.1, 13.3  
Bartels, K. S., 8.1, 10.1, 10.2, 12.1  
Barth, P. T., 23.4  
Bartlett, C., 1.3  
Barton, G. J., 21.1, 23.1, 24.5  
Bartunik, H., 1.3  
Bartunik, H. D., 8.1, 12.1  
Barwell, J. A., 1.3  
Barynin, V. V., 4.1  
Basak, A. K., 1.3, 8.1, 19.6  
Basham, B., 23.3  
Basham, D., 1.3  
Bashan, A., 8.1  
Bashford, D., 20.2, 21.2, 22.3  
Basiev, T. T., 5.1  
Bateman, R. C., 25.2  
Bates, P. A., 1.3  
Batie, C. J., 1.3  
Batter, J. J., 17.2  
Battersby, A. R., 8.1  
Bauer, C.-A., 15.2  
Bauer, M., 1.3  
Baumann, S., 3.1  
Baumann, U., 1.3  
Baumeister, W., 12.2, 19.6  
Bax, A., 19.7, 23.4, 24.5  
Bax, B., 1.3, 13.3  
Baxter, J. D., 1.3  
Bayer, E. A., 23.1  
Bayley, H., 1.3, 4.2  
Bayly, C. I., 25.1  
Beaman, T. W., 1.3  
Bean, W. F., 13.4  
Beaudouin, Y., 6.1  
Beche, J. F., 6.1, 8.1  
Beck, S., 21.1  
Becker, H., 7.1  
Becker, J. W., 1.3  
Beckmann, E., 4.2, 19.2, 19.6  
Beek, C. G. van, 25.1  
Beesse, L., 19.5  
Beesse, L. S., 23.2  
Beuemen, J. van, 21.1  
Beevers, C. A., 1.2  
Beggs, J. D., 3.1  
Beglov, D., 23.4  
Beintema, J. J., 13.4  
Bell, J. A., 4.3  
Bellamacina, C., 23.4  
Bellamy, A. R., 19.6  
Bellamy, H. D., 10.1  
Bellard, S., 18.4, 21.1, 21.2, 24.2,  
25.2  
Bellare, J. R., 19.6  
Bellizzi, J. J. III, 14.2  
Bello, J., 1.2  
Bellott, M., 20.2, 21.2  
Belmonte, A. L., 7.2  
Belnap, D. M., 19.6  
Belrhali, H., 9.1  
Banner, D. W., 1.3, 8.1, 13.4  
Benedik, M. J., 1.3, 24.4  
Benhar, I., 23.1  
Benjamin, T. L., 8.1  
Benner, J., 3.1, 24.4  
Bennett, M. J., 1.3, 21.3, 23.1  
Bennett, W. S., 1.3, 8.1, 13.4  
Benning, M. M., 1.3  
Beno, D., 1.3  
Benoit, J. P., 8.1  
Benson, D. A., 21.1  
Bentley, G., 1.3  
Bentley, G. A., 1.3, 13.3, 19.1,  
23.4  
Benton, C. B., 1.3  
Berendsen, H. J. C., 18.2, 20.1,  
20.2  
Berendzen, J., 12.2, 14.2, 25.1,  
25.2  
Bergelson, J. M., 1.3  
Berger, J. E., 10.2, 19.6  
Berger, J. M., 1.3  
Bergfors, T., 21.1  
Bergner, A., 1.3  
Bergsma-Schutter, W., 19.6  
Bergsten, P. C., 1.3  
Bergstrom, J. C., 6.1  
Berk, A. J., 23.3  
Berk, N. F., 6.2  
Berkovitch-Yellin, Z., 22.4  
Berkovitz, M. L., 20.2  
Berman, H., 5.2  
Berman, H. M., 4.3, 18.2, 18.3,  
21.1, 21.2, 22.4, 23.3, 23.4,  
24.2, 24.4, 24.5  
Bernal, J. D., 1.2, 5.2, 14.1, 22.1  
Bernal, R., 11.5  
Bernard, A. R., 1.3  
Bernard, V. D., 1.3  
Bernard, Y., 4.1  
Berndt, K. D., 19.7  
Berne, P. F., 4.1  
Bernhardt, G., 22.1  
Bernstein, B. E., 1.3  
Bernstein, F. C., 1.3, 12.1, 14.2,  
17.1, 18.4, 20.1, 21.1, 21.2,  
23.1, 24.1, 24.2, 24.3, 24.5,  
25.2  
Beroukhim, R., 19.6  
Beroza, P., 22.3  
Berriman, J., 19.2, 19.6  
Berriman, J. A., 19.6  
Berry, A., 4.3  
Berry, E. A., 4.2  
Bertaut, E. F., 16.2  
Berthet-Colominas, C., 4.1  
Berthou, J., 13.3  
Bertini, I., 19.7  
Bertolasi, V., 22.4  
Besch, H. J., 7.1  
Bethell, R. C., 1.3  
Bethge, P. H., 12.1  
Betz, M., 1.3  
Beuron, F., 19.6  
Beurskens, P. T., 16.1  
Beuville, E., 6.1, 7.1, 8.1  
Beveridge, D. L., 21.2, 22.4, 23.3,  
24.2, 24.4, 24.5

## AUTHOR INDEX

- Bevivino, A. E., 16.1  
 Bhandari, P., 3.1  
 Bharadwaj, R., 22.3  
 Bhat, T. N., 1.3, 14.2, 15.1, 21.1, 21.2, 22.4, 23.4, 24.2, 24.5  
 Bhuiya, A. K., 16.1  
 Bi, R.-C., 4.1  
 Bialli, S. E., 22.4  
 Bian, W., 19.5  
 Bickham, D., 24.4  
 Biddison, W. E., 1.3  
 Bienkowska, J., 1.3  
 Bijvoet, J. M., 1.2, 14.1, 14.2, 26.1  
 Bilderback, D. H., 6.1, 7.1, 7.2, 8.1, 8.2  
 Bilgin, N., 19.4  
 Billeter, M., 17.2, 19.7  
 Billeter, S. R., 20.1, 20.2  
 Binder, D. A., 1.3  
 Binkley, J., 3.1  
 Biou, V., 14.2  
 Bird, C. M., 22.4  
 Birdsall, D. L., 19.5  
 Birken, S., 12.1, 14.2  
 Birknes, B., 1.3  
 Birktoft, J. J., 1.2  
 Birrer, P., 1.3  
 Bishop, P. D., 1.3  
 Bishop, S. P., 4.1  
 Bishop, W. H., 10.2  
 Biswas, E. E., 3.1  
 Biswas, S. B., 3.1  
 Bjorkling, F., 21.3  
 Bjorkman, P. J., 1.3, 13.4  
 BJORQUIST, P., 1.3  
 Blaber, M., 1.3  
 Blackburn, G. M., 1.3  
 Blagova, E. V., 24.4  
 Blake, C. C., 1.3  
 Blake, C. C. F., 1.2, 9.1, 12.1, 22.1, 22.2, 23.2, 23.4, 26.1  
 Blake, R. C. II, 21.2  
 Blakemore, W., 19.6  
 Blakeslee, D. M., 4.1, 12.1, 24.4  
 Blanc, E., 21.2, 22.1  
 Blanchard, J. S., 1.3  
 Bland, R., 22.4  
 Blankenfeldt, W., 1.3  
 Blankenship, D. T., 1.3  
 Blanquet, S., 3.1, 19.4  
 Blau, H. M., 3.1  
 Blechner, S. L., 19.4  
 Blessing, R. H., 11.4, 11.5, 16.1, 18.4, 25.1  
 Blewett, J. P., 8.1  
 Blocker, H., 24.4  
 Bloom, B. R., 1.3  
 Bloom, F. E., 24.1  
 Bloom, M. E., 19.6  
 Bloomer, A. C., 1.2, 13.4, 19.6  
 Blow, D. M., 1.2, 4.1, 12.1, 12.2, 13.1, 13.2, 13.3, 13.4, 14.1, 14.2, 15.1, 15.2, 18.2, 22.2, 25.2, 26.1  
 Bluhm, M. M., 1.2, 26.1  
 Blum, M., 7.1, 11.4  
 Blumenthal, R. M., 1.3  
 Blundell, T., 22.2  
 Blundell, T. B., 23.1  
 Blundell, T. L., 1.2, 1.3, 5.1, 9.1, 12.1, 14.2, 22.4, 23.1, 24.1, 24.4, 25.1, 25.2  
 Bly, P., 6.1  
 Board, P. G., 1.3, 21.1  
 Bobbitt, J. L., 1.3  
 Bochkaev, A., 1.3, 23.2  
 Bock, A., 12.1  
 Bock, C. W., 22.4  
 Bock, R. M., 4.1  
 Bode, W., 1.3, 5.2, 10.2, 12.2, 13.1, 18.3  
 Bodenhausen, G., 19.7  
 Bodo, G., 1.2, 26.1  
 Boeckmann, B., 24.1  
 Boege, U., 11.5  
 Boelens, R., 20.1  
 Boer, B. de, 1.3  
 Boggon, T. J., 4.1, 8.1  
 Bohach, G. A., 1.3  
 Böhlen, K. von, 8.1, 10.1, 10.2  
 Böhm, H.-J., 22.4  
 Bohner, T., 1.3  
 Bohren, K. M., 1.3  
 Boie, R. A., 6.2  
 Boier Martin, I. M., 19.6  
 Boisset, N., 19.6  
 Boistelle, R., 4.1  
 Boisvert, D. C., 4.3  
 Bokhoven, C., 14.1  
 Boldeman, J. B., 6.2  
 Bolger, M. B., 22.3  
 Bolin, J., 11.5  
 Bolin, J. T., 1.3, 10.2, 13.4, 25.2  
 Bollag, D. M., 3.1  
 Bolognesi, M., 12.2, 23.1  
 Bolotovskiy, R., 11.1, 11.3, 11.4, 11.5  
 Bomans, M., 17.2  
 Bommel, A. J. van, 1.2  
 Bondi, A., 22.1, 22.4  
 Böni, P., 6.2  
 Bonn, T., 1.3  
 Bonneau, P. R., 1.3, 13.4  
 Bonnelle, C., 8.1  
 Bonneté, F., 4.1, 19.3  
 Bonomo, R. A., 1.3  
 Bonse, U., 8.1  
 Bonten, E., 1.3  
 Bonventre, J., 24.4  
 Bonvin, A. M. J. J., 20.1  
 Boothoo, A., 1.3  
 Boom, J. H. van, 1.3, 24.4  
 Boone, T., 1.3  
 Boote, C., 19.5  
 Booth, A. D., 18.1  
 Booth, T. F., 19.6  
 Booy, F. P., 19.2, 19.6  
 Borchardt, R. T., 8.1, 16.1  
 Bordier, C., 4.2  
 Bordo, D., 21.1, 22.2  
 Borgstahl, G. E. O., 8.2, 19.3, 21.1  
 Borisov, A. V., 19.6  
 Borisova, G. P., 19.6  
 Boritzki, T., 1.3  
 Bork, P., 23.1  
 Borkakoti, N., 1.3, 22.2  
 Borkowski, C. J., 6.2  
 Borst, P., 1.3  
 Borukhov, S., 19.6  
 Bosch, R., 4.1  
 Boseley, P. G., 19.4  
 Bosron, W. F., 1.3  
 Bossard, M. J., 1.3  
 Bosshard, R., 8.1  
 Boström, J., 22.4  
 Botchan, M. R., 1.3  
 Bott, R., 21.1  
 Bott, R. R., 1.3, 4.1, 18.2  
 Böttcher, B., 19.6  
 Bottger, G., 6.2  
 Boublik, M., 19.6  
 Bouckaert, J., 23.4  
 Boué, F., 4.1  
 Boulay, D. J. du, 25.1  
 Boulou, C. J., 19.3  
 Boulou, G., 23.4  
 Bourenkov, G. P., 1.3, 8.1  
 Bourgeois, D., 1.3, 8.1, 8.2, 9.1, 19.3  
 Bourne, P. E., 21.2, 22.4, 23.4, 24.2, 24.5  
 Bowen, Z., 19.6  
 Bower, M., 22.4  
 Bowersox, K. D., 4.1  
 Bowie, J. U., 21.1, 21.2, 21.3, 25.2  
 Bowlin, T., 1.3  
 Bowman, B. R., 11.5, 13.4  
 Box, G. E. P., 18.4  
 Boyer, P. L., 1.3, 3.1, 13.4  
 Boyers, D. G., 6.1  
 Boyes-Watson, J., 1.2  
 Bozic, D., 24.4  
 Bradbeer, J., 1.3  
 Bradbrook, G., 8.1, 18.5, 21.2  
 Bradbury, E. M., 19.4  
 Boggdon-Wilking, J., 22.4  
 Brady, G. P. Jr, 25.1  
 Brady, K. D., 1.3  
 Brady, L., 9.1  
 Brady, R. L., 1.3  
 Bragg, L., 1.2, 13.4  
 Bragg, W. H., 1.2  
 Bragg, W. L., 1.2, 19.4  
 Braig, K., 4.3  
 Brammer, L., 21.1, 22.4, 24.3  
 Brammer, R., 8.1  
 Branden, C.-I., 8.1, 17.2, 21.1, 26.1  
 Brandenberger, E., 1.2  
 Brandhuber, B. J., 1.3  
 Brange, J., 1.3  
 Branlant, G., 1.3  
 Branson, H. R., 1.2, 22.2  
 Braun, W., 19.7  
 Bray, J. E., 23.1  
 Bray, T. L., 4.1, 5.1  
 Brayer, G. D., 15.2  
 Breed, J., 4.2  
 Brehm, R. D., 1.3  
 Brennan, R. G., 1.3, 23.3  
 Brenner, S., 19.6  
 Brenner, S. E., 1.2, 23.1, 24.5  
 Brent, R., 3.1  
 Bressi, J. C., 1.3  
 Breton, R., 1.3  
 Brew, K., 1.3, 20.2  
 Breyer, W. A., 5.1  
 Briand, J., 1.3  
 Brice, M. D., 1.3, 12.1, 14.2, 17.1, 18.4, 20.1, 21.1, 21.2, 24.2, 24.3, 24.5, 25.2  
 Brick, P., 1.3, 22.2  
 Bricogne, G., 1.2, 1.3, 8.1, 11.1, 11.3, 11.4, 13.4, 14.2, 15.1, 15.2, 16.1, 16.2, 18.1, 18.2, 18.3, 18.4, 18.5, 19.6, 21.1, 25.1, 25.2  
 Bridou, F., 6.2  
 Brink, D. M., 13.2  
 Brink, J., 19.2, 19.6  
 Brinkmann, J., 17.2  
 Brinkmann, R., 8.1  
 Brinkmann, U., 3.1  
 Brion, P., 4.1  
 Brisson, A., 19.6  
 Brister, K. E., 6.1  
 Britton, D., 5.1  
 Britton, K. L., 8.1  
 Broach, J. R., 3.1  
 Broadhurst, M. J., 1.3  
 Broadhurst, P., 9.1  
 Brocklehurst, S. M., 25.1  
 Broger, C., 1.3, 4.3  
 Bromme, D., 1.3  
 Brookes, S., 19.6  
 Brooks, B. R., 20.2, 22.1, 25.1  
 Brooks, C. L., 20.2, 22.3, 23.4, 25.1  
 Brooks, J. P. Jr, 17.2  
 Brosch, R., 1.3  
 Brown, A. P., 5.1  
 Brown, D., 1.3, 9.1  
 Brown, F., 8.1, 22.1  
 Brown, I. D., 22.4, 24.3  
 Brown, J. C., 19.6  
 Brown, J. H., 1.3  
 Brown, K., 7.2  
 Brown, M. L., 1.3  
 Brown, N. P., 23.1  
 Brown, P. A., 1.3  
 Brown, P. O., 19.6  
 Brown, R. E., 19.6  
 Brown, R. S., 1.2, 23.3, 24.4  
 Brown, T., 1.3  
 Browner, M. F., 1.3, 4.2  
 Browning, J. L., 1.3  
 Brownlee, G. G., 1.3  
 Brubaker, M., 8.2  
 Bruccoleri, R. E., 22.1, 22.3, 25.1  
 Bruins, E. M., 19.5  
 Brunger, A. T., 1.3, 13.1, 13.2, 13.3, 14.2, 15.1, 15.2, 16.1, 17.1, 18.1, 18.2, 18.3, 18.4, 18.5, 19.5, 19.6, 19.7, 20.1, 20.2, 21.1, 21.2, 21.3, 22.3, 23.2, 23.4, 24.2, 25.1, 25.2  
 Brunmark, A., 1.3  
 Brunne, R. M., 19.7, 20.1, 22.3  
 Bruno, I. J., 22.4, 24.3  
 Brunori, M., 1.3  
 Bruns, C. M., 1.3  
 Brunton, J. L., 1.3  
 Bruschweiler, R., 19.7  
 Bryan, R. K., 19.5, 23.3, 24.4  
 Bryant, G. L. J., 1.3  
 Bryant, P. K., 1.3  
 Bryant, R. G., 23.4  
 Bryant, S. H., 4.3, 23.1, 24.1, 24.5  
 Brzozowski, A. M., 1.3, 21.3  
 Bu, Z., 19.3  
 Buchanan, S. K., 4.2  
 Bucher, P., 17.1  
 Bücherl, T., 6.2  
 Buckel, P., 3.1  
 Buckner, T. W., 21.1  
 Budahazi, G., 1.3  
 Budisa, N., 4.3, 12.1, 12.2  
 Bueche, A. M., 19.4  
 Buehner, M., 1.2, 13.4  
 Buerger, M. J., 8.2, 9.1, 12.2, 25.2, 26.1  
 Bugg, C. E., 1.3, 4.1, 8.1, 20.1, 21.1, 22.4, 23.3, 25.1  
 Bugianesi, R. L., 1.3  
 Bujacz, G., 4.3  
 Buku, A., 12.1  
 Bullock, T. L., 1.3  
 Bump, N. J., 1.3  
 Bundle, D. R., 1.3  
 Bunick, G. J., 19.4  
 Bunn, C. W., 1.2, 5.1  
 Burakoff, S. J., 1.3  
 Buras, B., 6.1  
 Burbaum, J. J., 1.3  
 Burch, A., 11.5  
 Burd, C. G., 23.2  
 Burdina, V. I., 13.2  
 Burgess, A. W., 22.1, 23.4  
 Bürgi, H.-B., 18.3, 18.5, 22.4  
 Burke, K. L., 1.3  
 Burke, P. M., 19.3  
 Burkhardt, N., 19.4  
 Burks, C., 19.4  
 Burla, M. C., 16.1, 25.1, 25.2  
 Burley, S. K., 1.3, 3.1, 4.1, 18.2, 22.2, 23.2, 23.3, 23.4  
 Burling, F. T., 14.2, 18.2, 25.2  
 Burmeister, W. P., 1.3, 7.2, 9.1  
 Burnett, M. N., 25.1  
 Burnett, R. M., 1.3, 19.6  
 Burns, M., 17.2  
 Burroughs, J. N., 8.1, 19.6  
 Burstein, Y., 12.1  
 Burt, S. K., 1.3  
 Burzlaff, H., 2.1, 11.1, 18.5  
 Busetta, B., 25.2  
 Bush, B. L., 22.1  
 Bush, K., 1.3  
 Busing, W. R., 18.1  
 Buskirk, C. P. van, 1.3  
 Bussiere, D. E., 1.3  
 Butcher, S., 19.6  
 Butcher, S. J., 19.6  
 Butler, P. J. G., 13.4, 19.6  
 Butt, H. J., 19.2  
 Butterworth, S., 18.3, 25.2  
 Bystroff, C., 15.1  
 Bywater, R., 21.1  
 Bywater, R. P., 22.1  
 Cable, M., 1.3  
 Cabral, J. M., 4.2, 23.2  
 Cabrera, N., 1.3  
 Cachau, R. E., 1.3  
 Caffes, P., 1.3  
 Cahill, S. M., 1.3  
 Cai, Z., 4.1  
 Caine, J. E., 19.1  
 Cajipe, V. B., 4.1  
 Caldas, T. D., 3.1  
 Caldwell, C. G., 1.3  
 Caldwell, J. W., 25.1  
 Calladine, C. R., 23.3  
 Calos, M. P., 3.1  
 Camalli, M., 16.1, 25.1  
 Cambell, P., 24.1  
 Cambillau, C., 1.3, 4.3, 18.3, 21.2  
 Camble, R., 1.3  
 Cameron, A. D., 1.3, 17.1  
 Cameron, J. M., 1.3  
 Cameron, P. M., 1.3  
 Campbell, J. W., 1.3, 8.1, 8.2, 11.1  
 Candau, S. J., 4.1  
 Canfield, R. E., 12.1, 14.2, 26.1  
 Cann, P. A., 1.3  
 Canters, G. W., 12.2  
 Cantor, C., 21.1  
 Cantor, C. R., 5.2  
 Canut de Amorós, M., 8.2  
 Capel, M. S., 1.3, 19.4  
 Capelle, B., 4.1, 6.1  
 Caplan, H. S., 6.1  
 Capozzi, F., 16.1  
 Cappuccio, G., 8.1  
 Carbonell, J., 22.4  
 Card, G., 1.3  
 Cardin, A. D., 1.3  
 Carfi, A., 1.3  
 Carilli, C. T., 1.3  
 Carlbom, U., 1.3  
 Carlow, C. K., 1.3  
 Carlquist, M., 1.3  
 Carlson, W. E., 4.1  
 Carlstrom, D., 26.1  
 Carlton, D. D., 1.3  
 Caron, P. R., 1.3  
 Carpenter, B. G., 19.4  
 Carpenter, J. M., 6.2  
 Carpenter, L., 17.2  
 Carr, P. A., 1.3  
 Carr, P. D., 8.1  
 Carr, S. A., 1.3  
 Carragher, B., 19.6  
 Carrascosa, J. L., 19.6  
 Carrell, A. B., 22.4  
 Carrell, C. J., 22.4  
 Carrell, H. L., 5.1, 21.1, 22.4  
 Carrell, R. W., 1.3  
 Carrington, M., 1.3  
 Carroll, S. F., 1.3  
 Carrondo, M. A., 16.1  
 Carson, M., 1.3, 4.1, 17.2, 21.1, 25.1  
 Carson, W. M., 8.1  
 Carter, C. W., 4.1, 13.2, 24.4  
 Carter, C. W. Jr, 4.1, 9.1, 14.2, 24.4  
 Carter, D., 1.3, 4.1  
 Carter, D. C., 1.3, 4.1  
 Carter, P., 22.2  
 Cartwright, B. A., 18.4, 21.1, 21.2, 24.2, 25.2  
 Carty, R. P., 23.4  
 Carucci, D. J., 1.3  
 Carugo, O., 4.3, 21.1  
 Carvin, D., 12.1  
 Carvin, D. G. A., 12.1  
 Cascarano, G., 16.1, 25.1  
 Cascio, D., 16.1, 19.3, 21.3  
 Caspar, D. L. D., 8.1, 19.3, 19.5  
 Cassanto, J. M., 4.1  
 Cassetta, A., 4.1, 8.1, 8.2  
 Castagna, J.-C., 6.2, 19.1  
 Castelhano, A. L., 1.3  
 Castellino, F. J., 1.3  
 Castleden, I., 22.4  
 Castón, J. R., 19.6  
 Cate, J. H., 1.3, 22.2  
 Cauchois, Y., 8.1  
 Causse, H., 19.3  
 Caustre, L., 6.2  
 Cavanagh, J., 19.7  
 Cavarelli, J., 4.1  
 Caves, L. S. D., 20.2  
 Ceccarelli, C., 22.4  
 Cech, T. R., 22.2  
 Cejka, Z., 19.4  
 Celestre, R., 6.1  
 Celia, H., 19.6  
 Cerasoli, F. J., 1.3  
 Cerritelli, S., 1.3  
 Certa, U., 1.3  
 Cesareni, G., 4.3  
 Ceska, T. A., 4.2, 12.1, 19.2, 19.6  
 Chacón, P., 19.3  
 Chait, B., 19.6

## AUTHOR INDEX

- Chait, B. T., 1.3, 3.1, 4.2, 23.2  
 Chaker, M., 6.1  
 Chakrabarti, P., 22.4  
 Chakraborty, R., 4.2  
 Chakraborty, T., 1.3  
 Chakravarty, S., 11.5  
 Chambers, J. L., 18.5  
 Chambers, S. P., 1.3  
 Champayne, E. F., 1.2  
 Champness, J. N., 1.2, 1.3, 13.4  
 Champoux, J. J., 1.3  
 Chan, A. C., 1.3  
 Chan, C., 5.1  
 Chan, D. C., 1.3  
 Chandler, D., 22.1  
 Chandrasekaran, R., 19.5, 23.3  
 Chandrasekhar, J., 20.2  
 Chandross, R. J., 1.3  
 Chang, B. S., 1.3  
 Chang, C. H., 4.2, 6.1  
 Chang, C.-H., 23.4  
 Chang, C.-S., 16.1  
 Chang, G., 1.3, 4.2, 12.2, 14.2, 23.3  
 Chang, J.-J., 19.2, 19.6  
 Chang, W. S. W., 1.3  
 Chang, Y., 1.3  
 Chapman, J., 4.1  
 Chapman, K. T., 1.3  
 Chapman, L., 1.3  
 Chapman, M. S., 13.4, 15.1, 21.1, 21.2, 21.3, 22.1, 25.1, 25.2  
 Charifson, P. S., 1.3  
 Charles, I. G., 1.3  
 Charlier, P., 21.1  
 Charon, M.-H., 4.1  
 Charpak, G., 7.1, 8.1  
 Charpilienne, A., 19.3  
 Chase, E. S., 19.6  
 Chatfield, C., 22.4  
 Chatfield, D. C., 20.2  
 Chaudhuri, J. B., 3.1  
 Chayen, N. E., 4.1, 8.1  
 Che, Z., 19.6  
 Cheetham, J. C., 20.2, 26.1  
 Cheley, S., 1.3, 4.2  
 Chelvanayagam, G., 1.3  
 Chen, A. A., 1.3  
 Chen, B. L., 1.3  
 Chen, C. C. H., 10.2  
 Chen, D. H., 19.6  
 Chen, H., 19.6, 23.3  
 Chen, L., 19.3  
 Chen, P. H., 3.1  
 Chen, S., 21.2  
 Chen, S. F., 1.3  
 Chen, W., 1.3, 12.1  
 Chen, X., 1.3  
 Chen, Y., 8.2  
 Chen, Z., 1.3  
 Chen, Z. W., 1.3  
 Chene, C., 1.3  
 Cheng, A., 19.6  
 Cheng, B., 1.3, 11.5  
 Cheng, N., 19.6  
 Cheng, R. H., 19.6, 22.1  
 Cheng, X., 1.3, 23.2  
 Cheng, Y., 19.6  
 Chernaia, M. M., 1.3  
 Chernov, A. A., 4.1, 5.1  
 Chervenak, M. C., 23.4  
 Chescoe, D., 19.6  
 Chet, I., 1.3, 25.2  
 Cheung, J., 4.1  
 Cheung, S., 6.2  
 Chevrier, B., 4.1  
 Chi, V. L., 17.2  
 Chi, Y. I., 4.2  
 Chiadmi, M., 8.1  
 Chiancone, E., 23.4  
 Chiang, Y., 4.1  
 Chidambaram, R., 22.4  
 Chien, C. Y., 6.1  
 Chikawa, J.-I., 7.1  
 Chillingworth, T., 1.3  
 Chin, D. N., 22.4  
 Chinea, G., 25.1  
 Chipman, P. R., 19.6  
 Chirgwin, J. R., 3.1  
 Chirica, L., 1.3  
 Chirino, A. J., 1.3, 23.1  
 Chitarra, V., 1.3  
 Chitnumsub, P., 1.3  
 Chiu, C. Y., 19.6  
 Chiu, T. K., 23.3  
 Chiu, W., 8.1, 19.2, 19.3, 19.6  
 Cho, Y., 1.3  
 Choe, H.-W., 23.4  
 Choe, S., 1.3, 21.3  
 Choi, H. J., 1.3  
 Choi, H.-K., 11.5, 13.1, 13.4, 15.1, 19.6, 25.2  
 Choi, K. Y., 23.3  
 Chong, S., 3.1  
 Chopra, R., 1.3, 4.3  
 Chothia, C., 1.2, 21.2, 22.1, 23.1, 24.5  
 Choudhary, A., 23.2  
 Choudhury, D., 1.3  
 Chow, J., 4.2  
 Chow, M., 1.3, 13.4  
 Christen, A. J., 1.3  
 Christen, D. K., 6.2  
 Christensen, A. M., 1.3  
 Christensen, D. A., 1.3  
 Christensen, N. D., 19.6  
 Christiansen, D., 20.2  
 Christianson, D. W., 22.2  
 Christopher, G. K., 4.1  
 Christy, M. E., 1.3  
 Chu, Z. T., 22.3  
 Chuang, D. T., 1.3  
 Chuang, J. L., 1.3  
 Chudzik, D. M., 1.3  
 Chui, W., 19.6  
 Chung, D. W., 1.3  
 Chung, S. K., 4.1  
 Church, G. M., 25.2  
 Churcher, C., 1.3  
 Ciccotti, G., 20.1, 20.2  
 Cieplak, P., 25.1  
 Cipriani, F., 6.2, 19.1, 19.3  
 Cirignano, L., 7.1  
 Cirilli, M., 1.3  
 Ciszak, E., 1.3  
 Clackson, T., 1.3, 23.4  
 Cladel, N. M., 19.6  
 Claiborne, A., 1.3  
 Clancy, L. L., 4.1  
 Clarage, J., 8.1  
 Clarage, M., 8.1  
 Clardy, J., 1.3, 14.2  
 Clare, J. J., 3.1  
 Clark, A. D. Jr., 1.3, 4.1, 13.4  
 Clark, A. J., 3.1  
 Clark, B. F. C., 1.2  
 Clark, C. D., 6.2  
 Clark, G., 6.1  
 Clark, K. L., 23.4  
 Clark, M., 1.3  
 Clark, P., 1.3, 13.4  
 Clarkson, J. M., 1.3  
 Claustre, L., 7.2  
 Clawson, D. K., 1.3  
 Clawson, L., 1.3  
 Clayton, R., 1.3  
 Cleasby, A., 1.3  
 Clegg, W., 17.2  
 Cleland, W. W., 23.2  
 Clemons, W. M. J., 1.3  
 Clifton, I. J., 1.3, 8.1, 8.2  
 Clifton, J. G., 1.3  
 Clore, G. M., 1.3, 3.1, 17.1, 18.2, 18.4, 19.7, 23.2, 23.4, 25.1, 25.2  
 Clout, P. N., 8.1  
 Clowney, L., 18.2, 18.3, 21.1, 21.2, 24.2  
 Clum, S., 1.3  
 Cobessi, D., 1.3  
 Cochran, W., 1.2, 13.1, 16.1, 18.5, 19.5, 26.1  
 Cockle, S. A., 1.3  
 Cody, V., 4.1  
 Coe, S., 6.1  
 Coffer, A. I., 1.3  
 Coffey, H. A., 1.3  
 Cogdell, R. J., 4.2, 8.1  
 Coggins, J. R., 1.3  
 Cohen, A. C., 1.3  
 Cohen, B. E., 8.2  
 Cohen, C., 5.2, 19.5  
 Cohen, F. E., 21.1, 22.2, 22.4, 25.2  
 Cohen, G. H., 1.3, 18.2, 18.5, 21.1  
 Cohen, G. N., 4.3  
 Cohen, J., 19.3  
 Cohen, S. L., 3.1, 4.2, 23.2  
 Colapietro, M., 8.1  
 Colbert, C., 11.5  
 Colby, T. D., 1.3  
 Cole, G., 23.4  
 Cole, J. C., 18.5, 22.4, 24.3  
 Cole, J. L., 1.3  
 Cole, P. A., 3.1  
 Cole, S. T., 1.3  
 Cole, T., 4.1  
 Coleman, C. I., 7.2  
 Coleman, P. M., 5.2  
 Coll, J. T., 1.3  
 Collart, F. R., 1.3  
 Collier, E., 13.1, 13.4  
 Colletti, A., 1.3  
 Collier, I. E., 1.3  
 Collier, R. J., 1.3  
 Collins, A. J., 22.4  
 Collins, F. S., 1.3  
 Collins, J., 1.3  
 Collins, J. F., 26.1  
 Collins, P. J., 1.3  
 Colls, J., 1.3  
 Collyer, C. A., 4.1  
 Colman, P. M., 1.3, 13.3, 13.4  
 Colonna, R. J., 1.3, 22.1  
 Colotti, G., 23.4  
 Colovos, C., 21.1, 21.3  
 Comb, D. G., 3.1  
 Concha, N. O., 1.3  
 Condon, B., 1.3  
 Condon, P., 23.4  
 Conklin, D., 22.4  
 Conlon, H. D., 1.3  
 Connors, P. G., 4.1  
 Connolly, M. L., 17.2, 22.1, 25.1  
 Connor, R., 1.3  
 Convert, P., 6.2  
 Conway, J. F., 19.6  
 Cook, E. R., 1.3  
 Cook, P. F., 4.1  
 Cook, S. P., 22.2  
 Cook, W. J., 1.3, 4.3, 20.1  
 Coombs, K. M., 19.6  
 Coombs, M. M., 22.4  
 Cooper, A., 1.2, 20.2  
 Cooper, B., 1.3  
 Cooper, J., 19.6  
 Cooper, J. B., 1.3  
 Cooper, R. A., 15.1  
 Cooper, S., 12.1  
 Copley, J. R. D., 6.2  
 Coppens, P., 8.1, 11.5, 18.4  
 Cordingley, M. G., 1.3, 13.4  
 Corey, R. B., 1.2, 19.5, 22.2, 26.1  
 Cork, C., 6.1, 7.1, 8.1  
 Cork, J. M., 14.1  
 Cornea-Hasegan, M. A., 13.4  
 Cornell, W. D., 25.1  
 Cornick, G., 5.2  
 Corpuz, M., 1.3  
 Correa, P. E., 1.3  
 Correll, C. C., 1.3  
 Cosme, J., 1.3  
 Cosslett, V. E., 6.1  
 Côté, C. Y., 6.1  
 Cote, H. C., 1.3  
 Cotton, F. A., 23.2  
 Coucelle, E., 1.3  
 Couderc, T., 1.3  
 Coulombe, R., 4.1  
 Coulter, C. L., 26.1  
 Coulton, J. W., 4.2  
 Courage, N. L., 1.3  
 Court, D., 6.2  
 Court, J. D., 6.2  
 Cowan, S. W., 1.3, 4.2, 13.4, 17.1, 18.4, 19.6, 21.1, 21.2, 25.1, 25.2  
 Cowburn, D., 1.3  
 Cowie, D. B., 4.3  
 Cowley, J. M., 19.6  
 Cowser, L. M., 19.6  
 Cowtan, K. D., 13.4, 15.1, 18.4, 18.5, 25.1, 25.2  
 Cox, E. G., 26.1  
 Cox, J. M., 13.4  
 Cox, S., 23.4  
 Crabbe, T., 1.3  
 Craievich, A., 7.1  
 Craig, S. P. III, 1.3  
 Craigie, R., 1.3, 4.3, 5.1  
 Craik, C. S., 1.3  
 Crainic, R., 1.3  
 Crane, K. M., 1.3  
 Crawford, R. K., 6.2  
 Cregg, J., 3.1  
 Cremer, D., 22.4  
 Cremonini, M. A., 19.7  
 Crennell, S. J., 1.3  
 Crespi, H. L., 19.4  
 Crichton, R. R., 19.4  
 Crick, F. H. C., 1.2, 5.2, 12.2, 14.1, 14.2, 15.2, 19.5, 23.3, 25.2, 26.1  
 Crippen, G., 23.1  
 Croft, D., 8.1  
 Crofts, A. R., 4.2  
 Cromer, D. T., 14.2  
 Cross, R. A., 19.6  
 Crossio, M.-P., 4.1  
 Crothers, D. M., 23.3  
 Crouch, R. J., 4.3  
 Crowfoot, D., 1.2, 5.2  
 Crowther, R. A., 1.2, 1.3, 13.1, 13.2, 13.3, 13.4, 15.1, 19.6  
 Cruickshank, D. W. J., 8.1, 8.2, 9.1, 13.1, 18.4, 18.5, 21.1, 21.2, 25.2  
 Crumly, K. V., 4.1  
 Cruz, M., 1.3  
 Cudney, B., 4.1, 24.4  
 Cudney, R., 4.1  
 Cullis, A. F., 1.2, 26.1  
 Culp, J. S., 1.3  
 Culver, J. N., 19.5  
 Cummings, L. M., 1.3  
 Cummings, M. D., 1.3  
 Cummings, S., 6.1  
 Cummins, P., 5.2  
 Cunningham, D. E., 12.1  
 Cunningham, J. A., 1.3  
 Cunningham, R. P., 24.4  
 Curmi, P. M., 1.3, 21.3  
 Curry, S., 1.3  
 Cusack, S., 4.1, 23.2  
 Cusanovich, M. A., 21.1  
 Cushman, D. W., 1.3  
 Cutfield, J. F., 1.3  
 Cutfield, S. M., 1.3  
 Cutruzzola, F., 1.3  
 Cyrklaff, M., 19.6  
 Cywin, C. L., 1.3  
 Czarniecki, M., 1.3  
 Czerwinski, E. W., 14.2, 16.1  
 Czeslik, C., 19.3  
 Czjzek, M., 1.3, 18.3, 21.2  
 Dadarlat, V. M., 20.2  
 Dadzie, K. Y., 1.3  
 Daggett, V., 20.1, 22.1  
 Dahlquist, F. W., 22.1  
 Dai, J.-B., 13.1, 13.4, 15.1, 25.2  
 Dale, G. E., 1.3, 4.3  
 D'Alessio, K. J., 1.3  
 Dall'Acqua, W., 23.4  
 Daneholt, B., 19.6  
 Danel, F., 1.3  
 Dang, L. C., 1.3  
 Danley, D. E., 1.3  
 D'Antonio, P., 4.1  
 Danz, H., 8.1, 10.1, 10.2  
 Dao-pin, S., 22.2  
 Dao-Thi, M.-H., 23.4  
 Daopin, S., 18.5  
 Darby, G., 1.3, 13.4  
 D'Arcy, A., 1.3, 4.1, 4.3, 24.4  
 Darden, T., 20.2  
 Darke, P. L., 1.3  
 Darnton, N. C., 19.3  
 Darst, S. A., 19.6  
 Das, K., 1.3, 13.4  
 Das, U., 21.2  
 DasGupta, B. R., 1.3  
 Dasgupta, S., 4.3  
 Datte, P., 6.1, 7.1, 8.1  
 Dauben, C. H., 26.1  
 Daura, X., 20.1  
 Dauter, M., 16.1, 18.4  
 Dauter, Z., 1.3, 8.1, 9.1, 12.2, 16.1, 18.3, 18.4, 18.5, 21.1, 25.2  
 Dave, R. D., 16.1  
 Davidson, E., 1.2  
 Davidson, W., 13.4  
 Davie, E. W., 1.3  
 Davies, C., 4.3  
 Davies, D. B., 23.3  
 Davies, D. R., 1.2, 1.3, 4.3, 5.1, 18.2, 18.5, 23.1, 24.4, 26.1  
 Davies, G. J., 1.3, 18.4, 21.1, 21.2  
 Davies, J. E., 22.4, 24.3  
 Davies, J. F., 1.3  
 Davies, R., 1.3  
 Davies, S. J., 1.3  
 Davis, H. T., 19.6  
 Davis, M. E., 13.1, 22.3  
 Davisson, V. J., 1.3, 14.2  
 Day, J., 4.1, 18.5  
 Day, P. J., 1.3  
 Dayhoff, M. O., 4.3  
 d'Azzo, A., 1.3  
 De Bernardes Clark, E., 3.1  
 De Boer, H. A., 3.1  
 De Bondt, H. L., 1.3  
 De Francesco, R., 1.3  
 De Geus, P., 4.3  
 De Illio, C., 1.3  
 De Ranter, C., 1.3  
 De Vos, S., 23.4  
 Dea, I. C. M., 19.5  
 Deacon, A., 4.1, 8.1, 8.2, 18.5, 21.2  
 Deacon, A. M., 16.1  
 Dean, P. M., 23.4  
 Deane, C. A., 23.1  
 Deane, C. M., 22.4  
 Debaerdemaeker, T., 16.1, 25.2  
 deBear, J. S., 4.1  
 Debouck, C., 1.3  
 Debye, P., 19.4  
 Decamps, T., 19.3  
 Decanniere, K., 23.4  
 Deckman, H. W., 7.2  
 Declercq, P. J., 1.3  
 Declercq, J.-P., 4.1, 16.1, 25.1  
 Degano, M., 1.3  
 Degn, L. L., 19.2  
 Deinum, J., 1.3  
 Deisenhofer, J., 1.2, 1.3, 4.2, 13.1, 18.3, 18.5, 23.4  
 Del Tito, B. J. Jr., 3.1  
 DeLano, W. L., 13.2, 17.1, 18.2, 18.4, 25.1, 25.2  
 Delbaere, L. T., 1.3  
 Delbaere, L. T. J., 15.2, 17.1, 18.2  
 Delcamp, T. J., 1.3  
 Delepierre, M., 1.3  
 Deller, M. C., 1.3  
 DeLucas, L. J., 1.3, 4.1, 5.1  
 Delves, C. J., 1.3  
 Demange, P., 4.3  
 DeMattei, R. C., 4.1  
 Dementiev, A. A., 24.4  
 Dementieva, I. S., 1.3  
 Demyen, T., 21.2, 22.4, 24.2, 24.4, 24.5  
 Denisov, V. P., 19.7  
 Denny, R. C., 19.5  
 Deras, M. L., 14.2  
 Derewenda, U., 1.3, 21.3, 22.2, 22.4  
 Derewenda, Z. S., 1.3, 21.3, 22.2, 22.4  
 DeRosier, D. J., 19.2, 19.6  
 Derrick, J. P., 1.3  
 DeRuijter, W. J., 19.6  
 Desiraju, G. R., 22.4  
 DesJarlais, R. L., 1.3  
 Dessen, A., 1.3  
 Dessen, P., 3.1, 19.4

## AUTHOR INDEX

- DeTitta, G. T., 4.1, 15.1, 16.1, 25.2
- Devlin, K., 1.3
- DeVos, A. M., 1.3, 23.4
- Dewan, J. C., 10.2
- DeYoreo, J. J., 4.1
- Dhanaraj, V., 1.3
- Di Cera, E., 18.4, 21.1
- Di Salvo, M. L., 1.3
- Diamond, R., 11.2, 11.3, 17.2, 18.1, 18.2, 18.4, 19.1, 19.5, 22.1
- Diana, G. D., 22.1
- Díaz, J. F., 19.3
- DiBlasio, E. A., 3.1
- Dickerson, R. E., 1.2, 1.3, 14.2, 23.3, 24.2, 26.1
- Dickert, L., 24.4
- Dideberg, O., 1.3, 8.1, 21.1
- Didierjean, C., 4.1
- Diederichs, K., 4.2, 9.1, 21.1, 25.2
- Diedrich, G., 19.4
- Diefenbach, R. J., 1.3
- Diekmann, S., 23.3
- Dietl, H., 7.1
- Dietrick, I., 19.2
- Dijkema, R., 1.3
- Dijkstra, B. W., 8.1
- Dijkstra, E. W., 11.3
- DiLella, A. G., 1.3
- Dill, K. A., 22.2
- Dilmore, J. G., 4.1
- Dimmler, G., 6.2
- Ding, J., 1.3, 4.1, 13.4, 25.1
- Ding, X., 23.4
- DiNola, A., 18.2, 20.1
- Dintzis, H. M., 1.2, 26.1
- Diprose, J. M., 8.1, 19.6
- Dirr, H. W., 1.3, 21.1
- DiSalvo, J., 1.3
- Divne, C., 21.1
- Dixon, J. E., 1.3
- Döbelli, H., 1.3
- Dobrianov, I., 4.1
- Dobson, C. M., 1.3, 20.2, 26.1
- Docherty, A. J., 1.3
- Dock, A.-C., 4.1
- Dock-Bregeon, A.-C., 4.1
- Dockerill, S., 12.1
- Dodd, F. E., 16.1
- Dodge, C., 24.5
- Dodson, E. J., 1.2, 1.3, 9.1, 13.1, 13.2, 13.4, 15.2, 18.1, 18.2, 18.3, 18.4, 18.5, 21.1, 21.2, 24.1, 25.1, 25.2
- Dodson, G. G., 1.2, 1.3, 9.1, 21.3, 24.1
- Dodson, K. W., 1.3
- Doerschuk, P. C., 19.3
- Dohlsten, M., 1.3
- Dohnalek, J., 1.3
- Doi, K., 7.1
- Doi, M., 23.2
- Doi, T., 24.4
- Doing, P., 8.1
- Dokland, T., 11.5, 13.4, 19.6
- Dolling, G., 6.2
- Domingo, E., 19.6
- Donahue, J. P., 4.3
- Dong, J., 4.1
- Doniach, S., 8.1, 19.3
- Donni, A., 6.2
- Donohue, J., 22.4, 26.1
- Doolittle, R. F., 1.3
- Dorn, C. P., 1.3
- Dorner, F., 4.1
- Dorner, L. F., 24.4
- Dorset, D. L., 16.1
- Doty, P., 26.1
- Doubet, S., 21.1
- Doubleday, A., 18.4, 21.1, 21.2, 24.2, 25.2
- Doublé, S., 4.1, 4.3, 12.1, 14.2
- Doucet, J., 8.1
- Doudna, J. A., 22.2
- Douence, V., 6.1, 8.1
- Douzou, P., 10.1
- Dover, S. D., 19.5, 19.6
- Dow, E. R., 1.3
- Dower, W. J., 1.3
- Down, J., 1.3
- Downing, K. H., 4.2, 19.2, 19.6
- Doyle, D. A., 4.2, 23.2
- Doyle, M. J., 22.4
- Drak, J., 23.3
- Drakenberg, T., 19.3
- Drebein, R., 17.2
- Drendel, W. B., 1.3, 16.1
- Drenth, J., 1.2, 2.1, 4.1, 21.1
- Drew, R., 1.3
- Drewry, D., 1.3
- Dreyfuss, G., 23.2
- Drickamer, K., 14.2, 23.2
- Drissen, H., 13.3, 18.4
- Driscoll, J. S., 22.4
- Drouin, M., 16.1
- Dryden, K. A., 19.6
- Du Bois, G. C., 10.1
- Duan, Y., 20.2
- Duax, W. L., 1.3
- Dube, P., 19.6
- Dubendorff, J. W., 3.1
- Dubler-Stuedle, K. C., 18.3
- Dubochet, J., 19.2, 19.6
- DuBose, R. F., 19.6
- Dubs, A., 19.7
- Dubuisson, J.-M., 19.3
- Ducruix, A., 4.1, 5.1, 6.1, 20.2
- Duda, R., 19.3
- Duee, E., 1.3
- Duez, C., 1.3, 21.1
- Duggleby, H. J., 1.3
- Duijneveldt, F. B. van, 22.4
- Duijneveldt-van de Rijdt, J. G. C. M. van, 22.4
- Duisenberg, A. J. M., 11.1, 25.1
- Duke, E. M. H., 8.2
- Dumas, C., 8.1
- Dumas, P., 11.5, 12.2
- Dunbar, B. J., 4.1
- Dunbar, J. B. J., 1.3
- Dunbrack, R. L. Jr., 20.2, 21.2, 22.4
- Duncan, B. S., 17.2
- Duncumb, P., 6.1, 9.1
- Dunfield, L. G., 22.1
- Dunitz, J. D., 18.5, 22.4, 25.2
- Dunlap, R. B., 16.1
- Dunn, G., 1.3
- Dunn, J. J., 1.3, 3.1
- Duquerroy, S., 8.1
- Durbin, R. M., 11.3
- Durbin, S. D., 4.1
- Durette, P. L., 1.3
- Durfee, R. C., 19.6
- Dusart, J., 21.1
- Dutko, F. J., 22.1
- Dwek, R. A., 23.2
- Dyason, J. C., 1.3
- Dyda, F., 1.3, 4.3, 5.1, 23.1
- Dym, O., 4.1, 21.3
- Dyson, M. R., 19.6
- Eads, J. C., 1.3
- Eady, R. R., 19.3
- Eakin, A. E., 1.3
- Ealick, S., 8.1
- Ealick, S. E., 1.3, 8.1, 9.1, 16.1, 21.2
- Earhart, C. A., 1.3
- Earnest, J., 6.1
- Earnest, T., 8.1
- Earnest, T. N., 1.3
- Eaton, J. T., 1.3
- Eaton, W. A., 19.3
- Ebel, C., 4.1, 19.4
- Eberstein, W., 4.1
- Ebisawa, T., 6.2
- Ebright, R. H., 23.3
- Ebright, Y. W., 23.3
- Eck, M. J., 1.3
- Eckersorn, C., 4.3
- Eckert, D. M., 1.3
- Edelsbrunner, H., 22.1
- Edelstein, S. J., 3.1, 5.2
- Edmonds, J. W., 16.1
- Edmundson, A. B., 12.1, 23.4
- Edsall, J. T., 5.2, 23.4
- Edwards, A. M., 1.3, 23.2
- Edwards, B. F., 1.3
- Edwards, D. J., 1.3
- Edwards, H., 3.1
- Edwards, R. A., 22.2
- Egelman, E. H., 19.6
- Egerton, M., 1.3
- Ehrenberg, M., 19.4
- Ehse, W., 19.6
- Eichele, G., 4.1
- Eichman, B. F., 23.3
- Eiglmeier, K., 1.3
- Eikenberry, E. F., 7.1, 7.2, 8.1
- Einspahr, H. M., 4.1, 8.1, 22.4
- Eisenberg, D., 1.2, 1.3, 4.3, 5.1, 5.2, 12.2, 14.2, 16.1, 17.1, 19.3, 21.1, 21.2, 21.3, 22.1, 23.1, 25.2
- Eisenberger, P., 8.1
- Eising, A. A., 20.1, 20.2
- Eklund, H., 17.2
- Ekstrom, J. L., 1.3, 16.1
- El Hassan, M. A., 23.3
- El-Kabbani, D., 4.2
- Elder, M., 8.1, 8.2
- Ellema, P., 8.1
- Ellenberger, T. E., 12.1, 23.2
- Ellington, W. R., 22.1
- Elliott, A., 6.1
- Elliott, C. J., 22.2
- Ellis, G., 8.1
- Ellis, L., 1.3
- Ellisman, M. H., 17.2, 19.6
- Elmore, C., 4.1
- Eltis, L. D., 1.3
- Ely, K. R., 12.1
- Emmerich, C., 8.1, 8.2
- Emsley, J., 1.3, 23.2
- Emsley, P., 1.3
- Endo, S., 19.6
- Enfors, S.-O., 3.1
- Engel, A., 19.2, 19.6
- Engel, C., 10.2
- Engel, J. C., 1.3
- Engelman, A., 1.3, 4.3, 5.1
- Engelman, D. M., 19.3, 19.4
- Engh, R. A., 1.3, 15.2, 18.2, 18.3, 18.4, 18.5, 21.1, 21.2, 22.4, 25.2
- Englund, P. T., 23.3
- Engstrom, O., 1.3
- Entine, G., 7.1
- Entsch, B., 1.3
- Epand, R. M., 19.6
- Epp, O., 1.2, 4.2, 19.7, 23.4
- Erbe, J. L., 21.1
- Erickson, B. W., 1.3
- Erickson, H. P., 4.3, 12.1, 19.2, 19.6
- Erickson, J., 1.3
- Erickson, J. W., 1.2, 1.3, 8.1, 11.1, 11.4, 11.5, 12.2, 13.4, 18.2, 25.2
- Erickson-Vitanen, S., 23.4
- Erlandsen, H., 1.3
- Erlebacher, J., 22.4
- Ermler, U., 4.2
- Ernst, J. F., 3.1
- Ernst, R. R., 19.7
- Erskine, P. T., 1.3
- Eschenberg, S., 1.3
- Esmon, S., 1.3
- Esnouf, R., 1.3, 10.1, 13.4
- Essen, L. O., 4.2, 19.6
- Esser, C. K., 1.3
- Esser, L., 4.2
- Essmann, U., 20.2
- Estes, M. K., 19.6
- Etges, R., 1.3
- Etienne, G., 4.1
- Evans, G., 1.3
- Evans, P. R., 4.3, 11.4, 23.2, 25.1
- Evans, R. M., 3.1
- Evans, S. V., 25.1
- Evansack, J. D., 20.2, 21.2
- Everitt, B., 22.4
- Everse, S. J., 1.3
- Evrard, C., 4.1
- Eyermann, C. J., 23.4
- Ezaz-Nikpay, K., 12.1, 23.2
- Faber, H. R., 4.3
- Fabre, C., 19.3
- Facello, M., 22.1
- Faerman, C., 23.4
- Faerman, C. H., 22.4
- Fairbrother, W. J., 19.7
- Fairweather, N. F., 1.3
- Falvo, J., 1.3
- Fam, B. C., 25.2
- Fan, C., 1.3, 17.1
- Fan, E., 1.3
- Fan, H.-F., 16.1
- Fan, Q. R., 1.3
- Fanchon, E., 14.2
- Fane, B. A., 11.5
- Fankuchen, I., 1.2, 10.1
- Faou, P., 4.1
- Farnoux, B., 6.2
- Farr, E. A., 24.1
- Farrants, G. W., 8.1
- Farrell, F. X., 1.3
- Farrell, R., 7.1
- Faruqi, A. R., 8.1
- Fass, D., 1.3
- Fasshauer, D., 23.2
- Fauchere, J.-L., 22.1
- Fauck, J., 22.1
- Fauman, E. B., 1.3
- Fayat, G., 3.1
- Fearnley, I., 4.3
- Feder, J. N., 1.3
- Federici, G., 1.3
- Fedorov, A. A., 1.3
- Feher, G., 4.1, 4.2, 22.3
- Fehlhammer, H., 13.1, 13.3
- Fei, M. J., 4.2
- Feigelson, R. S., 4.1
- Feigin, L. A., 19.3, 19.4
- Feigon, J., 23.3
- Feigon, R., 21.1
- Feil, I. K., 1.3
- Feil, S. C., 1.3
- Felder, C. E., 24.1
- Feldmann, R. J., 23.3
- Felsenfeld, G., 23.4
- Feltin, D., 6.2
- Feltwell, T., 1.3
- Feng, Z., 21.2, 22.4, 23.4, 24.2, 24.5
- Fenn, R. H., 26.1
- Fennen, J., 20.1
- Fenton, J. W. I., 1.3
- Ferez, C. R., 1.3
- Ferguson, A. D., 4.2
- Ferguson, D. M., 25.1
- Ferguson, M., 1.3
- Ferguson, P. D., 6.2
- Fermi, G., 1.3, 4.3
- Fernandez-Catalan, C., 1.3
- Ferre, R. A., 1.3
- Ferré-D'Amaré, A. R., 3.1, 4.1
- Ferrer, M., 1.3
- Ferretti, V., 22.4
- Ferrin, T. E., 17.2, 25.1
- Ferris, A. L., 1.3
- Fersht, A. R., 22.2
- Fesik, S. W., 1.3
- Fetler, L., 19.3, 19.4
- Fevold, J., 26.1
- Feytmans, E., 21.1, 21.2
- Field, M. J., 20.2, 21.2
- Fields, B. A., 1.3
- Fields, B. N., 19.6
- Figura, K. von, 1.3
- Filman, D. J., 1.3, 13.4, 19.6
- Finazzi-Agro, A., 12.2
- Finch, J. T., 1.2, 1.3, 19.6, 24.2, 24.4
- Findlay, J. B. C., 21.1
- Fine, R. F., 22.1, 22.3
- Finet, S., 4.1, 19.3
- Fink, A. L., 10.2, 19.3
- Finkel, S. E., 19.6
- Finkelstein, A., 22.1
- Finkelstein, K. D., 4.1
- Finney, J. L., 21.2, 22.1, 22.2
- Finzel, B. C., 1.3, 4.1, 11.4
- Fischer, B., 3.1
- Fischer, J., 6.2
- Fischer, P., 6.2
- Fischer, S., 1.3, 6.2, 20.2, 21.2
- Fischman, A. J., 12.1
- Fisher, A. J., 19.6
- Fisher, C. L., 22.1, 23.4, 24.4
- Fisher, J., 16.1
- Fisher, R. G., 15.1
- Fisher, R. J., 3.1
- Fisher, S. L., 1.3
- Fiske, S. J., 16.1, 25.1
- Fita, I., 5.1, 19.6
- Fitzgerald, P. M., 1.3
- Fitzgerald, P. M. D., 4.1, 21.2, 24.2, 24.5
- Fitzgibbon, M. J., 1.3
- Fitzpatrick, P. F., 1.3
- Flack, H. D., 11.4, 18.4, 18.5
- Flaherty, K. M., 1.3, 14.2, 18.2, 22.2, 25.2
- Flanagan, J., 1.3
- Flanagan, J. M., 19.3
- Flannery, B. P., 11.4, 18.2
- Flatmark, T., 1.3
- Fleisher, S., 19.6
- Fleming, A., 26.1
- Fleming, M. A., 1.3
- Fleming, P. J., 22.1
- Fletcher, R. J., 1.3, 13.4, 15.1, 22.2
- Fling, M. E., 1.3
- Flippen-Anderson, J. L., 16.1
- Flocco, M. M., 21.1, 22.2
- Flores, T. P., 23.1, 24.5
- Fluder, E. M., 1.3
- Focia, P. J., 1.3
- Fogel, D. B., 13.1
- Fogg, J., 24.4
- Folkers, G., 1.3
- Folkhard, W., 19.5
- Fontecilla-Camps, J. C., 1.3, 4.1, 5.1, 16.1, 23.2
- Fontes, E., 7.1
- Ford, G. C., 1.2, 11.2, 11.3, 13.1, 13.2, 13.4
- Ford, L. O., 26.1
- Forest, E., 1.3
- Forest, K. T., 1.3
- Forsberg, G., 3.1, 4.3
- Forsen, S., 19.3
- Forst, D., 4.2
- Forsyth, J. B., 6.2
- Forsyth, J. M., 6.1
- Forsyth, V. T., 19.5
- Forsythe, E. L., 4.1
- Fortier, S., 16.1, 22.4
- Fossetta, J., 4.3
- Foster, B. A., 1.3
- Fothergill-Gilmore, L. A., 1.3
- Foulet, G., 6.2
- Foundling, S., 1.3
- Fourme, R., 1.3, 4.1, 6.1, 8.1, 14.2
- Fournet, G., 19.3
- Fox, G., 8.1, 22.1
- Fox, G. C., 11.3, 11.4, 11.5
- Fox, J. M., 19.6
- Fox, M. P., 1.3
- Fox, R. A., 23.4
- Fox, T., 1.3, 25.1
- Fraipoint, C., 21.1
- Franceschi, F., 8.1, 12.1
- Francis, S. E., 1.3
- Franck, K., 6.1
- Frank, E. G., 4.3
- Frank, J., 8.1, 19.6
- Frank, R., 24.4
- Frankel, R. D., 6.1
- Frankenberg, N., 1.3
- Frankenberger, E. A., 1.2, 1.3, 8.1, 11.5, 13.4
- Franklin, R. E., 19.5, 23.3
- Franklin, S., 1.3
- Franks, A., 6.1
- Franks, N., 1.3
- Frappier, L., 1.3, 23.2
- Fraser, C. M., 1.3
- Fraser, J. D., 1.3
- Fraser, M., 1.3
- Fraser, M. E., 16.1
- Fraser, P. E., 19.5
- Fraser, R. D. B., 19.5
- Frazão, C., 16.1
- Frederick, C. A., 1.3

## AUTHOR INDEX

- Fredkin, D., 22.3  
 Freeborn, B., 8.1, 19.4, 19.6  
 Freeman, C. M., 22.2  
 Freeman, H. C., 8.1  
 Freeman, R., 19.6  
 Freemont, P. S., 1.3, 23.2  
 Freer, A. A., 4.2, 8.1  
 Freer, S. T., 1.3, 26.1  
 Freisheim, J. H., 1.3  
 Fremont, D. H., 1.3  
 French, S., 18.4, 25.2  
 Frere, J. M., 1.3, 21.1  
 Freund, A. K., 6.2, 8.1  
 Frey, M., 5.1, 23.2  
 Freymann, D., 1.3  
 Fricke, W. M., 3.1  
 Fridborg, K., 1.3, 13.4, 23.2  
 Friedman, A. M., 21.2  
 Friedman, J. M., 1.3, 23.2, 23.4  
 Friedman, R., 22.3  
 Friedrich, H., 6.2  
 Frigerio, F., 23.1  
 Fritsch, E. F., 3.1  
 Fritz, H.-J., 18.5, 25.2  
 Fritz-Wolf, K., 22.1  
 Fritzsche, G., 4.2  
 Frolow, F., 8.1, 10.1, 10.2, 23.4  
 Fromme, P., 4.2  
 Frommel, C., 22.1, 22.3  
 Frouin, J., 4.1  
 Fry, E., 8.1, 22.1  
 Fu, Z.-Q., 10.1  
 Fuchs, J. A., 22.3  
 Fujii, C., 1.3  
 Fujii, G., 1.3  
 Fujii, H., 6.2  
 Fujii, T., 1.3  
 Fujii, Y., 4.3  
 Fujikawa, K., 1.3  
 Fujimoto, J., 3.1  
 Fujinaga, M., 1.3, 13.3, 16.1, 18.2, 20.1  
 Fujishima, A., 24.4  
 Fujita, H., 7.1  
 Fujiwara, S., 19.4  
 Fujiyoshi, Y., 4.2, 19.2, 19.6  
 Fuller, S. D., 19.6  
 Fuller, W., 19.5  
 Fulop, V., 1.3  
 Funatsu, J., 1.3  
 Fung, J. C., 19.6  
 Fureugen, B., 17.2  
 Furey, W., 1.3, 13.4, 25.1, 25.2  
 Furey, W. F., 1.3  
 Furlong, D. B., 19.6  
 Furnas, T. C., 26.1  
 Furneaux, R. H., 1.3  
 Fusek, M., 1.3  
 Fusetti, F., 1.3  
 Futterer, K., 1.3  
 Fuxreiter, M., 21.2  
  
 Gabashvili, I. S., 19.6  
 Gabbay, K. H., 1.3  
 Gaboriaud, C., 1.3  
 Gabriel, A., 7.1, 19.1, 19.3  
 Gadet, A., 8.1  
 Gähler, R., 6.2  
 Gait, M. J., 24.4  
 Gallagher, W., 20.2  
 Galleni, M., 1.3  
 Gallo, S. M., 8.1, 14.2, 16.1, 25.2  
 Galloy, J. J., 22.4, 24.3  
 Gallwitz, U., 1.2  
 Gamble, R. C., 8.1  
 Gamblin, S. J., 1.3  
 Gamboa, G., 1.3  
 Gamon, M., 6.2  
 Gao, J., 20.2, 21.2  
 Gao, Y. G., 1.3  
 Garavito, M., 4.2  
 Garavito, R. M., 1.3, 4.2  
 Garbe, T. R., 1.3  
 Garboczi, D. N., 1.3, 24.1  
 Garcia, A. E., 23.4  
 Garcia, K. C., 1.3, 4.3  
 García-Ruiz, J. M., 4.1  
 Gardner, K. H., 19.7  
 Gardner, M. J., 1.3  
 Gardner, S. P., 22.4  
  
 Garges, K. T., 1.3  
 Garlick, R. L., 13.4  
 Garman, E. F., 1.3, 8.2, 9.1, 10.1, 10.2, 13.4  
 Garnier, T., 1.3  
 Garratt, R. C., 1.3  
 Garrett, G., 22.3  
 Garrett, T. P. J., 13.4  
 Garza-Ramos, G., 1.3  
 Gas, S., 1.3  
 Gassman, P. G., 23.2  
 Gassmann, J., 13.1, 15.1  
 Gast, P., 4.2  
 Gastinel, L. N., 1.3  
 Gatti, D. L., 1.3  
 Gatti, E., 7.1  
 Gatti, G., 12.2  
 Gautel, M., 19.3  
 Gautheron, P., 1.3  
 Gavira, J. A., 4.1  
 Gawrisch, K., 6.2  
 Gaykema, W. P. J., 13.4  
 Gebhard, W., 19.5  
 Gehlhaar, D. K., 13.1  
 Gehring, M. R., 1.3  
 Gehring, W. J., 19.7  
 Geiger, J. H., 23.3  
 Geis, I., 1.3, 23.3  
 Geise, H. J., 23.3  
 Geisler, S. C., 1.3  
 Geisow, M. J., 1.3  
 Gelatt, C. D., 18.2  
 Gelb, M. H., 1.3  
 Gelbard, E. M., 6.2  
 Gelbin, A., 21.2, 22.4, 24.2, 24.4, 24.5  
 Gelfand, D. H., 3.1  
 Gelin, B. R., 20.2, 22.1  
 Gellatly, B. J., 21.2, 22.1  
 Gellissen, G., 3.1  
 Genick, U., 19.3  
 Genova, J. D., 19.3  
 Genovesio-Taverne, J.-C., 5.1  
 Gentles, S., 1.3  
 Gentz, R., 1.3  
 Genz, H., 6.1  
 Georgalis, Y., 4.1  
 George, A., 4.1  
 George, S. E., 23.2  
 Georgiou, G., 3.1  
 Gerard, R. D., 1.3  
 Gerchman, S. E., 4.3  
 Gerlt, J. A., 1.3, 23.2  
 Germain, G., 16.1, 25.1  
 Gershater, C. J. L., 3.1  
 Gershon, P. D., 1.3, 23.2  
 Gerstein, M., 4.2, 19.6, 21.2, 22.1  
 Gerstel, B., 1.3  
 Gessler, K., 16.1  
 Getzoff, E. D., 1.3, 8.2, 19.3, 21.1, 22.1, 22.2, 23.4  
 Geurtsen, R., 20.1  
 Gewirth, D., 11.4, 11.5  
 Ghayur, T., 1.3  
 Ghernani, N.-E., 18.4  
 Ghirlando, R., 4.3  
 Ghosh, D., 1.3  
 Ghosh, M., 8.1, 19.6  
 Ghosh, P., 1.3  
 Ghuysen, J. M., 21.1  
 Giacometti, A., 19.5  
 Giacomozzo, C., 16.1, 25.1, 25.2  
 Giammona, D. A., 23.4  
 Gibrat, J.-F., 23.1, 24.5  
 Gibson, D., 6.1  
 Gibson, Q. H., 23.4  
 Gibson, W. M., 6.1  
 Giegé, R., 4.1, 5.1  
 Gierse, J. K., 4.2  
 Gieselmann, V., 1.3  
 Gilbert, D. B., 22.1  
 Gildehaus, D., 4.2  
 Gilham, P. T., 4.1  
 Gilli, G., 22.4  
 Gilli, P., 22.4  
 Gilliland, G. L., 1.3, 4.1, 9.1, 11.4, 12.1, 20.2, 21.1, 21.2, 22.4, 23.4, 24.1, 24.2, 24.4, 24.5  
 Gillon, W., 4.3  
  
 Gilman, M., 1.3  
 Gilmore, C. J., 14.2  
 Gilmore, D. J., 7.1  
 Gilson, M., 22.3  
 Gilula, N. B., 19.2, 19.6  
 Gingras, A. C., 23.2  
 Ginsberg, H. S., 5.2  
 Gioghegan, K. F., 1.3  
 Girard, M., 1.3  
 Girling, R. L., 12.1  
 Girotra, N. N., 1.3  
 Girvin, M. E., 1.3  
 Gittis, A. G., 1.3  
 Giuliani, D., 1.3  
 Glabe, C. G., 3.1  
 Glaeser, R. M., 19.2, 19.6  
 Glah, G. A., 19.3  
 Glasgow, J. I., 22.4  
 Glasstone, S., 6.2  
 Glatter, O., 19.3, 19.4  
 Gleichmann, T., 4.1, 8.1, 18.5, 21.2  
 Gleiter, R., 22.4  
 Glen, R. C., 22.4  
 Glover, I. D., 8.1  
 Glusker, J. P., 5.1, 21.1, 22.4, 23.2  
 Gluzman, I. Y., 1.3  
 Go, M., 23.1  
 Go, N., 18.3, 23.4  
 Göbel, H., 6.1, 19.3  
 Godlewski, T. S. Jr., 4.1  
 Goelz, S., 1.3  
 Gohimont, A. C., 21.1  
 Gohlke, U., 1.3  
 Gokhale, R. S., 1.3  
 Gold, L., 3.1  
 Goldberg, D. E., 1.3  
 Goldberg, G. L., 1.3  
 Golden, B. L., 4.3, 22.2  
 Goldgur, Y., 4.3, 23.2  
 Goldie, H., 17.1  
 Goldman, A., 21.1  
 Goldman, E., 3.1  
 Goldman, S., 3.1  
 Goldsmith, E. J., 1.3  
 Goldsmith, M. A., 1.3  
 Goldstein, A., 14.2  
 Goldstein, B. M., 1.3  
 Goldstein, H., 18.2  
 Golton, I. C., 22.1  
 Gomes, B., 1.3  
 Gomez-Puyou, A., 1.3  
 Gomez-Puyou, M. de, 1.3  
 Gomis-Rüth, F. X., 1.3, 5.1, 5.2, 12.2  
 Gong, H.-Y., 4.1  
 Gong, W., 1.3  
 Gong, Z. X., 22.1  
 Gonschorek, W., 11.4, 18.5  
 Gonzalez, A., 1.3, 6.1, 7.2, 10.2, 19.5  
 Gooch, J. T., 1.3  
 Goodenough, P., 3.1  
 Goodfellow, J., 22.1  
 Goodfellow, J. M., 8.1, 20.2, 22.1, 22.2, 23.4  
 Goodford, P. J., 17.2, 22.4  
 Gooding, A. R., 22.2  
 Goodkin, P. E., 4.1  
 Goodsell, D. S., 1.3, 17.2, 23.3  
 Goodson, T. J., 1.3  
 Goodwill, K. E., 1.3  
 Goody, R. S., 1.3, 8.2  
 Gooptu, B., 1.3  
 Goraj, K., 1.3, 21.1  
 Gordon, D. B., 1.3  
 Gordon, D. M., 22.4  
 Gordon, E., 4.1  
 Gordon, S. V., 1.3  
 Gorga, J. C., 1.3  
 Gori-Savellini, G., 19.7  
 Gorina, S., 1.3  
 Gosh, R., 4.2  
 Gosling, R. G., 23.3  
 Gottesman, S., 3.1  
 Götz, G., 10.1  
 Gouaux, J. E., 1.3, 4.2  
 Gouet, P., 1.3, 8.1, 19.6  
 Gough, G. R., 4.1  
 Gould, I. R., 25.1  
  
 Gould, R. O., 16.1, 22.4, 25.2  
 Gouraud, H., 17.2  
 Gourley, D. G., 1.3  
 Gover, S., 1.3, 8.1, 13.1, 13.2, 13.4  
 Gowen, B. E., 19.6  
 Gowrishankar, J., 3.1  
 Graaff, R. A. G. de, 16.1  
 Graber, P., 1.3  
 Graf, H.-D., 6.1  
 Graham, I. S., 25.2  
 Graham, J., 19.6  
 Gramaccioli, C. M., 18.5  
 Grams, F., 1.3  
 Gramsch, E., 7.1  
 Grant, J. A., 22.1  
 Grant, K. L., 3.1  
 Grant, R. A., 1.3, 19.6  
 Grassucci, R. A., 8.1, 19.6  
 Graubner, H., 5.2  
 Graves, B. J., 1.3  
 Gray, A. M., 22.4  
 Gray, C. P., 1.3  
 Gray, C. W., 19.3  
 Gray, D. M., 19.3  
 Gray, R. J., 4.1  
 Gray, S. J., 1.3  
 Grazulis, S., 24.4  
 Haak, J. R., 18.2, 20.1  
 Greaves, R. B., 21.1  
 Green, A. A., 4.1  
 Green, D. W., 1.2, 12.1, 12.2, 14.1, 25.2, 26.1  
 Green, L., 3.1  
 Green, M., 6.1  
 Green, N. M., 19.2  
 Green, R. C., 1.3  
 Green, W. J., 19.6  
 Greene, B., 19.3  
 Greene, G. L., 1.3  
 Greene, M. I., 23.4  
 Greenough, A. G. W., 11.4  
 Greenough, T. J., 1.3, 8.1, 8.2, 11.2, 11.3, 11.5  
 Greenstone, H. L., 19.6  
 Greenwood, A., 4.1, 18.5  
 Greenwood, C., 1.3  
 Greer, J., 15.1, 22.1, 25.2  
 Gregoret, L. M., 22.2  
 Gregory, J., 19.5  
 Grenader, A. K., 19.4  
 Grenfell, R., 24.4  
 Greve, J. M., 22.1  
 Gribbskov, C. L., 1.3  
 Gribbskov, M., 17.1  
 Griffith, D., 23.4  
 Griffith, D. L., 19.3  
 Griffith, J. P., 1.2, 1.3, 8.1, 11.5, 12.2, 13.4, 19.3  
 Grigorieff, N., 4.2, 19.2, 19.6  
 Grimes, J. M., 1.3, 8.1, 19.6  
 Grimm, R., 19.6  
 Grinna, L. S., 3.1  
 Gripon, C., 4.1  
 Groendijk, H., 1.3, 4.1, 10.1  
 Gronenborn, A. M., 1.3, 3.1, 19.7, 23.2, 23.4  
 Groom, M., 19.6  
 Groos, M., 6.2  
 Grootenhuys, P. D. J., 1.3  
 Gros, P., 1.3, 17.1, 18.2, 18.4, 19.3, 20.1, 20.2, 25.1, 25.2  
 Gross, H., 19.2  
 Gross, K.-H., 23.4  
 Grosse-Kunstleve, R. W., 17.1, 18.2, 18.4, 25.1, 25.2  
 Grossman, J. G., 19.3  
 Grove, J., 1.3  
 Groves, J., 10.2  
 Grubb, J. H., 1.3  
 Grubmeyer, C., 1.3  
 Grucza, R. A., 1.3  
 Grueber, G., 19.3  
 Gruner, S. M., 7.1, 7.2, 8.1, 9.1, 19.3  
 Grütter, M. G., 1.3, 16.1, 18.5  
 Götze, G., 10.1  
 Grzeskowiak, K., 24.2  
 Gsell, B., 12.1, 21.1  
 Gu, Y., 1.3  
 Gu, Y.-X., 16.1  
  
 Guagliardi, A., 25.1  
 Guanziroli, M. G., 23.1  
 Guddat, L. W., 23.4  
 Guha, A., 1.3  
 Guiasu, S., 15.2  
 Guilloteau, J.-P., 4.1  
 Guimaraes, B. G., 1.3  
 Guinier, A., 19.3, 19.4  
 Guise, A. D., 3.1  
 Gulbis, J. M., 4.2, 23.2  
 Gulnik, S. V., 1.3  
 Gunasekaran, K., 21.1  
 Gunasekera, A., 23.3  
 Gunner, M., 22.3  
 Gunsteren, W. F. van, 18.2, 19.7, 20.1, 20.2, 22.3, 23.4  
 Güntert, P., 19.7  
 Guo, B., 4.1  
 Guo, D. Y., 16.1  
 Guo, H., 20.2, 21.2  
 Guss, J. M., 8.1, 19.5  
 Gustafsson, J. A., 1.3  
 Guy-Crotte, O., 1.3  
 Guzikovich-Guerstein, G., 23.4  
 Gwilliam, M., 17.2  
  
 Ha, S., 20.2, 21.2  
 Ha, Y., 1.3  
 Haak, J. R., 18.2, 20.1  
 Haan, V. O. de, 6.2  
 Haas, C., 2.1, 4.1  
 Haas, D. J., 10.2  
 Haas, F. de, 19.6  
 Haas, J., 19.4  
 Habash, J., 1.3, 4.1, 8.1, 8.2  
 Habuka, N., 1.3  
 Hackett, M. C., 1.3  
 Hädener, A., 4.1, 8.1  
 Hadfield, A. T., 13.4, 26.1  
 Hadida-Hassan, M., 19.6  
 Hagishita, S., 1.3  
 Hagler, A. T., 22.2  
 Hagemann, W. K., 1.3  
 Hahn, S., 23.3  
 Hahn, Th., 1.2, 11.4, 18.5  
 Hails, J. E., 8.1  
 Hainbucher, K., 1.3  
 Hajdu, J., 1.3, 8.1, 8.2  
 Hakenbeck, R., 1.3  
 Grenader, A. K., 19.4  
 Halay, E. D., 23.3, 23.4  
 Halbert, S. M., 1.3  
 Halfon, Y., 8.1, 10.1, 10.2  
 Hall, E. R., 1.3  
 Hall, G., 7.1, 8.1  
 Hall, I. H., 19.5  
 Hall, S. R., 22.4, 24.3, 25.1  
 Halle, B., 19.7  
 Hallen, D., 1.3  
 Hallelwell, R. A., 1.3  
 Hallsall, M. J., 6.2  
 Hamada, K., 1.3  
 Hamaguchi, K., 26.1  
 Hames, B. D., 3.1  
 Hamiaux, C., 20.2  
 Hamilton, J. A., 1.3  
 Hamilton, L. D., 18.5, 19.5, 23.3  
 Hamilton, W. C., 11.5, 18.4, 19.5, 21.1, 26.1  
 Hamlin, N., 1.3  
 Hamlin, R., 1.3, 7.1, 9.1  
 Hamm, H. E., 4.3  
 Hammer, A., 21.1  
 Hammersley, A. P., 7.2, 8.1, 11.4  
 Hammill, L. D., 1.3  
 Hammouda, B., 6.2  
 Hampel, A., 4.1  
 Hampele, I. C., 1.3  
 Han, F.-S., 16.1  
 Han, M. H., 3.1  
 Han, S., 1.3  
 Hanai, R., 1.3  
 Hancock, H., 16.1  
 Hancock, R., 19.4  
 Handford, P., 1.3  
 Handin, R., 1.3  
 Handoll, H. H. G., 26.1  
 Haneef, M. I. J., 18.4  
 Hanein, D., 19.6  
 Hangyi, L., 8.1

## AUTHOR INDEX

- Hannaert, V., 1.3  
Hanning, C. R., 1.3  
Hanrahan, P., 17.2  
Hansen, H. A. S., 8.1  
Hansen, J., 1.3  
Hansen, J. L., 1.3  
Hansen, L. K., 1.3  
Hansen, S., 1.3  
Hansma, P. K., 19.2  
Hanson, J. C., 19.1  
Hao, Q., 8.1, 16.1  
Harada, Y., 13.3, 19.6  
Haran, T. E., 23.3  
Harata, K., 21.2  
Harauz, G., 19.6  
Harber, J., 22.1  
Harding, M. M., 1.2, 8.1, 8.2, 13.1, 13.4  
Hardman, K. D., 1.2, 1.3  
Hardt, S., 19.6  
Harel, M., 19.3  
Hargittai, I., 19.6  
Hargittai, M., 19.6  
Haridas, M., 18.5  
Harker, D., 1.2, 2.1, 12.2, 14.1, 26.1  
Harlan, J. E., 1.3  
Harlocker, S., 4.3  
Harlos, K., 4.1  
Harms, J., 8.1  
Harmsen, A., 8.1  
Harpaz, Y., 21.2, 22.1  
Harper, E. T., 22.2  
Harrenga, A., 4.2  
Harrington, D. J., 1.3  
Harrington, M. D., 4.1  
Harrington, R. E., 23.2  
Harris, B. A., 1.3  
Harris, B. G., 4.1  
Harris, D., 1.3  
Harris, G. W., 8.1, 18.4  
Harris, J. L., 6.1  
Harris, N., 8.1  
Harris, P., 6.2  
Harris, S. E., 22.4  
Harris, S. F., 1.3  
Harrison, P. M., 4.3  
Harrison, R. G. A., 3.1  
Harrison, R. K., 1.3  
Harrison, R. W., 10.1, 15.1, 21.1  
Harrison, S. C., 1.2, 1.3, 4.3, 7.1, 8.1, 11.2, 11.3, 11.4, 11.5, 13.4, 19.3, 19.5, 23.2  
Harrop, S. J., 4.1, 8.1  
Hart, M., 6.1, 8.1  
Hart, R. G., 1.2, 26.1  
Harting, J. A., 19.3  
Hartman, P., 5.1  
Hartmanis, M., 3.1, 4.3  
Hartshorne, N. H., 5.1  
Hartsuck, J. A., 1.2, 12.1  
Harutyunyan, E. H., 1.3  
Harvey, D. J., 26.1  
Harvey, S. C., 20.2, 23.3  
Harvey, T. S., 20.1  
Haschmeyer, A. E. V., 23.3  
Hasegawa, K., 6.2, 19.5  
Haser, R., 1.3  
Haser, W. G., 1.3  
Hashizume, H., 6.1, 8.1  
Haskell, K., 19.6  
Haslegrove, J. C., 8.1  
Hasler, L., 19.6  
Hasnain, S. S., 16.1, 19.3  
Hass, J., 19.4  
Hassell, A. M., 1.3  
Hastings, J. B., 8.1  
Hata, Y., 1.3  
Hatada, M., 1.3  
Hatada, M. H., 1.3  
Haug, E. J., 18.2  
Haight, C., 3.1  
Hauk, J., 4.2, 19.4  
Hauptman, H. A., 15.1, 16.1, 16.2, 25.2  
Havel, T. F., 19.7  
Havelka, W. A., 19.6  
Hawiger, J., 4.3  
Hawkins, A. R., 1.3  
Hawley, R., 22.3  
Hawthornthwaite-Lawless, A. M., 4.2, 8.1  
Hayakawa, K., 1.3  
Hayes, I. C., 22.4, 24.3  
Hayter, J. B., 6.2  
Hayward, S., 23.4  
Hayward, S. B., 19.2  
Hazen, E. E. Jr., 23.2  
Hazes, B., 1.3  
He, J. J., 23.2  
He, S.-M., 23.4  
He, W., 1.3  
He, X. M., 1.3, 4.1  
Head, J. F., 19.3  
Heagle, A. B., 19.6  
Heathman, S. P., 23.3, 24.4  
Hecht, H. J., 1.2, 1.3, 8.1, 11.5, 13.4  
Hecht, H.-J., 16.1  
Hecht, J., 22.3  
Hedman, B., 8.1  
Heel, M. van, 19.6  
Hefti, A., 19.6  
Hegde, R., 4.3  
Hegde, R. S., 1.3  
Hegerl, R., 5.2, 19.6  
Heidorn, D. B., 19.3  
Heimbach, J. C., 1.3  
Heinemann, U., 21.1, 23.4  
Heiner, A. P., 20.1  
Heinz, D. W., 1.3, 4.3  
Heinz, F. X., 1.3  
Heitler, W. G., 2.1  
Helfrich, R., 1.3  
Helgstrand, C., 17.1  
Hellingwerf, K., 8.2  
Helliwell, J. R., 1.3, 4.1, 8.1, 8.2, 9.1, 11.3, 11.5, 16.1, 18.5, 21.2  
Hellmig, B., 1.3  
Hendon, C., 10.2  
Helm, D. van der, 4.2  
Hemelrijk, P., 4.2  
Henderson, R., 1.2, 4.2, 9.1, 10.2, 12.1, 13.1, 13.4, 19.2, 19.6  
Henderson, S. J., 19.3  
Hendlich, M., 21.1  
Hendrickson, T., 22.3  
Hendrickson, W. A., 1.2, 1.3, 3.1, 4.3, 8.1, 9.1, 12.1, 12.2, 13.3, 14.1, 14.2, 15.1, 16.1, 18.1, 18.2, 18.4, 18.5, 19.1, 19.5, 21.1, 21.2, 23.4, 24.1, 25.1, 25.2  
Hendrix, R., 19.3  
Hensch, Z. S., 23.4  
Henisch, H. K., 4.1  
Henn, C., 17.2  
Hennig, M., 1.3  
Henrick, K., 21.1  
Henry, L. J., 1.3  
Henry, N. F. M., 1.2  
Heo, N. H., 18.4  
Herber, W. K., 1.3  
Herbert, A., 23.3  
Herbst-Irmer, R., 25.2  
Hermann, C., 1.2  
Hermann, R. B., 1.3, 22.1  
Hermans, J., 20.1  
Hermes, J. D., 1.3  
Hernan, R. A., 3.1  
Hernandez-Ramos, N., 24.1  
Herr, W., 1.3  
Herriott, J. R., 18.1, 18.5, 25.2  
Herron, J. N., 23.4  
Hershfield, M. S., 8.1, 16.1  
Herzberg, O., 1.3, 18.4, 21.1  
Herzenberg, A., 8.1  
Herzog, L., 1.3  
Hess, G. F., 1.3  
Hessler, D. S., 17.2  
Hesson, T., 1.3  
Heumann, H., 19.4  
Hewat, E. A., 19.6  
Heymann, J. B., 19.2, 19.6  
Heys, J. R., 1.3  
Hibbert, F., 23.2  
Hickey, M. J., 1.3  
Hickman, A. B., 1.3, 4.3, 5.1  
Hidaka, M., 6.2  
Hiemath, C. N., 1.3  
Higashi, T., 8.1, 11.1, 11.4  
Higgins, D. R., 3.1  
Higgs, H., 18.4, 21.1, 21.2, 24.2, 25.2  
High, D. F., 26.1  
Hikichi, K., 11.4  
Hilbers, C. W., 24.5  
Hilgenfeld, R., 4.1, 9.1, 21.1  
Hill, C. P., 1.3  
Hills, G. J., 19.2  
Hilton, H., 1.2  
Hiragi, Y., 19.3  
Hirai, T., 4.2, 19.2, 19.6  
Hirata, F., 23.4  
Hirel, P. H., 3.1  
Hirose, F., 4.3  
Hirose, K., 19.6  
Hirsch, A., 4.2  
Hirsch, E., 4.1  
Hirsch, J. A., 24.4  
Hirsch, P., 19.2  
Hirschler, J., 4.1  
Hirshberg, M., 20.1, 22.1  
Hirshfeld, F. L., 13.3, 25.2  
Hirvonen, C. A., 3.1  
Hitz, B. C., 24.5  
Hizi, A., 1.3, 4.3  
Hjelm, R., 6.2, 19.4  
Hjelmeland, L. M., 4.2  
Ho, J. X., 1.3, 4.1  
Ho, P. S., 23.3  
Ho, T. F., 1.3  
Hobaugh, M. R., 1.3, 4.2  
Höbner, G., 19.3  
Hockney, R. C., 3.1  
Hodel, A. E., 1.3, 15.2, 16.1, 21.1, 23.2  
Hodge, C. N., 23.4  
Hodgkin, D. C., 1.2, 1.3  
Hodgson, J., 3.1  
Hodgson, K., 8.1  
Hodgson, K. O., 8.1, 14.2, 19.3  
Hoek, A. N. van, 19.6  
Hoenger, A., 19.6  
Hof, P., 1.3  
Hofer, B., 1.3  
Hoff, A. J., 4.2  
Hoffman, A., 23.3  
Hoffman, D. W., 4.3  
Hoffman, S. L., 1.3  
Hoffman, T., 18.2  
Hoffmann, P., 6.1  
Hofmann, A., 3.1, 6.1  
Hofmann, B., 1.3  
Hofmann, E., 4.2  
Hofnung, M., 4.2  
Hofsteenge, J., 1.3  
Hofstra, H., 4.1  
Hoghoj, P., 6.2, 8.1, 19.1  
Hogle, J. M., 1.3, 13.4, 19.3, 19.6  
Hogue, C. W., 23.1, 24.5  
Hohenester, E., 1.3  
Höhne, K. H., 17.2  
Hoier, H., 16.1, 21.1  
Hol, W. G. J., 1.2, 1.3, 4.1, 13.4, 17.1, 18.2, 19.6, 20.1, 21.1  
Holbrook, S. R., 25.2  
Holden, H. M., 1.3  
Holdgate, G., 23.4  
Holl, P., 7.1  
Hollenberg, C. P., 3.1  
Hollenberg, J., 19.6  
Hollingshead, C., 19.3  
Hollister, J. R., 3.1  
Holm, I., 1.3  
Holm, L., 1.2, 23.1, 24.5  
Holmes, K. C., 1.2, 1.3, 8.1, 9.1, 11.3, 11.4, 11.5, 17.2, 19.5  
Holmes, M. A., 25.2  
Holmes, R. K., 1.3, 17.1, 21.1  
Holroyd, S., 1.3  
Holst, M., 22.3  
Holt, D. A., 1.3  
Holwerda, B. C., 1.3  
Hölzer, K., 4.1  
Holzman, T., 1.3  
Homo, J.-C., 19.2, 19.6  
Hong, F., 1.3  
Hong, L. H., 1.3  
Hong, Z., 1.3  
Honig, B., 22.1, 22.3, 23.2, 23.4, 24.5, 25.1  
Hönl, H., 2.1  
Hoof, R. W. W., 18.3, 21.1, 21.2, 22.4, 24.5, 25.2  
Hoog, S. S., 1.3  
Hoogsteen, K., 1.3, 23.3  
Hook, M., 1.3  
Hooke, R., 1.2  
Hooper, C. W., 18.5, 23.3  
Hoover, W. G., 20.2  
Hope, H., 8.1, 10.1, 10.2, 12.2, 16.1, 20.2, 25.2  
Hopkins, A., 1.3  
Hoppe, W., 8.1, 13.1, 14.2, 15.1, 18.2, 19.4, 19.6  
Hordvik, A., 1.3  
Horisberger, M., 6.2  
Hörlein, H. D., 19.7  
Hornby, T., 1.3  
Horne, R. W., 19.6  
Horton, J. R., 3.1, 4.3, 8.1, 12.1, 12.2, 14.2  
Horton, N. C., 23.3  
Horwich, A. L., 4.3  
Hosseini, M. W., 4.1  
Hostomska, Z., 1.3  
Hostomsky, Z., 1.3  
Hosur, M. V., 1.3  
Hotham, V. J., 1.3  
Hou, Z., 1.3  
Houdusse, A., 13.3  
Hough, E., 1.3  
House-Pompeo, K., 1.3  
Housset, D., 1.3, 16.1, 21.1  
Houy, W., 1.3  
Hovmöller, S., 18.4  
Hovmoller, S., 19.6  
Howard, A., 7.1, 11.3, 11.4  
Howard, A. J., 1.3, 11.4  
Howard, J. A. K., 8.1, 18.5, 22.4  
Howard, J. B., 19.3  
Howell, E. E., 1.3  
Howell, P. L., 8.1, 9.1, 16.1  
Howells, A., 1.3  
Howells, M., 6.1  
Howie, A., 19.2  
Howland, E., 1.3  
Howlin, B., 18.4  
Hoy, V. J., 22.4, 24.3  
Hruby, V. J., 12.1  
Hofmann, A., 3.1, 6.1  
Hsieh, S.-H., 21.2, 22.4, 24.2, 24.4, 24.5  
Hsiou, Y., 1.3, 13.4  
Hsu, I. N., 18.2  
Hu, N.-H., 16.1  
Hu, S. H., 1.3  
Hu, X., 4.2  
Huang, C. C., 1.3, 17.2, 25.1  
Huang, H., 1.3, 4.3  
Huang, K., 1.3  
Huang, L. S., 4.2  
Huang, S., 1.3, 19.6  
Hubatsch, I., 1.3  
Hubbard, R. E., 1.3, 17.2, 21.1, 22.1, 22.2, 23.4  
Hubbard, S. J., 3.1, 22.1, 23.4  
Hubbard, S. R., 1.3  
Hubbard, T. J., 1.2, 21.1, 23.1, 24.5  
Huber, G., 26.1  
Huber, R., 1.2, 1.3, 4.2, 4.3, 5.1, 5.2, 10.2, 12.1, 12.2, 13.1, 15.2, 18.2, 18.3, 18.4, 18.5, 19.7, 20.1, 21.1, 21.2, 22.4, 23.4, 24.4, 25.2  
Huber, T., 20.1  
Huberman, E., 1.3  
Huddleston, M. J., 1.3  
Huge-Jensen, B., 21.3  
Huggins, M. L., 22.2  
Hughes, E. W., 18.1  
Hughes, H. G. III, 6.2  
Hughes, J. J., 13.1, 15.1  
Hughes, S. H., 1.3, 3.1, 4.1, 4.3, 13.4  
Hughes, W. L., 4.1  
Huginin, M., 1.3  
Hui, H. L., 3.1  
Hui Bon Hoa, G., 10.1  
Huizinga, E. G., 1.3  
Hujer, A. M., 1.3  
Hukins, D. W. L., 19.5  
Huler, E., 22.2  
Hull, R. D., 1.3  
Hull, S. E., 16.1, 25.1  
Hulsmeyer, M., 1.3  
Hultgren, S. J., 1.3  
Humblet, C., 1.3, 22.4  
Huml, K., 11.4, 18.5  
Humm, A., 12.1, 12.2  
Hummelink, T., 18.4, 21.1, 21.2, 24.2, 25.2  
Hummelink-Peters, B. G., 18.4, 21.1, 21.2, 24.2, 25.2  
Hummer, G., 23.4  
Hümmer, K., 8.1, 16.1  
Hünenberger, P. H., 20.1, 20.2  
Hung, L. W., 4.2  
Hunt, J. F., 13.4, 15.1, 17.1, 19.4, 21.1, 25.2  
Hunte, C., 4.2  
Hunter, C. A., 23.3  
Hunter, C. N., 21.1  
Hunter, N., 8.1  
Hunter, W. N., 8.1, 23.3  
Hunting, M., 23.1  
Huntington, J. A., 1.3  
Hupe, D. J., 1.3  
Hurley, J. H., 4.3  
Hurley, T. D., 1.3  
Husain, J., 12.1  
Husain, Y., 13.4  
Husi, H., 1.3  
Huss, M., 19.3  
Hussain, Z., 6.1  
Hutchinson, E. G., 21.1, 21.2, 24.5, 25.2  
Huxley, H. E., 8.1, 19.6  
Huxley, P., 1.3  
Huygens, C., 1.2  
Hwang, K. Y., 1.3, 21.3  
Hynes, R. C., 4.3  
Ibel, K., 19.4  
Igarashi, N., 5.1  
Ikehara, M., 24.4  
Ikemizu, S., 8.1  
Ikura, T., 19.3  
Ilag, L. L., 11.5, 13.1, 13.4, 19.6  
Iles, G., 7.1  
Imahori, K., 26.1  
Imoto, T., 26.1  
Impey, R. W., 20.2  
Improta, S., 19.3  
Inagami, T., 1.2  
Inaoka, T., 24.4  
Incardona, N. L., 11.5, 13.4, 19.6  
Inghardt, T., 1.3  
Ingram, J., 1.3  
Ingram, V. M., 1.2, 12.1, 12.2, 14.1, 25.2, 26.1  
Inneman, A., 6.1, 9.1  
Innis, M. A., 3.1  
Inoue, H., 19.3  
Inoue, M., 23.2  
Inoue, N., 4.2  
Inoue, T., 1.3  
Inouye, H., 19.3, 19.5  
Inouye, M., 4.3  
Iofin, M., 22.1, 23.4  
Ippolito, J. A., 22.2  
Irick, S., 6.1  
Irie, M., 1.3  
Irving, T., 8.1  
Irwin, J. J., 1.3, 15.2, 18.4, 18.5, 21.1, 25.2  
Isaacs, N. W., 1.3, 4.2, 8.1, 15.1  
Isaacson, M., 19.2, 19.6  
Isakson, P. C., 4.2  
Isenman, D. E., 1.3  
Ishida, T., 23.2  
Ishii, S., 3.1  
Ishimura, T., 6.1  
Islam, S. A., 12.1, 23.1  
Isupov, M., 1.3, 18.4, 21.2  
Ito, K., 1.3  
Ito, N., 4.3, 23.2

## AUTHOR INDEX

- Ito, Y., 19.5  
Itoh, T., 7.1  
Itzstein, M. von, 1.3  
Ivanov, D., 23.4  
Ivanova, M. I., 19.5  
Iwanenko, D., 8.1  
Iwasaki, H., 24.4  
Iwata, M., 4.2  
Iwata, S., 4.2  
Iyer, G. H., 4.3  
Iyo, H., 23.2  
Izadi, N., 1.3  
Izumi, K., 4.1
- Jack, A., 13.1, 19.3, 25.2  
Jack, W., 24.4  
Jackson, D. A., 23.4  
Jackson, M. R., 1.3  
Jackson, R. C., 1.3  
Jacobé, J., 6.2  
Jacobo-Molina, A., 1.3, 4.1, 13.4  
Jacobs, W. R. J., 1.3  
Jacobson, B. L., 23.2  
Jacobson, R. A., 12.2, 25.2, 26.1  
Jacobson, R. H., 19.6  
Jacrot, B., 19.4  
Jadhav, P. K., 23.4  
Jagels, K., 1.3  
Jager, J., 19.6  
Jahn, D., 1.3  
Jain, A., 18.2  
Jain, S., 1.3, 16.1  
Jain, S. C., 21.2, 24.2  
Jakana, J., 8.1, 19.6  
Jakeman, D., 6.2  
Jaklevic, J., 7.1  
Jakob, P., 1.3  
Jakoby, W. B., 4.1  
Jakubowski, U., 14.2  
Jakubowski, V., 8.1  
James, C. F., 1.3  
James, M. G., 26.1  
James, M. N., 22.1  
James, M. N. G., 1.3, 15.2, 18.2, 21.1, 22.4  
James, R. W., 2.1, 14.2  
James, T. L., 17.2  
Jan, R., 23.2  
Jancarik, J., 1.3, 24.4  
Janell, D., 8.1  
Janes, W., 1.3  
Janin, J., 8.1, 21.1, 22.1, 23.1  
Janson, C. A., 1.3, 19.3  
Jansonius, J. N., 1.2, 1.3, 4.1, 4.2  
Janssen, P. A. J., 1.3, 13.4  
Jap, B., 12.2, 19.6  
Jap, B. K., 4.2  
Jardetzky, T. S., 1.3  
Jarup, L., 1.3  
Jarvis, D. L., 3.1  
Jarvis, L. E., 17.2, 25.1  
Jaskolski, M., 1.3, 4.3  
Jaurrgui-Adell, J., 26.1  
Jayaram, B., 22.3  
Jaynes, E. T., 16.2  
Jean-Charles, A., 22.3  
Jeanteur, D., 19.4  
Jeenes, D. J., 26.1  
Jeffery, B. A., 13.1, 13.3  
Jeffery, C. J., 23.4  
Jeffrey, G. A., 22.2, 22.4, 26.1  
Jeffrey, P. D., 1.3  
Jelsch, C., 4.1, 18.4  
Jeng, T.-W., 19.2, 19.6  
Jenkins, J. A., 1.3, 4.2, 8.1, 12.1  
Jenkins, T. M., 1.3, 4.3, 5.1  
Jenner, G., 4.1  
Jensen, L. H., 1.3, 8.1, 12.2, 18.1, 18.5, 22.2, 25.2, 26.1  
Jerala, R., 1.3  
Jerusalimi, D., 4.1  
Jeruzalmi, D., 10.2  
Jessen, S., 1.3, 13.4  
Jessen, T. H., 4.3, 23.2  
Jesus, W. D., 1.3  
Ji, X., 1.3, 21.1, 24.4  
Jia, Z., 1.3  
Jiang, J., 24.1  
Jiang, J.-S., 17.1, 18.2, 18.4, 18.5, 23.4, 25.1, 25.2
- Jiang, W., 19.6  
Jie, L., 22.1  
Jin, B., 1.3  
Jin, L., 1.3  
Jing, J., 1.3  
Joachimski, A., 1.3, 4.3, 23.2, 23.4  
John, J., 1.3  
Johnson, C. K., 17.2, 18.4, 25.1  
Johnson, D. L., 1.3  
Johnson, E. F., 1.3  
Johnson, G. E., 19.3  
Johnson, J., 17.2, 19.3  
Johnson, J. E., 1.2, 1.3, 4.1, 5.1, 8.1, 11.5, 12.2, 13.4, 19.3, 19.6  
Johnson, J. S., 1.3  
Johnson, L. L., 1.3  
Johnson, L. N., 1.2, 5.1, 8.1, 8.2, 12.1, 14.2, 24.4, 25.2, 26.1  
Johnson, M. W., 6.2  
Johnson, O., 17.1, 21.1, 22.4, 24.3  
Johnson, W. H., 1.3  
Johnson, W. W., 24.4  
Johnston, J. E., 4.1  
Johnston, S., 23.4  
Johnston, T. W., 6.1  
Jolidon, S., 1.3  
Jollès, J., 26.1  
Jollès, P., 13.3, 26.1  
Jolliffe, L. K., 1.3  
Jones, D. T., 23.1, 24.5  
Jones, E. Y., 1.3, 10.1  
Jones, G., 22.4  
Jones, H. D., 1.3  
Jones, I., 3.1  
Jones, M. L., 24.5  
Jones, N. D., 1.3  
Jones, R., 15.1, 16.1, 25.2  
Jones, R. G., 1.3  
Jones, S., 23.1, 24.5  
Jones, T. A., 1.2, 1.3, 13.4, 17.1, 17.2, 18.1, 18.3, 18.4, 19.6, 21.1, 21.2, 22.1, 25.1, 25.2  
Jones, Y., 1.3, 13.4  
Jonsson, B. H., 1.3  
Jonsson, T., 23.4  
Jontes, J., 19.2  
Joo, J.-H., 3.1  
Jordan, S. R., 1.3  
Jorgensen, W. L., 20.2  
Joris, B., 21.1  
Joris, L., 22.4  
Jornvall, H., 17.2  
Joseph-McCarthy, D., 20.2, 21.2  
Joshi, P., 4.3, 12.1  
Jouve, H. M., 1.3  
Jovin, T. M., 23.3  
Joyce, K. L., 19.5  
Judge, R. A., 4.1  
Judson, H. F., 1.2  
Jullien, M., 4.1  
Junemann, R., 19.4  
Junk, M., 7.1  
Juo, Z. S., 23.3  
Jurnak, F., 4.1  
Justin, N., 1.3  
Jynge, K., 1.3
- Kaback, H. R., 4.3  
Kabashima, T., 1.3  
Kabsch, W., 1.3, 8.2, 9.1, 11.1, 11.3, 11.4, 17.2, 19.5, 21.2, 22.1, 24.5, 25.1, 25.2  
Kachurin, A. M., 4.2  
Kaftory, M., 22.4  
Kage, T., 1.3  
Kahn, R., 6.1, 8.1, 9.1, 14.2  
Kajiura, K., 19.3  
Kalb (Gilboa), A. J., 8.1, 18.5, 21.2  
Kaler, E. W., 4.1  
Kalish, V. J., 1.3  
Kalisz, H. M., 1.3  
Kalk, K. H., 1.3, 19.6  
Kalk, K. K., 8.1  
Kallai, O. B., 1.2  
Kallarakal, A. T., 1.3  
Kallen, J., 1.3, 19.7  
Kalman, E. T., 4.3  
Kalman, Z. H., 8.2
- Kam, Z., 4.1  
Kamer, G., 1.2, 1.3, 4.1, 8.1, 11.5, 12.2, 13.4  
Kamiya, N., 8.1  
Kamp, M. van de, 12.2  
Kamper, J., 1.2  
Kan, C. C., 1.3  
Kane, D. J., 19.3  
Kane, J. F., 3.1  
Kanei-Ishii, C., 3.1  
Kang, S., 3.1  
Kang, S. W., 1.3  
Kannan, K. K., 1.3  
Kanngiesser, U., 19.6  
Kantardjiev, K. A., 1.3  
Kanters, J. A., 22.4  
Kanyo, M., 7.2  
Kapoor, T. M., 1.3  
Kapp, O. H., 22.1  
Kappock, T. J., 16.1  
Kaptein, R., 18.3, 20.1, 24.5, 25.2  
Karasawa, Y., 6.2  
Kärcher, J., 16.1  
Karen, V. L., 5.1  
Karjalainen, K., 1.3  
Karle, I. L., 16.1  
Karle, J., 4.3, 8.1, 14.2, 15.1, 16.1, 16.2, 25.2  
Karlsson, R., 1.3, 4.1, 4.2  
Karnbrock, W., 12.1, 12.2  
Karpus, M., 15.1, 15.2, 18.1, 18.2, 19.5, 19.6, 19.7, 20.1, 20.2, 21.2, 22.1, 22.3, 22.4, 23.4, 25.1, 25.2  
Karplus, P. A., 1.3, 4.1, 9.1, 21.1, 23.4, 25.2  
Karpukhina, S. Ya., 4.1  
Karpusas, M., 1.3  
Karsenti, E., 19.6  
Kartha, G., 1.2, 14.1, 19.5  
Kashima, A., 1.3  
Kashino, S., 22.4  
Kasper, J. S., 1.2  
Kastelein, R. A., 3.1  
Kataoka, M., 19.3  
Katayama, C., 11.4  
Katayanagi, K., 24.4  
Kathman, A., 4.1  
Katoh, E., 4.1  
Katsube, Y., 1.3  
Katsura, T., 4.1  
Katunuma, N., 1.3  
Katz, J. J., 19.4  
Katz, L., 1.3  
Katz, R. A., 4.3  
Kaufman, R. J., 3.1  
Kaufmann, W., 5.2  
Kauzmann, W., 2.1, 22.1, 22.2, 23.4  
Kawamura, N., 1.3  
Kawar, Z. S., 3.1  
Kawashima, E., 3.1  
Kay, L. E., 19.7  
Kayushina, R. L., 13.1  
Ke, H., 1.3, 16.1  
Keeley, A., 1.3  
Keeling, J., 1.3, 13.4  
Keeling, K., 4.1  
Keith, G., 4.1  
Keller, P. A., 21.1  
Keller, T. A., 4.2, 17.1  
Keller, W., 13.4  
Kellermann, J., 4.3  
Kelley, R. F., 1.3  
Kelley, R. L., 23.2  
Kelly, J. A., 21.1, 22.1  
Kemmer, J., 7.1  
Kemink, J., 20.1  
Kemp, C. W., 14.2  
Kempf, A., 19.3  
Kempf, D. J., 1.3  
Kendrew, J. C., 1.2, 12.1, 14.2, 23.3, 23.4, 26.1  
Kennard, O., 1.3, 12.1, 14.2, 17.1, 18.2, 18.4, 20.1, 21.1, 21.2, 22.2, 22.4, 23.3, 24.2, 24.3, 24.5, 25.2  
Kennedy, P. E., 12.1  
Kennedy, J., 19.6  
Kenney, W. C., 1.3
- Kent, S. B., 1.3  
Kenyon, G. L., 1.3, 17.2  
Kercher, M. A., 23.3  
Kerfeld, C. A., 5.1  
Kergil, D. L., 19.3  
Kern, D., 4.1  
Kerwin, S. M., 17.2  
Kessel, M., 19.6  
Kessler, H., 20.1  
Khalak, H. G., 8.1, 14.2, 16.1, 25.2  
Khan, G., 18.4  
Khang, Y., 1.3  
Khodyreva, S., 23.2  
Kidera, A., 4.2, 18.3, 19.2, 19.6  
Kiefersauer, R., 5.1, 5.2  
Kiefhaber, T., 19.3  
Kihara, H., 19.3, 19.6  
Kikuchi, T., 23.1  
Kilpatrick, P. J., 17.2  
Kim, H., 1.3, 4.2  
Kim, J. J., 1.2, 1.3  
Kim, J. L., 1.3, 23.3  
Kim, K. H., 22.1  
Kim, K. K., 1.3, 4.2, 21.3  
Kim, M. H., 1.3  
Kim, P. S., 1.3  
Kim, R., 3.1  
Kim, S., 11.1, 11.4  
Kim, S. H., 1.2, 1.3, 4.2, 23.4  
Kim, S.-H., 3.1, 12.2, 14.2, 15.2, 16.1, 18.2, 21.1, 24.4, 25.2  
Kim, Y., 1.3, 23.3  
Kimble, W. L., 4.1  
Kimura, Y., 4.2, 19.2, 19.6  
Kincaid, B. M., 8.1  
King, A., 19.6  
King, J., 3.1, 19.3  
King, L. A., 3.1  
Kingma, J., 4.1  
Kingston, R. E., 3.1  
Kingston, R. L., 5.1  
Kinning, A. J., 16.1  
Kipnis, I., 7.1  
Kirby, I., 1.3, 13.4  
Kirchhofer, D., 1.3  
Kirkegard, L., 4.1  
Kirkpatrick, P., 6.1  
Kirkpatrick, S., 18.2  
Kirschner, D. A., 19.3, 19.5  
Kirz, J., 6.1  
Kiselev, N. A., 19.6  
Kisiel, W., 1.3  
Kisker, C., 19.3  
Kisseberth, N., 19.6  
Kissing, C. R., 1.3, 13.1, 23.2  
Kistler, J., 19.6  
Kitadokoro, K., 1.3  
Kitao, A., 23.4  
Kitov, P. I., 1.3  
Kitzing, E. von, 23.3  
Kizaki, H., 1.3  
Kjeldgaard, M., 13.4, 17.1, 18.4, 19.4, 19.6, 21.1, 21.2, 25.1, 25.2  
Klaholz, B. P., 10.2  
Klanner, R., 7.1  
Klebe, G., 22.4  
Kleffer, J. C., 6.1  
Klei, H. E., 13.1  
Kleim, J. P., 1.3  
Klein, B. J., 22.3  
Klein, H., 8.1  
Klein, M. H., 1.3  
Klein, M. L., 20.2  
Klein, O., 2.1  
Kleine, T., 1.3  
Klem, T. J., 14.2  
Kleymann, G., 4.2  
Kleywegt, G. J., 1.3, 13.4, 17.1, 18.1, 18.2, 18.3, 21.1, 21.2, 22.1, 25.1, 25.2  
Klimpel, K. R., 1.3  
Kline, H. E., 17.2  
Klippenstein, G. L., 15.1  
Kloek, A. P., 1.3  
Klueppelberg, H. U., 19.6  
Klug, A., 1.2, 12.1, 13.4, 16.2, 19.2, 19.5, 19.6, 22.4, 24.2, 24.4
- Knapke, E., 19.2  
Knauper, V., 1.3  
Knesch, G., 19.6  
Knigge, M., 1.3  
Knight, J. B., 19.3  
Knight, S. D., 1.3  
Knighton, D. R., 1.3  
Knull-Jones, J., 22.2  
Knott, R., 6.2, 24.4  
Knott, R. B., 6.2  
Knott, V., 1.3  
Knox, J. R., 1.3, 17.1, 21.1  
Knüpfer, W., 6.1  
Ko, T.-P., 1.3, 18.5  
Kobayashi, K., 1.3  
Kobe, B., 18.5  
Kobos, P., 22.2  
Koch, M., 6.2  
Koch, M. H. J., 19.3, 19.4  
Kocher, J. P., 22.1  
Kocsis, E., 19.6  
Koebnik, R., 4.2  
Koehl, E., 23.2  
Koekoek, R., 1.2  
Koelln, I., 8.1  
Koenig, B. W., 6.2  
Koenig, D. F., 1.2, 22.1, 26.1  
Koepeke, J., 4.2  
Koetzle, T. F., 1.3, 12.1, 14.2, 17.1, 18.4, 20.1, 21.1, 21.2, 23.1, 24.1, 24.2, 24.3, 24.5, 25.2  
Kohara, M., 1.3  
Kohl, H., 6.1  
Kohlbrener, W. E., 1.3  
Kohli, E., 19.3  
Kohlstaedt, L. A., 1.3  
Kohnert, U., 1.3  
Kohn, M., 1.3  
Kohra, K., 6.1, 8.1  
Koizumi, S., 6.2  
Kok, A. de, 19.6  
Kok, G. B., 1.3  
Kokkinidis, M., 1.3, 4.1, 18.3, 24.4  
Kolaskar, A. S., 21.1  
Kolatk, P., 22.1  
Kolks-Gawinowicz, M. A., 12.1, 14.2  
Kollman, P. A., 20.2, 25.1  
Kolodziej, S. J., 19.6  
Kolter, R., 19.6  
Komarov, F. K., 6.1  
Komatsu, H., 4.1, 5.1  
Komatsu, T., 1.3  
Komives, E. A., 23.4  
Komiya, H., 4.2  
Komura, S., 6.2  
Kondoh, A., 3.1  
Kong, L. B., 19.6  
König, N., 4.2  
König, S., 19.3  
Konigsberg, W. H., 1.3  
Konnert, J. H., 4.1, 18.1, 18.4, 18.5, 21.1, 25.1, 25.2  
Konno, M., 13.4  
Konrad, S., 19.3  
Kontopidis, G., 1.3  
Koo, H.-S., 23.3  
Koonin, E. V., 1.3  
Kopka, I. E., 1.3  
Kopka, M. L., 1.3, 23.3  
Kopp, M. K., 6.2  
Koradi, R., 17.2  
Korn, A. P., 17.1, 21.1  
Kornberg, R., 19.6  
Kornberg, T. B., 23.2  
Koronakis, E., 14.2  
Koronakis, V., 14.2  
Korszun, Z. R., 1.3, 8.1  
Kort, R., 8.2  
Korty, B. D., 16.1  
Koshland, D. E., 8.2  
Kossiakoff, A. A., 1.3, 19.1, 23.4  
Koster, A. J., 19.6  
Kostorz, G., 6.2  
Kostrewa, D., 1.3, 23.3, 24.4  
Koszalak, S., 4.1  
Kotsifaki, D., 1.3  
Koullich, D., 19.6

## AUTHOR INDEX

- Kouwijzer, M. L. C. E., 8.1  
 Kovacic, S., 3.1  
 Koymans, L., 1.3, 13.4  
 Kozack, R., 22.3  
 Kozaki, S., 6.1  
 Kozarich, J. W., 1.3  
 Kozasa, M., 11.4  
 Kozin, M. B., 19.3, 19.4  
 Krahn, J. M., 14.2  
 Kramer, B., 22.4  
 Kramer, R. M., 1.3  
 Kratky, C., 8.1, 10.1, 10.2  
 Kratky, O., 5.2, 19.3, 19.4  
 Kraulis, P. J., 17.2, 22.1, 23.1, 23.4, 25.1, 25.2  
 Krause, C. D., 1.3  
 Krause, K. L., 1.3, 7.1, 24.4  
 Krauss, N., 1.3, 16.1  
 Kraut, J., 1.2, 1.3, 26.1  
 Krauth-Siegel, R. L., 1.3  
 Kreevoy, M. M., 23.2  
 Kreider, J. W., 19.6  
 Kregel, F., 1.3  
 Krell, T., 1.3  
 Kremer, J. R., 17.2  
 Kremer, M., 13.4, 22.1  
 Krengel, U., 1.3  
 Kretsinger, R. H., 1.3, 18.5, 25.2  
 Kreusch, A., 4.2  
 Krishnaswamy, S., 13.4  
 Krieter, P. A., 1.3  
 Krivanek, O. L., 19.6  
 Kroeger Koepke, M., 1.3, 13.4  
 Kroeger Smith, M. B., 1.3, 13.4  
 Krogh, A., 1.3  
 Krogmann, D. W., 5.1  
 Kroon, J., 1.3, 19.3, 22.4, 25.1  
 Krueger, J. K., 3.1, 19.3  
 Krueger, S., 6.2  
 Krüger, E., 6.2  
 Krüger, P., 20.1  
 Krukowski, A. E., 14.2, 15.1, 18.2, 25.2  
 Krumbholz, S., 8.1  
 Kryger, G., 19.3  
 Krylova, I., 19.4  
 Krzywdka, S., 18.4, 21.2  
 Kubalek, E. W., 19.6  
 Kubota, H., 1.3  
 Kucera, R. B., 3.1  
 Kuchnir, L., 20.2, 21.2  
 Kuchomov, A., 19.6  
 Kuczera, K., 20.2, 21.2  
 Kudryavtsev, A. B., 5.1  
 Kuge, M., 4.3  
 Kugimiya, W., 1.3  
 Kühlbrandt, W., 4.2, 19.2, 19.6  
 Kühn, K., 12.2  
 Kuhn, L. A., 22.1, 23.4  
 Kuhn, P., 1.3, 21.1  
 Kuhn, R. J., 1.3, 11.5, 19.6  
 Kuik, A. van, 21.1  
 Kukla, D., 13.1  
 Kulke, M. H., 3.1  
 Kumakhov, M. A., 6.1  
 Kumar, N. M., 19.2, 19.6  
 Kundrot, C. E., 22.2  
 Kuntz, I. D., 1.3, 5.2, 22.4  
 Kunz, C., 1.3  
 Kuo, A. L., 4.2, 23.2  
 Kuo, C. F., 24.4  
 Kuo, L. C., 1.3  
 Kuprin, S., 19.3, 19.4  
 Kurihara, H., 1.3  
 Kurihara, K., 4.1  
 Kuriyan, J., 1.3, 15.1, 15.2, 18.1, 18.2, 19.5, 19.6, 20.1, 20.2, 21.1, 25.1, 25.2  
 Kurumbail, R. G., 1.3, 4.2  
 Kusaba, T., 19.5  
 Kuszewski, J., 17.1, 18.2, 18.4, 25.1, 25.2  
 Kuwajima, K., 19.3  
 Kuyper, L. F., 1.3  
 Kuzin, A. P., 1.3, 21.1  
 Kuznetsov, Y. G., 4.1  
 Kvick, A., 8.1  
 Kwon, J.-B., 3.1  
 Kwong, A. D., 1.3  
 Kwong, P. D., 1.3, 3.1, 4.3, 13.3, 24.1  
 Kycia, J. H., 4.3  
 Kyogoku, Y., 24.5  
 Kyriakidis, C. E., 16.1  
 La Fortelle, E. de, 1.3, 8.1, 14.2, 16.1, 25.1  
 Laarhoven, P. J. M., 18.2  
 Laba, D., 1.3  
 Labahn, J., 12.1, 23.2  
 Labananskas, M., 4.1  
 LaBean, T. H., 25.2  
 Laber, B., 1.3  
 Labouesse, P., 19.6  
 Labouré, S., 8.2  
 Labrie, F., 1.3  
 Lacapere, J.-J., 19.6  
 Lackner, H., 16.1  
 Lacks, S. A., 1.3  
 Lacy, D. B., 1.3  
 Ladbury, J. E., 23.4  
 Ladenstein, R., 1.3, 12.2  
 Ladipo, F. T., 22.4  
 Ladjadj, M., 19.6  
 Ladner, J. E., 1.2, 4.1, 12.1, 24.4  
 Lafer, E. M., 4.1  
 Lafont, S., 4.1, 19.3, 20.2  
 Lagacé, L., 1.3, 13.4  
 Lah, M. S., 1.3  
 Lai, E., 23.4  
 Lai, Z., 1.3  
 Lairson, B. M., 8.1  
 Lam, P. Y. S., 23.4  
 Lamb, W., 8.1  
 Lambeir, A. M., 1.3  
 Lambert, M. H., 1.3  
 Lamed, R., 23.1  
 Lamm, G., 22.3  
 Lamont, S., 19.6  
 Lamy, J. N., 19.6  
 Lamyi, J. K., 4.2  
 Lamzin, V. S., 8.1, 15.1, 16.1, 18.1, 18.3, 18.4, 18.5, 21.1, 21.2, 25.1, 25.2  
 Lan, J. M. van der, 10.1  
 Lancaster, C. R. D., 4.2  
 Land, T. A., 4.1  
 Landau, E. M., 4.2, 8.1, 19.6  
 Landau, L. D., 13.2  
 Landry, D., 3.1  
 Langan, P., 19.5  
 Lange, C., 4.2  
 Lange, G., 19.3  
 Langen, H., 4.3  
 Langer, J. A., 19.4  
 Langer, R., 19.6  
 Langermann, S., 1.3  
 Langhorst, U., 23.4  
 Langmore, J., 19.6  
 Langowski, L., 4.1  
 Langridge, R., 17.2, 18.5, 19.5, 23.3, 25.1  
 Langs, D. A., 15.1, 16.1, 25.2  
 Langsetmo, K., 22.3  
 Lantwin, C. B., 1.3  
 Lanyi, J. K., 19.6, 25.2  
 Lanza, T. J., 1.3  
 Larder, B. A., 1.3  
 Larsen, F. K., 11.2  
 Larson, A. C., 6.2  
 Laskowski, R. A., 18.1, 18.3, 18.4, 18.5, 21.1, 21.2, 21.3, 22.4, 24.5, 25.1, 25.2  
 Lata, R. K., 19.6  
 Lattman, E. E., 1.3, 5.2, 13.1, 13.2, 14.2, 15.1, 19.3, 25.2  
 Lau, F. T. K., 20.2, 21.2  
 Lau, H. S. M., 8.1  
 Lauher, J. W., 17.2  
 Lautenschlager, P., 4.1  
 Lautwein, A., 1.3  
 Lauwereys, M., 4.3  
 LaVallie, E. R., 3.1  
 Laver, W. G., 1.3, 13.4  
 Lavery, R., 23.3, 24.2  
 Lavington, S., 26.1  
 Lavrik, O., 23.2  
 Lawrence, C. E., 4.3  
 Lawrence, M. C., 13.1  
 Lawson, C. L., 1.3, 23.2, 23.4  
 Lawson, D. M., 4.3, 21.3  
 Lawton, J. A., 19.6  
 Lazaridis, T., 23.4  
 Le, H. V., 1.3  
 Le Motte, P., 21.1  
 Leach, A. R., 22.4  
 Leahy, D. J., 4.3, 12.1  
 Leavens, W., 1.3  
 Lebech, B., 6.2  
 Lebedev, A., 1.3, 18.1, 18.4, 18.5, 25.1  
 Leberman, R., 4.1, 8.1, 19.4, 19.5  
 Lebioda, L., 16.1  
 Lebron, J. A., 1.3  
 Lecomte, C., 18.4  
 Lecroisey, A., 1.3  
 Ledvina, P. S., 23.2  
 Lee, A. T., 1.3, 4.2  
 Lee, A. Y., 1.3  
 Lee, B., 17.2, 22.1, 24.5, 25.1  
 Lee, C. H., 1.3  
 Lee, E. J., 19.5  
 Lee, F. S., 22.3  
 Lee, H., 20.2  
 Lee, H. W., 3.1  
 Lee, J. K., 4.2  
 Lee, J. O., 1.3  
 Lee, J. W., 4.2  
 Lee, K. H., 1.3  
 Lee, K. Y., 5.2  
 Lee, L., 22.2, 22.4  
 Lee, S., 11.5  
 Lee, W., 1.3  
 Lee, W.-M., 19.6  
 Leeuw, S. W. de, 20.2  
 Lefauchaux, F., 4.1  
 Lefevre, J. F., 19.3  
 LeGall, J., 16.1  
 Legg, M. J., 23.2  
 Legon, A. C., 22.2  
 Legrand, A., 8.2  
 Legrand, L., 4.1  
 LeGrice, S. F. J., 19.6  
 Leherte, L., 22.4  
 Lehmann, M. S., 6.2, 8.1, 11.2, 19.1, 19.4  
 Lehmann, W. D., 4.2, 19.6  
 Lehn, J.-M., 4.1, 22.4  
 Leiberman, P. M., 1.3  
 Leicester, S. E., 22.1  
 Leigh, J. B., 19.5  
 Leippe, D., 19.6  
 Leiserowitz, L., 22.4  
 Leith, A., 19.6  
 Leja, C., 4.1  
 Lellouche, G. S., 6.2  
 LeMaster, D. M., 3.1, 4.3, 8.1, 12.1, 12.2, 14.2  
 Lemay, S. G., 4.1  
 Lemieux, R. U., 26.1  
 Lemmen, C., 22.4  
 Lemon, S. M., 1.3  
 Lemonnier, M., 6.1, 8.1  
 Lenarcic, B., 1.3  
 Lengauer, T., 22.4  
 Lenhoff, A., 22.3  
 Lenhoff, A. M., 4.1  
 Lenk, H. P., 26.1  
 Lentfer, A., 8.2  
 Lentz, P. J. Jr, 1.2  
 Leonard, G. A., 8.1  
 Leonard, S. A., 1.3  
 Leopold, H., 5.2  
 Lepault, J., 19.2, 19.3, 19.6  
 Leppla, S. H., 1.3  
 Lesk, A. M., 1.3, 21.1, 22.1, 23.1  
 Leslie, A. G., 1.3  
 Leslie, A. G. W., 8.1, 11.1, 11.2, 11.4, 11.5, 13.1, 13.4, 14.2, 15.1, 19.5, 19.6, 23.3, 25.1, 25.2  
 Lessinger, L., 16.1, 25.1  
 Lesslauer, W., 1.3  
 LeTrong, I., 1.3  
 Leu, C. T., 1.3  
 Levane, S. D., 23.3  
 Levi, S., 4.3  
 Levin, L., 8.1  
 Levine, M. M., 1.3  
 Levinthal, C., 17.2  
 Levitt, M., 20.1, 21.1, 22.1, 22.2, 22.4, 23.1, 23.3, 23.4, 25.2  
 Levorse, D. A., 1.3  
 Levy, D., 19.6  
 Levy, H. A., 18.1, 19.6  
 Levy, M. A., 1.3  
 Levy, R. M., 18.2, 20.2  
 Lewandowski, F. A., 4.1  
 Lewi, P. J., 1.3  
 Lewicki, J. A., 1.3  
 Lewis, C. T., 1.3  
 Lewis, E. E., 6.2  
 Lewis, M., 12.2, 14.2, 22.1, 22.4, 23.3, 25.2  
 Lewis, R., 8.1  
 Lewit-Bentley, A., 4.2  
 L'Hermite, G., 1.3  
 L'hoir, C., 1.3  
 Li, C., 16.1  
 Li, C. M., 1.3  
 Li, H., 1.3  
 Li, J., 4.3  
 Li, J. Y., 12.1  
 Li, M., 5.1, 23.1  
 Li, M. L., 1.3  
 Li, N., 16.1  
 Li, R., 1.3  
 Li, Y., 1.3, 19.6  
 Li, Z., 4.2  
 Li de la Sierra, I., 1.3  
 Liang, H., 1.3  
 Liang, J., 22.1  
 Liberman, D., 14.2  
 Libert, M., 21.1  
 Libeu, C. P., 4.2  
 Libson, A. M., 1.3  
 Liddington, R., 1.3, 8.1  
 Liepinsh, E., 19.7, 23.4  
 Liesum, A., 4.1  
 Lietzke, R., 19.4  
 Lifchitz, A., 13.3, 25.2  
 Lifschitz, E. M., 13.2  
 Lifson, S., 22.2  
 Liljas, A., 1.3, 8.1, 23.1  
 Liljas, L., 13.4, 17.1, 23.2  
 Liljefors, T., 22.4  
 Lillie, R. A., 6.2  
 Lim, J. S., 15.2  
 Lim, K., 4.1  
 Lim, V. I., 22.1  
 Lim, W. A., 22.1  
 Lin, D., 24.1  
 Lin, J. H., 1.3  
 Lin, S. W., 1.3  
 Lin, T. Y., 1.3  
 Lin, Z., 13.4  
 Lindahl, T., 1.3, 23.2  
 Lindau, I., 8.1  
 Lindblom, G., 4.2  
 Linderström-Lang, K. U., 1.2  
 Lindley, P. F., 1.3, 5.2, 8.1, 13.3  
 Lindsey, J., 1.2  
 Lindsog, S., 1.3  
 Ling, H., 1.3  
 Link, T. A., 4.2  
 Linschoten, M., 1.3  
 Lionetti, C., 23.1  
 Lipari, G., 20.2  
 Lipka, J. J., 12.1  
 Lipman, D. J., 24.5  
 Lippard, S. J., 12.1  
 Lipscomb, W. N., 1.2, 1.3, 12.1, 26.1  
 Lipson, H., 1.2, 26.1  
 Listowsky, I., 1.3  
 Litt, A., 10.2  
 Little, C., 1.3  
 Littlechild, J. A., 1.3  
 Liu, A. K., 26.1  
 Liu, B. S., 23.2  
 Liu, H., 1.3, 19.6  
 Liu, J., 1.3, 13.4  
 Liu, K., 23.4  
 Liu, K. D., 1.3  
 Liu, S., 1.3  
 Liu, S.-P., 16.1  
 Liu, U., 10.2  
 Liu, W., 19.6  
 Liu, Y., 1.3, 4.3  
 Liu, Y.-S., 16.1  
 Livingstone, J. C., 4.3  
 Livnah, O., 1.3  
 Lloyd, L. F., 4.1  
 Lo Bello, M., 1.3  
 Lobanova, G. M., 4.1  
 Lobkovsky, E., 1.3  
 Locher, K. P., 4.2  
 Lockhart, A., 19.6  
 Locklin, S., 6.1  
 LoConte, L., 23.1  
 Loebmann, H., 1.3  
 Loetscher, H., 1.3  
 Logan, D., 22.1  
 Loll, P. J., 1.3, 4.2, 16.1  
 Lomas, D. A., 1.3  
 Lommerse, J. P. M., 22.4, 24.3  
 Long, A., 12.1, 23.2  
 Long, A. M., 1.3  
 Long, J. V. P., 6.1, 9.1  
 Long, M. M., 4.1  
 Longacre, S., 1.3  
 Longhi, S., 18.3, 21.2  
 Longley, K., 1.3  
 Longoni, A., 7.1  
 Lonsdale, K., 1.2  
 Lonsdale-Yardley, K., 1.2  
 Looney, D. J., 1.3  
 Lopez, N., 25.1  
 Lopez-Otin, C., 1.3  
 Lorber, B., 4.1  
 Lorensen, W. E., 17.2  
 Lorenz, M., 19.5  
 Loris, R., 23.4  
 Lottspeich, F., 5.2  
 Lotz, W., 6.1  
 Lougheed, J. C., 23.4  
 Lounnas, V., 23.4  
 Love, R. A., 1.3  
 Love, W. E., 13.1  
 Lovejoy, B., 1.3  
 Lovell, C. R., 16.1  
 Lovell, M., 7.1  
 Lovell, S. C., 25.2  
 Lovgren, S., 1.3  
 Low, B. W., 5.2, 10.2  
 Lowde, R. D., 6.2  
 Lowe, D. M., 22.2  
 Lowe, G., 26.1  
 Lowe, J., 1.3  
 Löwe, J., 12.2  
 Lowenjaup, K., 23.3  
 Lowrance, J. L., 7.2, 8.1  
 Lu, A., 3.1  
 Lu, G., 25.1  
 Lu, H.-H., 22.1  
 Lu, P., 23.3  
 Lu, X., 1.3, 13.4  
 Lubini, P., 16.1  
 Lubkowski, J., 21.1  
 Lucas, J., 22.4  
 Luchinat, C., 16.1, 19.7  
 Luckow, V. A., 3.1  
 Ludemann, S., 20.2  
 Ludwig, B., 7.1  
 Ludwig, B., 4.2  
 Ludwig, M. L., 1.2, 1.3  
 Luecke, H., 4.2, 19.6, 22.3, 23.2, 25.2  
 Luft, B. J., 1.3  
 Luft, J. R., 4.1  
 Luger, K., 8.1  
 Luginbühl, P., 19.7  
 Luisi, B., 14.2  
 Luisi, B. F., 23.2, 23.4  
 Lukatela, G., 1.3  
 Luker, K. E., 1.3  
 Lundell, D. J., 1.3  
 Lunin, V. Yu., 15.1, 15.2  
 Lunn, C. A., 1.3  
 Luo, C., 19.6  
 Luo, J., 23.1  
 Luo, J., 1.2, 1.3, 8.1, 11.5, 12.2, 13.4  
 Luong, C., 4.2  
 Luque, F. J., 23.4  
 Luscombe, N. M., 25.1  
 Lustbader, J. W., 12.1, 14.2  
 Luther, M. A., 1.3  
 Luther, P. K., 19.6



## AUTHOR INDEX

- Lüthy, R., 21.1, 21.2, 21.3, 25.2  
Lutter, R., 8.1, 14.2  
Luty, B., 22.3  
Lutz, G., 7.1  
Luzzago, A., 4.3  
Luzzati, V., 15.2, 18.2, 18.5, 19.4, 21.1  
Lynch, R. E., 13.1, 13.4, 15.1, 19.6, 25.2  
Lynden-Bell, R. M., 22.1
- Ma, D., 1.3  
Ma, N. T., 3.1  
Máaza, M., 6.2  
McAlister, J. P., 17.2  
MacArthur, M. W., 18.1, 18.3, 21.1, 21.2, 21.3, 22.4, 24.5, 25.2  
McAuley-Hecht, K., 1.3  
McCaffrey, P. G., 1.3  
Maccallum, P. H., 22.4  
McCammon, J. A., 19.6, 20.2, 22.3  
McCance, S. G., 1.3  
McCarroll, L., 3.1  
McClellan, A. L., 22.4  
McClelland, A., 22.1  
McClure, D. B., 1.3  
Maccoss, M., 1.3  
McCourt, M. P., 16.1  
McCoy, J. M., 3.1  
McCrea, P. D., 19.4  
McCutcheon, J. P., 1.3  
McDermott, G., 4.2, 8.1  
MacDonald, C. A., 6.1  
McDonald, I. K., 21.1, 22.2, 25.1  
McDonald, J. J., 4.2  
McDonnell, J., 1.3  
McDowall, A. W., 19.2, 19.6  
MacDowell, A. A., 6.1  
McDowell, R. S., 19.1, 23.4  
McElroy, A. B., 1.3  
McElroy, H. E., 1.3, 4.3  
McEwen, B. F., 19.6  
Macfarlane, E. L. A., 4.3  
McGeehan, G., 1.3  
MacGillivray, C. H., 19.5  
McGlone, M. L., 3.1  
McGrath, M. E., 1.3  
McGrath, W. J., 1.3  
McGuinness, L., 1.3  
McGuire, R. F., 23.4  
Machin, P. A., 8.1, 8.2, 13.2, 26.1  
Macia, F., 1.3  
McIntosh, J. R., 17.2  
McIntyre, K., 1.3  
McKay, D. B., 1.3, 19.3, 22.2  
MacKay, M., 1.2  
McKeever, B. M., 1.3  
McKenna, R., 11.5, 13.1, 13.4, 15.1, 19.6, 25.2  
MacKenzie, D. A., 26.1  
McKenzie, H. A., 23.4  
MacKerell, A. D., 20.2, 21.2, 25.1  
McKerrow, J. H., 1.3  
McKinlay, M. A., 1.3, 22.1  
McKinney, B. R., 11.5  
MacKinnon, R., 4.2, 23.2  
McKinstry, W. J., 1.3  
McLachlan, A. D., 17.1, 22.1, 22.4  
McLachlan, D. Jr., 1.2  
McLaughlin, P. J., 1.3, 8.1  
McLean, J., 1.3  
McMahon, B., 21.2  
McMorrow, D. F., 14.2  
McNab, C. G. A., 19.5  
Macnab, S. J., 19.6  
McNeil, P., 21.1  
McPherson, A., 1.2, 4.1, 5.1, 18.5, 24.4  
McPherson, M. J., 3.1  
McPhillips, T. M., 4.2  
McQueney, M. S., 1.3  
Macrae, C. F., 22.4, 24.3  
MacRae, T. P., 19.5  
McRee, D. E., 1.3, 5.1, 12.2, 18.1, 19.3, 21.1, 24.4, 25.1, 25.2  
McSweeney, S., 6.1, 7.2, 8.1, 8.2, 9.1, 19.3
- McTigue, M. A., 1.3  
Madan, B., 22.1  
Madden, D. R., 24.1  
Madden, M., 7.1  
Madej, T., 23.1, 24.5  
Mader, A. W., 8.1  
Madison, V. S., 1.3  
Madson, N. B. J., 4.1  
Madura, J., 20.2, 22.3  
Maeder, D. L., 4.1  
Maekawa, T., 3.1  
Maes, D., 23.4  
Magari, S. R., 1.3  
Magdoff, B. S., 12.2, 14.2, 26.1  
Magerl, A., 6.2  
Magnus, K. A., 1.3  
Mahadevan, D., 13.3  
Maier, P., 1.3  
Maier-Leibnitz, H., 6.2  
Maignan, S., 4.1  
Maigret, B., 21.1  
Main, P., 1.2, 8.1, 13.2, 13.4, 14.2, 15.1, 15.2, 16.1, 18.4, 25.1, 25.2  
Mainfroid, V., 1.3, 21.1  
Maiorov, V., 21.1  
Mair, G. A., 1.2, 9.1, 22.1, 23.2, 26.1  
Maiuzza, R. A., 23.4  
Majkrzak, C. F., 6.2  
Makino, Y., 1.3  
Makowski, I., 8.1, 10.1, 10.2, 12.1  
Makowski, L., 19.5  
Makrides, S. C., 3.1  
Malamashkevish, V. N., 1.3  
Malby, R., 8.1, 19.6  
Malchiodi, E. L., 1.3  
Malcolm, B. A., 1.3  
Maldonado, E., 1.3  
Maldonado, F., 1.3  
Mallessa, R., 19.3  
Malfois, M., 4.1, 19.3  
Malhotra, A., 19.6  
Malik, P., 1.3  
Malin, R., 23.4  
Malinchik, S. B., 19.5  
Malinski, J. A., 4.3  
Malkin, A. J., 4.1  
Mallorga, P., 1.3  
Maluszynska, H., 22.4  
Mammen, M., 22.4  
Mancia, F., 10.2  
Mancini, E. J., 19.6  
Mande, S. C., 1.3  
Mandelkow, E., 1.2, 1.3, 19.3  
Mandelkow, E. M., 19.3  
Mandelkow, H., 1.3  
Mandl, C., 1.3  
Mangel, W. F., 1.3, 23.4  
Mangeot, J.-P., 4.1  
Maniatis, T., 3.1  
Mankovich, J. A., 1.3  
Mann, K., 1.3  
Mannervik, B., 1.3, 21.1  
Mannherz, H. G., 1.3, 17.2  
Manning, N. O., 22.4, 24.1, 24.3  
Manohar, A. V., 4.3  
Marchal, S., 1.3  
Marchesini, A., 12.2  
Marcicante, C., 8.1  
Marco, S. di, 16.1  
Marcotrigiano, J., 23.2  
Marcy, A. I., 1.3  
Mardian, J. K., 19.4  
Marel, G. A. van der, 1.3  
Margle, S. M., 19.6  
Margoliash, E., 1.2  
Margosiak, S. A., 1.3  
Marinescu, D. C., 13.4, 19.6  
Marini, J. C., 23.3  
Marital, J. A., 1.3  
Mariuzza, R. A., 1.3  
Mark, A. E., 20.1, 20.2, 22.3  
Mark, B. L., 19.3  
Markham, G. D., 1.3  
Markland, W., 1.3  
Markley, J. L., 24.1, 24.5  
Marks, C., 1.3  
Marmar, B. L., 1.3  
Marmorstein, R. Q., 23.2, 23.4
- Marquart, M., 18.3  
Marsh, R. E., 11.4, 18.5, 21.1, 26.1  
Marshall, C. J., 1.3  
Marshall, S. A., 1.3  
Marshall, V. P., 1.3  
Marston, F. A., 3.1  
Martial, J. A., 1.3, 21.1  
Martijn van der Plas, R., 1.3  
Martín, A., 1.3  
Martin, A. C., 23.1  
Martin, D., 4.1  
Martín, J. L., 1.3  
Martin, K. O., 18.1  
Martin, P. D., 23.3, 24.4  
Martín-Blanco, E., 23.2  
Martínez, A., 1.3  
Martínez, C., 4.3  
Martínez, D., 24.5  
Martínez-Hackert, E., 4.3  
Maruyama, X. K., 6.1  
Marvin, D. A., 18.5, 19.5, 23.3  
Mascarenhas, Y., 12.1  
Maskos, K., 1.3  
Mason, S. A., 19.1  
Mason, T., 1.3  
Massariol, M.-J., 1.3, 13.4  
Massey, V., 1.3  
Mast, K. D. van der, 19.6  
Mastronarde, D. N., 17.2  
Masulli, M., 1.3  
Materlik, G., 8.1  
Mateu, L., 19.4  
Mateu, M. G., 19.6  
Mather, T., 1.3  
Mathewman, J. C., 8.2  
Mathews, F. S., 1.3, 26.1  
Mathews, I. I., 1.3, 16.1  
Mathias, J. P., 22.4  
Mathias, P., 19.6  
Mathiesen, R. H., 16.1  
Mathieu, M., 1.3, 19.3  
Matias, P. M., 1.3  
Matsukage, A., 4.3  
Matsumoto, M., 19.6  
Matsumoto, O., 24.4  
Matsumoto, T., 11.4  
Matsumura, M., 1.3  
Matsuo, T., 1.3  
Matsushima, K., 1.3  
Matsushima, M., 4.2, 18.3, 19.2, 19.6  
Matsushita, T., 7.1, 8.1  
Matsuura, Y., 5.1  
Matte, A., 17.1  
Matte, J. P., 6.1  
Mattes, R., 3.1  
Mattevi, A., 19.6  
Matthew, J. B., 22.3  
Matthews, B. W., 1.2, 4.1, 4.3, 5.1, 5.2, 9.1, 12.1, 13.1, 13.4, 14.1, 14.2, 15.1, 16.1, 17.1, 18.1, 18.4, 19.6, 21.1, 22.1, 22.2, 23.4, 25.1, 25.2  
Matthews, D. A., 1.3, 7.1  
Matthysens, G., 4.3  
Mattos, C., 20.2, 21.2, 23.4  
Matzinger, P. K., 8.1  
Mauguin, C., 1.2  
Maurizi, M. R., 19.6  
Maveyraud, L., 1.3  
Max, N., 17.2  
May, J. L., 1.3  
May, R., 19.4  
Maynas, O., 8.1  
Mayer, E., 19.6  
Mayhew, M., 1.3  
Mayo, S. L., 1.3  
Mayr, I., 1.3, 12.2  
Mazza, C., 1.3  
Mazzarella, L., 13.4  
Mazzoni, M. R., 4.3  
Meade, C. J., 4.1  
Meador, W. E., 23.2  
Meadows, R. P., 1.3  
Means, A. R., 23.2  
Medarde, M., 6.2  
Medrano, F., 1.3  
Medveczky, N., 23.2
- Meek, J. L., 23.4  
Meerwinck, W., 19.4  
Meerwink, W., 19.4  
Mehra, F., 1.3  
Meier, W., 1.3  
Meiring, E. M., 23.4  
Meining, W., 12.2  
Meissner, W., 7.1  
Melo, F., 21.1, 21.2  
Mendelson, R. A., 19.4  
Meng, E. C., 22.4  
Meng, W., 1.3  
Menk, R. H., 7.1  
Menon, S., 1.3  
Mercola, D., 1.3  
Merkel, G., 4.3  
Merrington, C. L., 3.1  
Merritt, E. A., 1.3, 8.1, 14.2, 21.1, 22.1, 25.1, 25.2  
Mersha, F. B., 3.1  
Mertens, P. P. C., 8.1, 19.6  
Merz, K. M. Jr., 25.1  
Meseccar, A. D., 8.2  
Messerschmidt, A., 11.4, 12.2  
Mesyanzhinov, V. V., 11.1  
Mészáros, E., 10.1  
Metcalf, P., 1.3, 7.1, 11.4  
Metoz, F., 19.6  
Metropolis, N., 18.2  
Mewes, H. W., 21.1  
Meyer, E., 1.3, 23.4  
Meyer, E. F., 1.3, 12.1, 14.2, 17.1, 18.4, 20.1, 21.1, 21.2, 22.4, 24.2, 24.3, 24.5, 25.2  
Meyer, J., 18.4  
Meyer, J. E., 1.3  
Meyer, J. E. W., 4.2  
Meyer, K. H., 19.5  
Meyer, T. E., 21.1  
Mian, I. S., 17.2  
Michejda, C. J., 1.3, 13.4  
Michel, H., 1.2, 4.2  
Michels, P. A., 1.3  
Michie, A. D., 23.1, 24.5  
Michnick, S., 20.2, 21.2  
Middleton, S. A., 1.3  
Midgley, H. G., 5.2  
Midura, R. J., 4.2  
Mietzner, T., 22.4  
Mietzner, T. A., 1.3  
Mighell, A. D., 5.1  
Mihelich, E. D., 1.3  
Mikami, B., 1.3  
Mikami, T., 5.1  
Mikchailov, A. M., 24.4  
Miki, K., 1.2, 1.3, 4.2  
Mikol, V., 1.3, 4.1  
Mikula, P., 6.2  
Milburn, M. V., 1.3, 23.4  
Milch, J. R., 6.1, 7.1  
Mildner, D. F. R., 6.2  
Millane, R. P., 19.5  
Millar, J. R., 1.3  
Millaud, D., 6.1  
Millaud, J., 7.1, 8.1  
Milledge, H. J., 13.1  
Millen, D. J., 22.2  
Miller, A., 4.2, 8.1, 19.5  
Miller, J., 22.4  
Miller, J. H., 12.1  
Miller, J. K., 1.3  
Miller, L. K., 3.1  
Miller, M., 1.3  
Miller, M. D., 1.3, 24.4  
Miller, R., 8.1, 14.2, 15.1, 16.1, 25.1, 25.2  
Miller, S. T., 19.3  
Miller, T., 4.1  
Miller, W. F., 6.2  
Milligan, R. A., 19.6  
Milne, G. W. A., 22.4  
Milner-White, E. J., 17.2, 21.2, 22.4, 24.1, 24.2  
Mimori, Y., 19.5  
Mimori-Kiyosue, Y., 19.5  
Minezaki, Y., 4.1, 6.2, 19.1  
Minke, W. E., 1.3  
Minor, I., 13.4, 22.1  
Minor, P. D., 1.3
- Minor, W., 10.2, 11.1, 11.2, 11.3, 11.4, 11.5, 16.1, 25.1  
Mintier, G. A., 1.3  
Mirov, S. B., 5.1  
Mirza, U. A., 1.3  
Misch, L., 19.5  
Misra, V., 22.3  
Missougi, G., 8.1  
Mistry, A., 1.3  
Mitchell, E. M., 22.4, 23.1, 24.3  
Mitchell, E. P., 7.2, 9.1, 10.1, 10.2  
Mitchell, E. W. J., 6.2  
Mitchell, G. F., 22.4, 24.3  
Mitchell, J. B. O., 22.2  
Mitchell, M. A., 1.3  
Mitra, A., 19.5  
Mitra, A. K., 19.6, 21.1  
Mitra, B., 1.3  
Mitra, J., 22.4  
Mitraki, A., 3.1  
Mitschler, A., 4.2, 10.2  
Mitsui, Y., 1.3  
Mitsuoka, K., 4.2, 19.2, 19.6  
Mittl, P. R. E., 4.3, 16.1  
Miura, K., 1.3  
Miyahara, J., 6.2, 7.1, 8.1, 9.1  
Miyashiro, J. M., 4.2  
Miyashita, S., 4.1  
Miyatake, H., 1.3  
Miyazawa, A., 4.2, 19.2, 19.6  
Mizuguchi, K., 23.1  
Mizuno, H., 1.3  
Mizusaki, T., 19.6  
Mizushima, T., 4.2  
Mizuuchi, K., 23.3  
Mo, F., 16.1, 26.1  
Mochalkin, I., 1.3  
Mochizuki, S., 1.3  
Moens, L., 22.1  
Moereels, H., 1.3, 13.4  
Moews, P. C., 1.3, 17.1, 18.5, 21.1, 25.2  
Moezzi, B., 25.2  
Moffat, K., 1.3, 8.1, 8.2, 10.2, 19.3  
Moffatt, B. A., 3.1  
Mohan, V., 22.3  
Mohsen, A. W., 1.3, 3.1  
Moks, T., 3.1, 4.3  
Molteni, A. G. G., 25.1  
Mollering, H., 12.2  
Moman, C. A., 11.5  
Moman, F. A., 23.4  
Monaco, L. A., 4.1  
Mondragon, A., 1.3  
Monteil, H., 1.3  
Montel, M., 6.1  
Montemartini-Kalisz, M., 1.3  
Montfort, R. L. M., 8.1  
Montgomery, J. A., 8.1  
Moodie, S., 21.1  
Moody, M. F., 19.3  
Moody, P. C., 1.3  
Moore, B. H. M., 23.3  
Mook, H. A., 6.2  
Moomaw, E. W., 1.3  
Mooney, P. E., 19.6  
Moore, D., 1.3  
Moore, D. D., 3.1  
Moore, K. M., 4.1  
Moore, K. W., 1.3  
Moore, N. J., 16.1  
Moore, P. B., 1.3, 8.1, 19.3, 19.4, 19.6  
Moore, P. R., 8.1  
Moore, V. L., 1.3  
Morag, E., 23.1  
Morán, F., 19.3  
Moras, D., 1.2, 4.1, 4.2, 8.1, 10.2, 13.4  
Moreno, A., 1.3, 4.1  
Moreno, P. O., 10.1, 10.2  
Morera, S., 1.3  
Morgan, D. G., 19.6  
Morgan, D. O., 1.3  
Morgan, R. J., 22.3  
Morgenstern, K. A., 1.3  
Morgunova, E. Yu., 24.4  
Morihiro, K., 1.3

## AUTHOR INDEX

- Morikawa, K., 19.6, 24.4  
 Morikawa, Y., 3.1  
 Morin, M. J., 1.3  
 Morioka, H., 23.2  
 Morishita, J., 7.1  
 Morita, Y., 1.3  
 Moriyama, H., 5.1  
 Morizono, H., 1.3  
 Morlang, S., 8.1  
 Moroder, L., 12.1, 12.2  
 Morris, A. L., 21.1, 21.2, 25.2  
 Morris, R. J., 18.4, 25.2  
 Mortensen, K., 6.2  
 Morton, A. G., 22.1  
 Morton, C. J., 23.4  
 Moser, J., 1.3  
 Moshkov, K., 1.3  
 Moss, D. S., 1.3, 8.1, 13.2, 13.3, 18.1, 18.3, 18.4, 18.5, 21.1, 21.2, 21.3, 22.4, 24.5, 25.2  
 Mosser, A. G., 1.2, 1.3, 8.1, 11.5, 13.4, 19.6, 22.1  
 Mosser, G., 19.6  
 Mosyak, L., 23.2  
 Motherwell, W. D. S., 17.2, 18.4, 21.1, 21.2, 22.4, 24.2, 25.2  
 Mott, J. E., 1.3  
 Mottonen, J., 1.3  
 Moulai, J., 8.1  
 Moule, S., 1.3  
 Moulmier, L., 4.2  
 Moulis, J.-M., 18.4  
 Moulton, J., 1.3, 21.1, 23.1  
 Moulton, S., 19.3  
 Mourey, L., 1.3, 19.3  
 Mourou, G., 6.1  
 Mouz, N., 1.3  
 Mowbray, S. L., 17.1, 21.1, 22.2  
 Moy, J.-P., 7.1, 7.2  
 Mroczkowski, B., 1.3  
 Muchmore, S. W., 1.3, 10.2, 13.4, 25.2  
 Mucke, E., 22.1  
 Muckelbauer, J. K., 13.4  
 Muenke, C., 4.2  
 Muir, A. K., 1.3  
 Muir, T., 19.6  
 Muirhead, H., 1.2, 13.4, 26.1  
 Mujeeb, A., 17.2  
 Mukherjee, A. K., 8.1, 16.1  
 Mulcahy, L. S., 1.3  
 Mulders, J., 1.3  
 Mulichak, A. M., 1.3  
 Mullaley, A., 22.4  
 Müller, A., 6.1  
 Muller, F., 1.3  
 Müller, M., 19.7  
 Muller, S., 12.1  
 Muller, Y. A., 1.3  
 Müller-Neuteboom, S., 19.6  
 Mullier, G. W., 22.4  
 Mulvey, G., 1.3  
 Mumenthaler, C., 19.7  
 Munch, J.-P., 4.1  
 Munro, I. H., 8.1  
 Munshi, S., 1.3, 13.4, 19.6  
 Munson, S. H., 4.1  
 Murakami, W. T., 19.3  
 Muraki, M., 21.2  
 Murata, K., 4.2, 19.2, 19.6  
 Murata, M., 8.1  
 Murby, M., 3.1  
 Murcko, M. A., 1.3  
 Murphy, G., 1.3  
 Murphy, K. C., 21.1  
 Murphy, L., 1.3  
 Murphy, M. E. P., 1.3, 25.1  
 Murray, C. J., 1.3  
 Murray, D. L., 1.3  
 Murray, E. J., 1.3  
 Murray, I. A., 1.3  
 Murray, J. B., 23.2  
 Murray, K., 19.6  
 Murray, M. G., 1.3  
 Murray-Rust, P., 22.4  
 Murshudov, G. N., 15.2, 18.1, 18.2, 18.3, 18.4, 18.5, 21.1, 21.2, 25.1, 25.2  
 Murthy, C. S., 22.3  
 Murthy, H. M., 1.3  
 Murthy, M. R., 1.3  
 Murthy, M. R. N., 13.4  
 Murty, B. N., 22.4  
 Murzin, A. G., 1.2, 23.1, 24.5  
 Musayev, F. N., 1.3  
 Muschol, M., 4.1  
 Mushtaq, Y., 1.3  
 Music, C. L., 19.6  
 Musil, D., 1.3  
 Mussig, J., 4.1, 12.1  
 Na, D. S., 3.1  
 Nachman, J., 20.2  
 Nadarajah, A., 5.1  
 Naday, I., 7.2, 8.1, 11.4  
 Nadeau, J. G., 23.3  
 Nagabhushan, T. L., 1.3, 4.1, 4.3  
 Nagai, K., 4.1, 4.3, 10.2, 23.2  
 Nagakawa, A., 8.1  
 Nagar, B., 1.3, 16.1  
 Nagase, H., 1.3  
 Nagayama, K., 19.6  
 Nagel, D. J., 6.1  
 Nakada, T., 4.1  
 Nakagawa, A., 7.1  
 Nakamura, H., 22.3  
 Nakamura, K. T., 1.3  
 Nakashima, R., 4.2, 8.1  
 Nakatani, H., 19.3  
 Nakatani, Y., 1.3  
 Nakatsu, K., 13.1  
 Nam, H. J., 1.3  
 Namba, K., 19.5, 19.6  
 Nambudripad, R., 19.5  
 Nance, S., 1.3  
 Nandi, C. L., 22.2  
 Nanmori, T., 1.3  
 Nanni, R. G., 1.3, 4.1  
 Nar, H., 12.2  
 Narayana, N., 1.3  
 Narayana, S. V. L., 1.3, 4.1, 21.1  
 Narula, S. K., 1.3  
 Nash, H. A., 23.3  
 Nash, R. A., 1.3  
 Natsushita, T., 6.1  
 Nauman, R., 4.1  
 Navaza, J., 5.1, 13.2, 13.3, 15.1, 25.1, 25.2  
 Nave, C., 6.1, 10.2, 19.5  
 Navia, M. A., 1.3, 4.1  
 Nayal, M., 18.4, 21.1, 24.5  
 Naylor, C. E., 1.3  
 Ne, F., 19.1  
 Neal, B. L., 4.1  
 Negrel, A. D., 1.3  
 Neidhart, D. J., 1.3  
 Neidle, S., 21.2, 23.3, 24.2  
 Nelson, H. C. M., 23.3  
 Nemerow, G. R., 19.6  
 Nemethy, G., 22.1, 22.2, 23.1  
 Nemreson, Y., 1.3  
 Neshich, G., 24.5  
 Nothing, U., 6.1  
 Nettesheim, D., 1.3  
 Neubauer, G., 1.3  
 Neubüser, A., 4.2  
 Neufeind, T., 12.1, 12.2  
 Neugebauer, J. M., 4.2  
 Neuhaus, D., 21.1  
 Neumann, S., 1.3  
 Neutze, R., 8.1  
 Newcomb, J. R., 1.3  
 Newcomb, W. W., 19.6  
 Newhouse, Y., 24.4  
 Newman, J., 19.6  
 Newman, M., 24.4  
 Ng, J., 4.1  
 Ng, K., 8.2, 19.3  
 Ng, S. L., 1.3  
 Ngo, T., 20.2, 21.2  
 Nguyen, D. T., 20.2, 21.2  
 Nguyen-huu, X., 1.3  
 Nibert, M. L., 19.6  
 Nicholls, A., 22.1, 22.3, 23.2, 23.4, 25.1  
 Nichols, W. L., 17.2  
 Nicholson, D. W., 1.3  
 Nicholson, H., 4.3, 21.1  
 Nicholson, R. B., 19.2  
 Nicklaus, M. C., 22.4  
 Nicolas, A., 21.2  
 Nicolette, C., 5.1  
 Niedzwiecki, L., 1.3  
 Niefind, K., 1.3  
 Nieh, Y. P., 4.1, 8.1  
 Nielsen, C., 7.1, 11.4  
 Nielsen, J., 1.3  
 Niemann, A. C., 4.1, 8.1  
 Nierhaus, K. H., 6.2, 19.4, 19.6  
 Nieves-Alicea, R., 1.3  
 Niggli, P., 1.2  
 Niimura, N., 6.2, 19.1  
 Niklaus-Reimer, A. S., 1.3  
 Nikolov, D. B., 23.3  
 Nilges, M., 17.1, 18.2, 18.4, 25.1, 25.2  
 Nilsson, B., 3.1, 4.3  
 Nilsson, L., 25.1  
 Nimura, N., 4.1  
 Nina, M., 23.4  
 Nishikawa, S., 23.2  
 Nishimura, S., 1.3, 23.4  
 Nishina, Y., 2.1  
 Nissen, P., 1.3, 8.1, 19.4, 19.6  
 Nixon, P. E., 13.3  
 No, D., 3.1  
 Noah, M., 19.6  
 Nobeli, I., 22.4  
 Noble, M. E. M., 10.2, 21.1  
 Noble, R. W., 3.1  
 Noda, M., 1.3  
 Noel, J. P., 4.3  
 Nogales, E., 19.2, 19.6  
 Noguchi, K., 19.5  
 Noguchi, S., 1.3  
 Noiles, R., 1.3  
 Nolasco, N., 19.6  
 Noller, H. F., 1.3  
 Nolte, M., 1.3  
 Nomoto, A., 1.3  
 Nonaka, T., 6.2, 19.1  
 Norbeck, D. W., 1.3  
 Nordman, C. E., 13.1, 13.2, 13.4  
 Noriega, F., 1.3  
 Norrby, P.-O., 22.4  
 Norris, G., 22.1  
 Norris, J., 4.2  
 North, A. C. T., 1.2, 9.1, 13.3, 14.1, 14.2, 22.1, 23.2, 26.1  
 Norton, D. A., 16.1  
 Norvell, J. C., 19.1  
 Nose, S., 20.2  
 Noteborn, M. H. M., 3.1  
 Notstrand, B., 1.3  
 Novella, M. L., 4.1  
 Novick, R. P., 1.3  
 Novotny, J., 22.3  
 Nowak, U. K., 1.3  
 Nowalk, A. J., 1.3  
 Nowicki, C., 1.3  
 Nowotny, P., 19.4  
 Nowotny, V., 19.4  
 Nukaga, M., 1.3  
 Nukaga, Y., 1.3  
 Nunn, R. S., 21.1  
 Nunzi, A., 25.2  
 Nurizzo, D., 1.3  
 Nuttall, R., 8.1  
 Nyborg, J., 19.4  
 Nyburg, S. C., 22.4  
 Nygren, D., 8.1  
 Nygren, H., 6.1  
 Oakley, A. J., 1.3  
 Oatley, S. J., 1.3  
 Obata, Y., 19.5  
 Oberoi, H., 22.3  
 Obmolova, G., 19.6  
 Odom, J. D., 16.1  
 O'Donnell, K., 1.3  
 O'Donnell, T. J., 17.2  
 Oed, A., 6.2  
 Oefner, C., 1.3, 23.3, 24.4  
 Oesterheld, D., 4.2, 19.6  
 Öfverstedt, L.-G., 19.6  
 Oganessian, V., 1.3  
 O'Gara, M., 1.3  
 Ogata, C. M., 4.3, 14.2, 16.1  
 O'Hagan, A., 18.4  
 O'Halloran, T. V., 12.1  
 O'Handley, S. F., 24.4  
 O'Hara, B., 1.3  
 Ohgi, K., 1.3  
 Ohkawa, H., 23.1, 24.5  
 Ohlendorf, D. H., 1.3, 11.4  
 Ohlsson, A., 1.3  
 Ohman, L., 1.3  
 Ohmori, D., 12.1  
 Ohno, S., 19.5  
 Ohtan, M., 1.3  
 Ohtsuka, A., 7.1  
 Ohtsuka, E., 1.3, 24.4  
 Oikonomakos, N. G., 8.1  
 Ononen, C., 1.3  
 Okada, K., 4.2  
 Okada, S., 16.1  
 Okamoto, S., 6.2  
 Okamura, M., 22.3  
 Okaya, Y., 8.1, 14.1, 14.2, 25.2  
 Oki, H., 5.1  
 Oksman, A., 1.3  
 Okuyama, K., 19.5  
 Olack, G., 19.3  
 Olafson, B. D., 22.1, 25.1  
 Olah, G. A., 19.3, 19.4  
 Olby, R., 1.3  
 Oldfield, T. J., 18.3, 21.1, 25.1, 25.2  
 Oldham, J. W. H., 26.1  
 Olin, B., 1.3, 21.1  
 Olins, A. L., 19.6  
 Olins, D. E., 19.4, 19.6  
 Oliva, G., 1.3, 8.1  
 Oliveira, M. A., 22.1  
 Oliver, K., 1.3  
 Oliver, S. W., 1.3  
 Olmsted, M. C., 22.3  
 Olofsson, A., 19.6  
 Olsen, K. W., 1.2, 13.4  
 Olson, A. J., 1.2, 13.4, 17.2, 25.1  
 Olson, C., 19.6  
 Olson, N. H., 13.4, 19.6, 22.1  
 Olson, W. K., 21.2, 22.4, 23.3, 24.2, 24.4, 24.5  
 Olszewski, J. M., 1.3  
 Olthof-Hazekamp, R., 25.1  
 O'Mara, D., 7.2  
 Omichinski, J. G., 23.4  
 Ondetti, M. A., 1.3  
 Oosawa, K., 19.5  
 Oosterkamp, W. J., 6.1  
 Oppenheim, A., 1.3, 25.2  
 Oppenheim, A. V., 15.2  
 Oprea, T. I., 23.4  
 O'Prrian, D., 1.3  
 Oram, M., 1.3  
 Ord, K. J., 18.4  
 O'Reilly, D. R., 3.1  
 Orengo, C. A., 23.1, 24.5  
 Orgel, L. E., 23.2  
 Orlewicz, E., 1.3  
 Orlova, E. V., 19.6  
 O'Rourke, J., 22.1  
 Orpen, A. G., 21.1, 22.4, 24.3  
 Orts, W. J., 6.2  
 Osamura, K., 6.2  
 Ösapay, K., 18.2  
 Osborne, J., 1.3  
 Ose, V., 19.6  
 O'Shannessy, D., 1.3  
 Ostermeier, C., 4.2  
 Ostovic, D., 1.3  
 O'Sullivan, T. J., 1.3  
 Otalora, F., 4.1  
 Otting, G., 19.7, 23.4  
 Otto, M. J., 1.3, 23.4  
 Otwine, D. F., 1.3  
 Otwinowski, Z., 4.3, 11.1, 11.2, 11.3, 11.4, 11.5, 23.2, 23.4, 25.1, 25.2  
 Oubridge, C., 4.3, 10.2, 23.2  
 Ouh-Young, M., 17.2  
 Overington, J. P., 23.1  
 Owen, C. H., 19.6  
 Owens, K. A., 1.3  
 Owens, S. M., 6.1  
 Ozaki, H., 1.3  
 Paalme, T., 19.4  
 Pabo, C. O., 23.2  
 Pace, H. C., 23.3  
 Pack, G. R., 22.3  
 Padlan, E. A., 1.3, 18.2  
 Padmanabhan, K., 1.3  
 Padmanabhan, K. P., 1.3  
 Padmanabhan, R., 1.3  
 Padmore, B., 6.1  
 Padmore, H., 6.1, 8.1  
 Padron, G., 1.3  
 Page, A. P., 1.3  
 Page, M. G., 1.3  
 Pahl, R., 6.1  
 Pahlner, A., 8.1, 14.2  
 Pai, E. F., 1.3, 4.2, 4.3, 8.2, 17.2  
 Pak, J. Y., 1.3, 4.2  
 Palfey, B. A., 1.3  
 Palmenberg, A. C., 22.1  
 Palmer, A. G. III, 19.7  
 Palmer, C. L., 1.3  
 Palmer, D. W., 6.2  
 Palmer, J. T., 1.3  
 Palmer, K. J., 26.1  
 Palmer, R., 23.4  
 Palmier, M. O., 1.3  
 Palmitkar, M., 4.2  
 Pangborn, W., 1.3, 16.1  
 Pannu, N. S., 1.3, 15.2, 17.1, 18.1, 18.2, 18.3, 18.4, 18.5, 21.1, 25.1, 25.2  
 Pant, N., 1.3  
 Pantos, E., 8.1, 19.3  
 Papageorgiou, A. C., 1.3  
 Papanikolaou, Y., 4.1  
 Papiz, M. Z., 4.2, 8.1, 8.2  
 Pararajasegaram, R., 1.3  
 Parast, C. V., 1.3  
 Pardanani, A., 23.4  
 Pardee, A. B., 23.2  
 Pardo, B., 6.2  
 Parekh, R. B., 23.2  
 Parello, J., 4.1  
 Pares, S., 1.3  
 Parfait, R., 19.4  
 Parge, H. E., 1.3  
 Pargellis, C. A., 1.3  
 Parisini, E., 16.1  
 Park, B. H., 23.4  
 Park, C. H., 1.3  
 Park, H.-S., 19.5  
 Park, I. S., 1.3  
 Park, J. T., 26.1  
 Parker, J. E., 1.3  
 Parker, M. W., 1.3  
 Parkhill, J., 1.3  
 Parkin, S., 10.1, 10.2, 20.2, 25.2  
 Parkinson, G., 18.2, 18.3, 21.1, 21.2, 23.3, 24.2  
 Parks, R. E. J., 1.3  
 Parratt, L. G., 8.1  
 Parrish, C. R., 19.6  
 Parrish, R. G., 1.2, 26.1  
 Parthasarathy, G., 22.1  
 Parthasarathy, R., 14.1, 22.4  
 Paschke, R., 1.3  
 Pascucci, V., 17.2  
 Pashley, D. W., 19.2  
 Paskind, M., 1.3  
 Pasquali-Ronchetti, I., 19.6  
 Passalacqua, E. F., 1.3  
 Passell, L., 6.2  
 Pastan, I., 23.1  
 Pastore, A., 19.3  
 Patel, H., 4.3  
 Patel, J. R., 6.1  
 Patel, S., 4.1, 24.4  
 Patkar, S. A., 21.3  
 Patskovska, L. N., 1.3  
 Patskovsky, Y. V., 1.3  
 Pattabiraman, N., 22.1  
 Pattanayak, R., 19.5  
 Patterson, A. L., 1.2, 2.1, 12.2  
 Patti, J. M., 1.3  
 Pattison, P., 1.3  
 Pattus, F., 19.4  
 Paul, D. A., 1.3  
 Pauling, L., 1.2, 19.5, 22.1, 22.2, 22.4  
 Paulus, H., 3.1  
 Paupit, R. A., 1.3, 4.2, 23.4  
 Pautsch, A., 4.2

## AUTHOR INDEX

- Pauwels, R., 1.3, 13.4  
 Pav, S., 1.3  
 Pavel, N., 7.1  
 Pavelčík, F., 16.1  
 Pavletich, N. P., 1.3, 23.2  
 Pavlov, M. Yu., 19.4  
 Pavlovsky, A., 1.3  
 Pawley, J. B., 19.2  
 Paxton, T. E., 4.1  
 Payton, M. A., 1.3  
 Peanasky, R. J., 1.3  
 Pearl, F. M. G., 23.1  
 Pearl, L., 1.3  
 Pearlman, D. A., 18.2  
 Pearse, B. M. F., 19.6  
 Pearson, W. R., 24.5  
 Peat, T. S., 4.3  
 Pebay-Peyroula, E., 4.2, 8.1, 19.6  
 Pédelacq, J.-D., 1.3, 19.3  
 Pedersen, J. S., 6.2, 19.4  
 Pedersen, L. C., 1.3  
 Pedersen, L. G., 20.2  
 Pederson, J., 1.3  
 Pedireddi, V. R., 22.4  
 Pednault, E., 23.3  
 Peek, J. A., 1.3  
 Peerdeman, A. F., 1.2  
 Pegg, A. E., 1.3, 16.1  
 Pegg, M. S., 1.3  
 Pei, X. Y., 1.3  
 Peisach, E., 23.4  
 Peitsch, M. C., 24.1  
 Pelletier, J. J., 3.1  
 Pelletier, L. A., 1.3  
 Peltier, S. T., 19.6  
 Pelton, J. G., 23.3  
 Peltonen, L., 1.3  
 Penczek, P., 8.1, 19.6  
 Peng, J. W., 19.7  
 Penington, C. J., 1.3  
 Penn, C. R., 1.3  
 Penning, T. D., 4.2  
 Pépin, H., 6.1  
 Pepinsky, R., 1.2, 8.1, 14.1, 14.2, 17.2, 25.2  
 Perahia, D., 22.3  
 Peram, J. W., 20.2  
 Perdok, W. G., 5.1  
 Peretz, M., 8.1  
 Perevozchikova, N. A., 19.6  
 Perez-Montfort, R., 1.3  
 Perham, R. N., 1.3, 4.3, 25.1  
 Perler, F. B., 3.1  
 Perlo, A., 19.3  
 Perman, B., 8.2  
 Pernock, J. B., 6.2  
 Pernet, L., 1.3  
 Perona, J. J., 23.2  
 Perrakis, A., 1.3, 15.1, 16.1, 25.2  
 Perram, J. W., 20.2  
 Perrera, L., 20.2  
 Pertea, M., 1.3  
 Perutz, M. F., 1.2, 1.3, 4.3, 5.1, 5.2, 12.1, 12.2, 13.4, 14.1, 19.4, 22.2, 22.4, 25.2, 26.1  
 Pervushin, K., 19.7  
 Peschar, R., 16.1  
 Petef, M., 1.3  
 Petereson, P. A., 1.3  
 Peters, J., 19.7  
 Peters, K. P., 22.1  
 Peters, R., 4.1  
 Petersen, H. G., 20.2  
 Peterson, E. P., 1.3  
 Peterson, E. S., 23.4  
 Peterson, M. R., 4.1, 8.1  
 Peterson, P. A., 1.3, 4.3  
 Petillot, Y., 1.3  
 Petitjean, M., 22.1  
 Petitpas, I., 19.3  
 Petosa, C., 1.3  
 Petra, P. H., 1.3  
 Petrascu, A.-M., 19.3  
 Petratos, K., 8.2, 23.3, 24.4  
 Petrella, E. D., 1.3  
 Petres, S., 1.3  
 Petruzzelli, R., 12.2  
 Petska, S., 1.3  
 Petsko, G., 5.1  
 Petsko, G. A., 1.3, 8.2, 10.1, 10.2, 12.1, 18.2, 20.2, 22.2, 23.4, 25.2  
 Pettitt, B. M., 20.2, 22.3, 23.4  
 Petzold, G. L., 1.3  
 Pevear, D. C., 22.1  
 Peyrusse, O., 6.1  
 Pfeifer, T. A., 3.1  
 Pfeiffer, F., 21.1  
 Pflugrath, J. W., 11.3, 11.4, 17.1, 23.2  
 Pfuegl, G., 1.3  
 Pfuetzner, R. A., 1.3, 4.2, 23.2  
 Phillips, C., 1.3  
 Phillips, D. C., 1.2, 9.1, 12.1, 17.2, 20.2, 22.1, 23.2, 23.3, 24.1, 26.1  
 Phillips, D. E., 23.1  
 Phillips, F. C., 5.1  
 Phillips, G. N., 5.2, 7.1, 10.2, 23.4  
 Phillips, J. C., 8.1  
 Phillips, S. E., 1.3  
 Phillips, S. E. V., 12.1, 19.1  
 Phillips, W., 19.3  
 Phillips, W. C., 6.1, 7.2  
 Phipps, A. G., 4.1  
 Phizackerley, R. P., 1.3, 8.1, 10.1, 14.2  
 Phong, B. T., 17.2  
 Pianetta, P., 8.1  
 Pichon-Pesme, V., 18.4  
 Pickup, B. T., 22.1  
 Pickworth, J., 1.2  
 Picot, D., 1.3, 4.2  
 Piefke, J., 12.1  
 Pieper, M., 1.3  
 Piestrup, M. A., 6.1  
 Pifferi, A., 8.1  
 Pijning, T., 8.1  
 Pike, A. C., 1.3, 20.2  
 Pilz, I., 19.3  
 Pimentel, G. C., 22.4  
 Pina, L., 6.1, 9.1  
 Pincus, C. I., 6.1  
 Pineo, G. F., 1.3  
 Ping, F., 22.1  
 Pinkerton, M., 26.1  
 Pinkner, J., 1.3  
 Pinko, C., 1.3  
 Piolletti, M., 8.1  
 Piper, M., 1.3  
 Pique, M. E., 19.6, 22.1, 23.4  
 Pirenne, M. H., 19.4  
 Pitcher, E. J., 6.2  
 Pitchford, N. A., 22.4  
 Pitts, J. E., 12.1  
 Pixa, G., 4.1  
 Pjura, P. E., 1.3, 4.1, 23.3  
 Plaas-Link, A., 4.1  
 Platas, J. G., 16.1  
 Plattner, J. J., 1.3  
 Plester, V., 4.1  
 Pletcher, J. F., 10.2  
 Pletinckx, J., 23.4  
 Pletnev, V. Z., 1.3  
 Pley, H. W., 22.2  
 Pliska, V., 22.1  
 Plückthun, A., 3.1  
 Podell, E., 22.2  
 Podjarny, A., 4.1, 13.3  
 Podjarny, A. D., 13.1, 14.2, 15.1  
 Poe, M., 1.3  
 Poet, R., 22.4  
 Pohl, E., 16.1, 18.5, 25.2  
 Pohl, F. M., 23.3  
 Poirrette, A. R., 23.1  
 Polekhina, G., 1.3  
 Polidori, G., 16.1, 25.1, 25.2  
 Polikarpov, I., 1.3, 8.1  
 Poljak, R. J., 1.3, 23.4, 26.1  
 Pollack, L., 19.3  
 Pollak, S., 12.1, 14.2  
 Pollard, T. D., 1.3  
 Polyakov, A., 19.6  
 Pomeranchuk, I., 8.1  
 Pomes, R., 23.4  
 Pommert, A., 17.2  
 Ponder, J. W., 1.2, 21.1  
 Ponpipom, M. M., 1.3  
 Pons, T., 25.1  
 Ponticello, G. S., 1.3  
 Ponting, C. P., 1.3  
 Pontius, J., 18.3, 21.1, 21.2, 22.1, 25.2  
 Poorman, R. A., 1.3  
 Poormina, C. S., 23.4  
 Poortmans, F., 23.4  
 Pope, L. H., 19.5  
 Pople, J. A., 22.4  
 Popov, A. N., 8.1  
 Popovic, T., 1.3  
 Popovici, M., 6.2  
 Popp, D., 19.5  
 Poppe, C., 19.6  
 Popper, K. R., 18.4  
 Poralla, K., 4.2  
 Porod, G., 19.4  
 Porter, R., 1.3  
 Porter, S. J., 4.3  
 Porter, T. K., 17.2  
 Posner, J., 1.3  
 Possee, R. D., 3.1  
 Posselt, D., 6.2  
 Post, B., 10.1  
 Post, C. B., 20.2  
 Postma, J. P. M., 18.2, 20.1  
 Potempa, J., 1.3  
 Pothier, P., 19.3  
 Potschka, M., 19.3  
 Potter, C. S., 19.6  
 Potthast, L., 4.1  
 Pottle, M. S., 22.1  
 Poulos, T. L., 11.4  
 Pound, A. M., 12.1, 14.2  
 Powers, J. C., 1.2  
 Prade, L., 12.1, 12.2  
 Pradervand, C., 8.1, 8.2, 19.3  
 Prael, R. E., 6.2  
 Prahalad, M., 1.3  
 Prahaj, J., 4.1  
 Prange, T., 1.3, 8.1, 16.1, 20.2  
 Prasad, B. V. V., 8.1, 19.2, 19.6  
 Prasad, C. V., 22.3  
 Prasad, G. S., 1.3  
 Prasad, S. M., 24.4  
 Prask, H. J., 6.2  
 Pratt, C. A., 1.3  
 Pratt, K. P., 1.3  
 Pratt, S. D., 1.3  
 Prendergast, N. J., 1.3  
 Presley, B. K., 25.2  
 Press, W. H., 11.4, 18.2  
 Presta, L. G., 19.1, 22.2, 23.4  
 Prevelige, P. E., 19.3  
 Prevost, G., 1.3  
 Prevost, M., 22.1  
 Pribnow, D., 3.1  
 Price, H., 8.1, 18.5, 21.2  
 Price, S. L., 22.2, 22.4  
 Price, S. R., 4.1, 4.3  
 Priestle, J. P., 1.3, 16.1, 18.3, 21.1  
 Pribnow, D., 3.1  
 Prince, E., 11.4, 18.1, 18.4, 18.5, 19.1  
 Prince, S. M., 4.2, 8.1  
 Printz, M. P., 22.2  
 Privé, G. G., 4.3, 16.1, 23.4, 24.2  
 Proccacci, P., 22.1  
 Proctor, P., 21.2  
 Prodhom, B., 20.2, 21.2  
 Pronk, S. E., 1.3, 4.1  
 Prosen, R. J., 1.2  
 Prothero, J. W., 13.1  
 Proudfoot, A. E., 1.3  
 Provost, K., 4.1  
 Ptitsyn, O. B., 22.1  
 Puchalski, R., 4.1  
 Puigjaner, L. C., 19.5  
 Pulford, W. C. A., 23.4  
 Pulvino, T. A., 1.3  
 Pumpens, P., 19.6  
 Pusey, M. L., 4.1, 5.1  
 Putnam, J. E., 1.3  
 Puvathingal, J. M., 4.1, 10.2  
 Pynn, R., 6.2  
 Qian, C., 1.3, 13.4  
 Qian, J.-Z., 16.1  
 Qian, Y. Q., 19.7  
 Qin, J., 4.3  
 Qiu, X., 1.3, 17.1  
 Qoronfleh, M. H., 1.3  
 Quail, J. W., 1.3  
 Quail, M. A., 1.3  
 Quemard, A., 1.3  
 Quigley, G. J., 1.2, 1.3  
 Quinn, G., 24.5  
 Quinter, T. A., 6.1  
 Quiocho, F. A., 1.2, 1.3, 5.2, 12.1, 17.1, 22.3, 23.2, 23.4  
 Raag, R., 1.3  
 Rabijns, A., 1.3  
 Rabilloud, T., 4.1  
 Rabinovich, D., 13.3, 23.4  
 Radeka, V., 6.2  
 Rademacher, T. W., 23.2  
 Rader, S. D., 22.2  
 Radermacher, M., 19.6  
 Radfar, R., 16.1  
 Radford, S. E., 26.1  
 Radha, A., 19.5  
 Radhakrishnan, R., 1.3, 22.4, 23.4  
 Radke, C. J., 22.3  
 Rae, A. D., 13.3  
 Rae, W. N., 5.2  
 Raftery, J., 4.1, 8.1, 18.5, 21.2  
 Raghunathan, S., 1.3  
 Rago, J. V., 1.3  
 Rah, S. Y., 6.1  
 Raithby, P. R., 22.4  
 Raj Bhandary, U. L., 4.1  
 Rajandream, M. A., 1.3  
 Rak, D. M., 4.1  
 Ralph, A., 1.3, 16.1  
 Ramachandran, G. N., 1.2, 14.1, 15.2, 17.2, 19.5, 21.1, 21.3, 22.4, 25.2, 26.1  
 Ramachandran, S., 21.2  
 Ramakrishnan, C., 21.1, 25.2  
 Ramakrishnan, G., 26.1  
 Ramakrishnan, V., 1.3, 4.3, 6.2, 14.2, 19.4  
 Raman, S., 14.1  
 Ramaseshan, S., 14.1  
 Ramaswamy, S., 4.2  
 Rambaud, A., 6.2  
 Ramesha, C., 4.2  
 Ramos, C. H., 19.4  
 Ranck, J.-L., 19.6  
 Rand, R. P., 23.4  
 Randall, W. C., 1.3  
 Rano, T. A., 1.3  
 Rao, G. S. J., 4.1  
 Rao, S. T., 23.3  
 Rao, Z., 1.3  
 Rapp, G., 8.2, 19.3  
 Rappoport, Z., 22.4  
 Rarey, M., 22.4  
 Raschke, W. C., 3.1  
 Rashin, A. A., 22.1, 22.3, 23.1, 23.4  
 Rasmussen, B., 1.3, 4.2, 23.4  
 Rastinejad, F., 1.3  
 Ratel, F., 6.2  
 Rathbone, K., 8.1  
 Ratliff, R. L., 19.5, 23.3  
 Ratnaparkhi, G. S., 21.2  
 Rattigan, E., 1.3  
 Rausch, C., 6.2  
 Rausch, C. W., 1.3  
 Ravelli, R. B. G., 19.3, 25.1  
 Raves, M. L., 19.3  
 Ravichandran, K. G., 1.3  
 Ray, S., 1.3  
 Ray, S. S., 1.3  
 Ray, W. J. Jr., 4.1, 10.2, 13.4  
 Rayment, I., 5.1, 13.4, 19.3, 19.6  
 Raymond, M., 7.1  
 Rayner, M. M., 23.4  
 Read, J. A., 1.3  
 Read, R. J., 1.3, 9.1, 13.3, 13.4, 15.1, 15.2, 16.1, 17.1, 18.1, 18.2, 18.3, 18.4, 18.5, 21.1, 25.1, 25.2  
 Reck, G., 16.1  
 Record, M. T., 22.3  
 Record, T., 22.3  
 Reddy, J. M., 26.1  
 Reddy, V., 19.3, 19.6  
 Redinbo, M. R., 1.3  
 Reedy, M. C., 19.6  
 Reedy, M. K., 19.6  
 Reeke, G. N., 1.2, 12.1  
 Rees, B., 4.2  
 Rees, D. A., 19.5  
 Rees, D. C., 1.3, 4.2, 5.1, 10.2, 19.3, 22.1, 25.2  
 Refaat, L. S., 16.1  
 Rehak, P., 7.1  
 Reibenspiess, J., 16.1  
 Reichert, E. T., 5.1  
 Reichert, P., 1.3, 4.1  
 Reichmann, L., 1.3  
 Reiher, W. E. III, 20.2, 21.2  
 Reiling, S., 17.2  
 Reilly, J., 5.2  
 Reimer, L., 19.6  
 Reimer, M., 17.2  
 Reimach, F. C., 19.4  
 Reinemer, P., 1.3, 21.1  
 Reiner, E. S., 22.3  
 Reinherz, E. L., 13.4  
 Reinikainen, T., 21.1  
 Reiss, P., 1.3  
 Remington, S. J., 15.1  
 Ren, J., 1.3, 10.1, 13.4  
 Ren, Z., 8.1, 8.2, 19.3  
 Renner, T. R., 6.1  
 Rentzepis, P. M., 8.1, 8.2  
 Renwick, S. B., 1.3  
 Rerat, C., 1.3  
 Resandt, R. W. van, 24.4  
 Reshetnikova, L., 23.2  
 Resnick, D. A., 1.3  
 Reviakine, I., 19.6  
 Rey, F. A., 1.3, 19.3  
 Reynolds, C. D., 1.3  
 Reynolds, G. T., 7.1  
 Reynolds, J. A., 22.1  
 Reynolds, R. A., 15.1  
 Rhee, S. G., 1.3  
 Rhim, W.-K., 4.1  
 Rhodes, D., 1.2, 1.3  
 Rice, D. W., 4.1, 8.1, 21.1, 23.1  
 Rice, J. A., 23.3  
 Rice, L. M., 17.1, 18.1, 18.2, 18.4, 25.1, 25.2  
 Rice, P. A., 1.3, 23.3  
 Rich, A., 1.2, 1.3, 19.5, 23.2, 23.3  
 Richard, B., 4.1  
 Richard, S., 19.3, 19.4  
 Richards, F. M., 1.2, 5.2, 10.2, 17.2, 19.3, 19.7, 21.1, 21.2, 22.1, 24.5, 25.1  
 Richards, R. N., 4.1  
 Richardson, C. C., 3.1  
 Richardson, C. D., 3.1  
 Richardson, D. C., 22.2, 25.2  
 Richardson, J. S., 1.2, 17.2, 22.2, 23.1, 25.2  
 Richardson, J. W., 12.2, 25.2  
 Richardson, S. B., 1.3  
 Richarme, G., 3.1  
 Richelle, J., 18.3, 21.1, 21.2, 22.1, 24.2, 24.5, 25.2  
 Richmond, B., 1.3  
 Richmond, M., 26.1  
 Richmond, R. K., 8.1  
 Richmond, T. J., 8.1, 12.1, 22.1  
 Richter, A., 6.1  
 Richter, C., 19.6  
 Richter, D., 6.2  
 Richter, H. T., 4.2, 19.6, 25.2  
 Richter, O. M. H., 4.2  
 Ridderstrom, M., 1.3  
 Ridout, C. J., 1.3  
 Riek, R., 19.7  
 Ries, A., 12.2  
 Ries-Kautt, M., 4.1, 6.1, 20.2  
 Riess, G., 1.3  
 Rigaud, J.-L., 19.6  
 Rigden, D. J., 1.3  
 Riley, D. P., 26.1  
 Rillfors, L., 4.2  
 Rimmer, B., 1.2  
 Ringe, D., 12.1, 23.4

## AUTHOR INDEX

- Ringquist, S., 3.1  
 Rini, J. M., 1.3, 16.1  
 Ripka, W. C., 1.3  
 Risler, J. L., 8.1  
 Riste, T., 6.2  
 Rittenhouse, J. W., 1.3  
 Ritter, O., 24.1  
 Rixon, F. J., 19.6  
 Rizkallah, P. J., 4.2  
 Rizzuto, C. D., 24.1  
 Rob, A., 4.1  
 Robert, M.-C., 4.1  
 Roberts, D. L., 1.3  
 Roberts, J., 21.1  
 Roberts, M. M., 1.3  
 Roberts, T. M., 1.3  
 Robertson, A. P., 18.5  
 Robertson, B. E., 11.4, 18.5  
 Robertson, J. H., 1.2  
 Robertson, J. M., 1.2, 22.4  
 Robertus, J. D., 1.2  
 Robillard, G. T., 8.1  
 Robinett, W., 17.2  
 Robinson, C. R., 23.4  
 Robinson, J., 1.3, 3.1, 4.3, 24.1  
 Robinson, R., 26.1  
 Robrahn, B., 8.1  
 Rocap, G., 3.1  
 Rodeau, J.-L., 4.1  
 Roden, R. B. S., 19.6  
 Roderick, S. L., 1.3  
 Rodgers, D. W., 1.3, 9.1, 10.2, 11.5, 13.4  
 Rodgers, J. R., 1.3, 5.1, 12.1, 14.2, 17.1, 18.4, 20.1, 21.1, 21.2, 24.2, 24.3, 24.5, 25.2  
 Rodier, F., 4.1  
 Roditi, I., 1.3  
 Rodriguez, G., 18.2  
 Rodriguez, R., 25.1  
 Roe, S. M., 1.3, 18.4, 23.4  
 Roeder, R. G., 23.3  
 Rogers, D., 12.2  
 Rogers, J., 1.3  
 Rogers, J. K., 18.4  
 Rogers, L. C., 6.2  
 Rogers, S., 1.3  
 Rogers-Low, B. W., 1.2  
 Rohmer, M.-M., 18.4  
 Roitsch, C., 1.3  
 Rokop, S. E., 19.3, 19.4  
 Rokosz, L. L., 1.3  
 Rolan, P. E., 1.3  
 Roland, W., 18.4  
 Rollett, J. S., 11.4, 11.5, 18.5, 25.2, 26.1  
 Rollins, C. T., 1.3  
 Romanos, M., 3.1  
 Romão, M. J., 5.2, 12.2  
 Rome, L. H., 19.6  
 Romers, C., 23.3  
 Romines, W. H. R., 1.3  
 Rondon, D., 4.1  
 Rooman, M., 21.2  
 Roos, D. S., 1.3  
 Roper, D. I., 15.1  
 Rosa, J. J., 1.3  
 Rose, D. R., 17.1, 21.1  
 Rose, G. D., 17.2, 22.2, 23.1  
 Rose, H., 19.6  
 Rose, P. E., 1.3  
 Rosemond, J., 1.3  
 Rosenbaum, G., 8.1, 9.1  
 Rosenberg, A. H., 3.1  
 Rosenberg, H., 23.2  
 Rosenberg, J. M., 23.2, 23.3  
 Rosenberger, F., 4.1  
 Rosenblatt, J., 1.3  
 Rosenblum, W. M., 4.1  
 Rosenbluth, A., 18.2  
 Rosenbluth, M., 18.2  
 Rosenbrock, G., 1.3, 23.4  
 Rosenbusch, J. P., 4.2, 8.1, 17.1, 19.6  
 Rosenfield, R. E., 22.4  
 Rosenman, I., 4.1  
 Rosner, M., 1.3  
 Ross, C. K., 1.3, 10.1, 13.4  
 Ross, D. S., 1.3  
 Ross, S., 7.2, 11.4  
 Rossbach, J., 8.1  
 Rossi, A., 12.2  
 Rossi, F. M., 3.1  
 Rossi, G., 7.1, 8.1  
 Rossi, G. L., 4.1  
 Rossi, M., 22.4  
 Rossi, R. M., 19.4  
 Rossington, C., 7.1  
 Rossjohn, J., 1.3  
 Rossky, P., 22.3  
 Rossmanith, T., 4.2  
 Rossmann, M. G., 1.1, 1.2, 1.3, 1.4, 8.1, 10.2, 11.1, 11.2, 11.3, 11.4, 11.5, 12.2, 13.1, 13.2, 13.3, 13.4, 14.1, 14.2, 15.1, 15.2, 18.2, 19.6, 22.1, 23.1, 25.1, 25.2, 26.1  
 Rotella, F. J., 1.3  
 Roth, M., 4.2, 8.2  
 Rotonda, J., 1.3  
 Rougé, P., 19.3  
 Rould, M. A., 23.2, 23.3  
 Rousseau, R. W., 4.1  
 Rousseaux, F., 6.1, 8.1  
 Roussel, A., 1.3  
 Rouvinen, J., 1.3  
 Roux, B., 20.2, 21.2, 23.4, 25.1  
 Rowe, J. M., 6.2  
 Rowland, R. S., 22.1, 22.4, 24.3  
 Rowlands, D., 8.1, 22.1  
 Rowlands, R. J., 19.5  
 Roy, B. M., 1.3  
 Roy, P., 1.3, 8.1, 19.6  
 Roy, S., 13.4, 15.1, 17.1, 19.6, 21.1, 25.2  
 Royer, W. E., 1.3, 23.4  
 Rozamus, L. W., 1.3  
 Rozycki, M. D., 3.1  
 Rozzelle, J. E., 1.3  
 Ru, Y., 23.4  
 Rubin, B., 1.3  
 Rubin, J. R., 1.3  
 Ruble, J., 4.1  
 Rublevskaya, I. N., 19.4  
 Rudall, K. M., 19.5  
 Rudenko, G., 1.3  
 Rudman, R., 10.2  
 Rudolph, R., 1.3  
 Rueckert, R. R., 1.2, 1.3, 8.1, 11.5, 13.4, 19.6, 22.1  
 Rufino, S. D., 23.1  
 Ruhl, M., 19.4  
 Rule, G. S., 1.3  
 Rule, S. A., 1.3, 8.1  
 Rullmann, J. A. C., 18.3, 25.2  
 Rummel, G., 4.2, 8.1, 19.6  
 Ruoho, A. E., 4.3  
 Rupley, J. A., 22.1, 26.1  
 Rupp, B., 20.2  
 Rush, J. J., 6.2  
 Russ, J. C., 5.2  
 Russell, G. J., 6.2  
 Russell, R. B., 23.1  
 Russell, S., 22.3  
 Russmann, L., 12.2  
 Russo, A. A., 1.3  
 Rutter, S., 1.3  
 Ryan, D. M., 1.3  
 Ryan, K. P., 10.1  
 Ryckaert, J.-P., 20.1, 20.2  
 Rydel, T. J., 1.3  
 Ryu, S. E., 1.3  
 Sabatier, C., 1.3  
 Sacchetti, J. C., 1.3  
 Sacco, A. Jr., 4.1  
 Sachdev, D., 3.1  
 Sack, J. S., 23.2, 25.2  
 Sack, S., 1.3  
 Sadowska, J. M., 1.3  
 Saenger, W., 1.3, 4.1, 16.1, 22.2, 22.4, 23.3, 23.4  
 Saez, E., 3.1  
 Safo, M. K., 1.3  
 Safran, M., 23.2  
 Sahli, R., 8.1  
 Saied, F., 22.3  
 St Charles, R., 1.3  
 Saito, H., 6.2  
 Sakabe, K., 8.1  
 Sakabe, N., 8.1, 9.1, 11.4  
 Sakamoto, T., 22.3  
 Saksela, K., 1.3  
 Saldanha, J., 22.4  
 Salemme, F. R., 4.1, 11.4  
 Sali, A., 1.3, 23.1, 25.1  
 Salomon, J. A., 1.3  
 Saludjian, P., 1.3  
 Salunke, D. M., 8.1  
 Salzburg, S., 1.3  
 Salzmann, M., 19.7  
 Samama, J.-P., 1.3, 19.3  
 Sambanis, A., 4.1  
 Sambrook, J., 3.1  
 Sampogna, R., 22.3  
 Samraoui, B., 1.3, 13.4  
 Samson, L., 1.2  
 Samson, S., 8.1  
 Samuel, F., 6.2  
 Samuelson, E., 3.1  
 Sander, C., 1.2, 18.3, 21.1, 21.2, 21.3, 22.4, 23.1, 24.5, 25.1, 25.2  
 Sanders, J. K. M., 23.3  
 Sanderson, M. R., 10.2, 23.2  
 Sandler, R., 6.1  
 Sandler, S. J., 3.1  
 Sanger, F., 1.2  
 Sanner, M.-F., 17.2, 25.1  
 Sano, T., 19.3  
 Sano, Y., 19.3  
 Sanpietro, M., 7.1  
 Santi, D. V., 1.3  
 Santoro, A., 19.1  
 Saper, M. A., 1.3, 12.1, 13.4, 17.1  
 Saphos, C., 1.3  
 Sarafianos, S. G., 1.3  
 Sardana, M., 1.3  
 Sardana, V., 1.3  
 Sardet, C., 19.4  
 Sarfaty, S., 1.3, 21.1  
 Sargent, D. F., 8.1  
 Sarikaya, E., 1.3  
 Sarkar, A., 18.3, 21.1  
 Sarkar, S. K., 1.3  
 Sarko, A., 19.5  
 Sarma, R., 21.1  
 Sarma, V. R., 1.2, 9.1, 22.1, 23.2, 26.1  
 Sarubbi, E., 1.3  
 Sarvestani, A., 7.1  
 Sasabe, H., 19.6  
 Sasaki, K., 12.1  
 Sasisekharan, V., 1.2, 17.2, 21.3, 25.2, 26.1  
 Satchler, G. R., 13.2  
 Sathe, G., 3.1  
 Sathyanarayana, B. K., 1.3  
 Sato, K., 4.1  
 Sato, T., 1.3  
 Satow, Y., 1.3, 4.3, 7.1, 8.1  
 Sattler, M., 1.3  
 Sauer, F. G., 1.3  
 Sauer, N., 7.1  
 Sauer, R. T., 23.2, 23.4  
 Sauer-Eriksson, E., 1.3  
 Saul, F., 1.3  
 Sauli, F., 6.2  
 Saunders, D., 1.3  
 Sauter, C., 4.1  
 Savage, H., 22.2, 23.4  
 Savva, R., 1.3  
 Savvides, S. N., 4.1  
 Sawada, M., 6.1  
 Sawamura, S., 4.1  
 Sawasdikosol, S., 1.3  
 Sawyer, L., 1.3, 5.1  
 Sax, M., 1.3  
 Saxena, A. M., 6.2  
 Saxena, K., 4.2  
 Sayers, J. R., 12.1  
 Sayers, Z., 19.3, 19.4  
 Sayle, R. A., 17.2, 21.2, 24.1, 24.2, 24.3  
 Sayre, D., 15.1  
 Sazaki, G., 4.1  
 Scanlon, W. J., 5.2  
 Scanu, A. M., 19.4  
 Scapin, G., 1.3  
 Scarborough, G. A., 19.2  
 Scateni, R., 22.1  
 Schaad, O., 23.4  
 Schachman, H., 5.2  
 Schad, E., 1.3  
 Schaeffer, M., 22.3  
 Schäfer, M., 16.1  
 Schaik, R. C. van, 20.1, 20.2  
 Schaknowski, N. A., 6.2  
 Schalk-Hihi, C., 1.3  
 Schar, H. P., 1.3  
 Scharer, O. D., 12.1, 23.2  
 Schärpf, O., 6.2  
 Schatz, M., 19.6  
 Scheek, R. M., 20.1  
 Schefer, J., 6.2  
 Scheffzek, K., 1.3  
 Schein, C. H., 3.1  
 Schellenberger, A., 19.3  
 Schellman, C., 22.2  
 Schellman, J. A., 1.2  
 Schendel, P. F., 3.1  
 Schenk, H., 16.1  
 Schenk, P. M., 3.1  
 Scheraga, H. A., 22.1, 23.1, 23.4  
 Scherm, R., 6.2  
 Schevitz, R. W., 1.2, 1.3, 13.1, 15.1, 23.2, 23.4  
 Scheybani, T., 19.6  
 Schierbeek, A. J., 13.3, 15.1  
 Schiers, C., 17.2  
 Schiffer, C. A., 1.3, 20.1, 20.2  
 Schiffer, M., 4.2, 12.1  
 Schikore, D. R., 17.2  
 Schildkamp, W., 8.1, 8.2, 19.3  
 Schildkraut, I., 24.4  
 Schiller, J. T., 19.6  
 Schiltz, E., 4.2  
 Schiltz, M., 1.3, 8.1, 12.1  
 Schimmel, P. R., 5.2  
 Schindelin, H., 19.3  
 Schindler, D. G., 19.4  
 Schirmer, H., 23.1  
 Schirmer, R. H., 1.3  
 Schirmer, T., 1.3, 4.2, 5.2, 17.1  
 Schlagenhauf, E., 1.3  
 Schlenkrich, M., 20.2, 21.2  
 Schlessman, J. L., 19.3  
 Schleyer, P., 22.4  
 Schlichting, I., 1.3, 8.2  
 Schlievert, P. M., 1.3  
 Schlömann, M., 21.1  
 Schlunegger, M. P., 18.5  
 Schlünzen, F., 8.1  
 Schmid, C., 12.2  
 Schmid, M. F., 19.2, 19.6  
 Schmidt, A., 18.5, 25.2  
 Schmidt, J. J., 1.3  
 Schmidt, T., 19.3  
 Schmidt, T. J., 19.6  
 Schmitt, M., 19.4  
 Schmitt, M. P., 1.3, 17.1  
 Schmitter, M. J., 3.1  
 Schmitz, F., 1.3  
 Schneider, A., 1.3  
 Schneider, B., 21.2, 22.4, 23.3, 24.2, 24.4, 24.5  
 Schneider, D. K., 6.2, 19.4  
 Schneider, J., 1.3  
 Schneider, J. R., 8.1  
 Schneider, M., 12.2  
 Schneider, R., 23.1, 24.5  
 Schneider, T., 3.1  
 Schneider, T. R., 8.2, 9.1, 10.2, 16.1, 18.4, 18.5, 21.2, 25.1, 25.2  
 Schnierer, S., 1.3  
 Schnyder, T., 22.1  
 Schoenborn, B. P., 6.2, 12.1, 19.1, 19.4  
 Schoenborn, B.P., 6.2  
 Schoenfeld, H. J., 1.3  
 Schoenflies, A. M., 1.2  
 Schoettlin, W. E., 4.3  
 Schomaker, V., 18.4, 21.1  
 Schomburg, D., 1.3  
 Schonbrunn, E., 1.3  
 Schonfeld, H. J., 1.3  
 Schoone, J. C., 14.1  
 Schostarez, H. J., 1.3  
 Schotte, F., 8.2  
 Schrama-de Pauw, A., 7.2  
 Schramm, V. L., 1.3  
 Schreiber, H., 20.2  
 Schreiber, S. L., 1.3  
 Schreuder, H., 1.3, 21.3  
 Schreuder, H. A., 1.3, 10.1  
 Schroeder, R., 19.6  
 Schrüder, W., 8.1  
 Schroeder, I. G., 6.2  
 Schroer, K., 4.1  
 Schubar, H. L., 1.3  
 Schuller, D. J., 13.4, 15.1, 25.2  
 Schulten, K., 4.2, 17.2  
 Schultz, G. E., 8.1  
 Schultz, P., 19.2, 19.6  
 Schultz, S. C., 1.3, 23.3, 24.1  
 Schultze, P., 21.1  
 Schulz, B., 16.1  
 Schulz, G. E., 1.3, 4.2, 4.3, 23.1  
 Schulz, H. H., 18.5  
 Schulze, E., 19.6  
 Schulze, H., 19.4  
 Schumacher, G., 12.2  
 Schumacher, M. A., 1.3, 23.3  
 Schuster, M., 6.1, 19.3  
 Schuster, T. M., 19.3  
 Schutt, C., 3.1  
 Schutt, C. E., 1.2, 11.2, 11.3, 11.4, 11.5, 13.4  
 Schutte, E., 26.1  
 Schwabe, J. W. E., 1.3  
 Schwager, P., 13.1  
 Schwam, H., 1.3  
 Schwan, H. P., 22.3  
 Schwartz, D. C., 1.3  
 Schwartz, R. S., 10.1  
 Schwartz, T., 23.3  
 Schwarz, F. P., 23.4  
 Schwarzenbach, D., 11.4, 18.4, 18.5  
 Schwegle, W., 16.1  
 Schweizer, W. B., 22.4  
 Schwinger, J., 6.1, 8.1  
 Scimienti, C. R., 3.1  
 Scopes, R. K., 3.1  
 Scorer, C. A., 3.1  
 Scott, C. A., 4.3  
 Scott, D. L., 1.3  
 Scott, D. M., 1.3  
 Scott, L. R., 19.6  
 Scott, M. E., 3.1  
 Scott, W. E., 19.5  
 Scott, W. G., 24.2, 24.4  
 Scott, W. R. P., 20.1, 20.2  
 Scouloudi, H., 13.1, 26.1  
 Scriven, L. E., 19.6  
 Scrutton, N. S., 4.3  
 Sears, V. F., 6.2  
 Seaton, B. A., 19.3  
 Seavey, B. R., 24.1  
 Sedat, J. W., 19.6  
 Sedzik, J., 19.3  
 Seeds, W. E., 18.5, 23.3  
 Seeger, K., 1.3  
 Seeman, N. C., 23.2, 23.3  
 Segel, D. J., 19.3  
 Seggern, H., 6.2  
 Seibert, K., 4.2  
 Seidman, J. G., 3.1  
 Selk, L. M., 1.3  
 Sella, C., 6.2  
 Seller, P., 7.1  
 Sellin, P. J., 8.1  
 Sellschop, J. P. F., 6.1  
 Selmer, T., 1.3  
 Semisotnov, G. V., 19.3  
 Sengbusch, P., 19.5  
 Senn, H., 12.1, 19.7, 21.1  
 Serdyuk, I. N., 19.3, 19.4  
 Serrano, L., 22.2  
 Serre, L., 1.3  
 Sesay, M. A., 24.4  
 Sesonske, A., 6.2  
 Sessions, R. B., 1.3  
 Seto, C. T., 22.4  
 Sevcik, J., 18.4, 18.5, 21.1  
 Severin, J. M., 1.3  
 Sexton, J. L., 1.3  
 Sgro, J.-Y., 19.6, 22.1  
 Sha, B., 1.3

## AUTHOR INDEX

- Sha, B.-D., 16.1  
 Shah, A. K., 19.6  
 Shah, S. A., 1.3  
 Shakked, Z., 13.3, 23.3, 23.4  
 Shallom, S., 1.3  
 Shaltiel, S., 23.4  
 Shamoo, Y., 18.2  
 Shannon, C. E., 16.2  
 Shao, Y., 3.1  
 Shapiro, R., 1.3  
 Sharff, A. J., 14.2  
 Sharma, A., 1.3  
 Sharma, M. R., 19.6  
 Sharma, V., 1.3  
 Sharon, R., 20.1, 22.1  
 Sharp, J. D., 1.3  
 Sharp, K. A., 22.1, 22.3, 23.2, 23.4, 25.1  
 Sharp, P., 7.1  
 Sharpe, T. R., 23.4  
 Shaw, P. J., 19.2  
 Shaw, W. V., 1.3, 4.3  
 Shaw Stewart, P. D., 4.1  
 Sheat, S., 1.2  
 Sheehan, B., 19.6  
 Sheldrick, G. M., 9.1, 12.2, 14.2, 16.1, 18.1, 18.4, 18.5, 21.1, 21.2, 25.1, 25.2  
 Shen, B. W., 1.3  
 Shen, F., 1.3  
 Shen, K., 1.3  
 Shen, Q., 16.1  
 Shen, Y. Q., 1.3  
 Shepard, W., 1.3, 8.1  
 Shepherd, J. A., 7.1, 7.2  
 Sheriff, S., 1.3, 13.1, 18.2, 18.4, 18.5, 21.2  
 Sherman, D. M., 13.4  
 Sherman, F. S., 3.1  
 Sherman, M. B., 19.2, 19.6  
 Sherry, B., 1.2, 1.3, 8.1, 11.5, 13.4, 22.1  
 Shi, D., 1.3  
 Shi, J.-P., 22.2  
 Shi, W., 1.3  
 Shi, X., 1.3, 23.2  
 Shi, Y., 17.1  
 Shi, Y.-Y., 20.1  
 Shieh, H. S., 1.3  
 Shields, G. C., 23.3, 24.1  
 Shields, G. P., 22.4  
 Shimanouchi, T., 1.3, 12.1, 14.2, 17.1, 18.4, 20.1, 21.1, 21.2, 24.2, 24.3, 24.5, 25.2  
 Shimizu, T., 4.3  
 Shimon, L. J., 23.2  
 Shimoni, L., 22.4  
 Shimonishi, Y., 1.3  
 Shimothno, K., 3.1  
 Shin, D. H., 1.3, 21.3  
 Shin, R., 16.1  
 Shinagawa, H., 24.4  
 Shindyalov, I. N., 21.2, 22.4, 23.4, 24.2, 24.5  
 Shinedling, S., 3.1  
 Shinke, R., 1.3  
 Shinzawa-Itoh, K., 4.2, 8.1  
 Shiono, M., 16.1  
 Shipley, G. G., 1.3, 19.4  
 Shipley, N. S., 24.4  
 Shiraiwa, Y., 6.1  
 Shlichta, P., 4.1, 5.1  
 Shlyapnikov, S. V., 24.4  
 Shmueli, U., 16.1, 18.5  
 Shoelson, S. E., 1.3  
 Shoemaker, C. B., 1.2  
 Shoham, M., 21.2  
 Shoham, Y., 23.1  
 Shoolingin-Jordan, P. M., 1.3  
 Shore, H. B., 4.1  
 Shore, V. C., 1.2, 26.1  
 Shotkin, L. M., 6.2  
 Shotton, D., 4.2  
 Shotton, M. W., 19.5  
 Showalter, R. E., 1.3  
 Shpungin, J., 19.1, 23.4  
 Shrader, T. E., 3.1  
 Shraake, A., 22.1  
 Shrive, A. K., 1.3  
 Shteyn, S., 19.1  
 Shu, A., 1.3  
 Shu, Z.-Y., 4.1  
 Shudo, K., 21.1  
 Shulmeister, V. M., 4.2  
 Shustak, C., 1.3, 4.2  
 Siani, M. A., 22.1, 23.4  
 Sibanda, B. L., 22.4  
 Sibbald, P. R., 22.1  
 Siddiqui, A. S., 23.1, 24.5  
 Siddons, D. P., 4.1, 8.1  
 Sieck, T., 19.3  
 Siegel, D. P., 19.6  
 Siegert, R., 4.2, 19.6  
 Sieker, L. C., 1.3, 8.1, 12.2, 16.1, 18.1, 18.4, 18.5, 25.2, 26.1  
 Sielecki, A. R., 1.3, 15.2, 21.1, 22.1  
 Sigal, I. S., 1.3  
 Siglar, S. G., 23.4  
 Sigler, P. B., 1.2, 1.3, 4.1, 4.3, 5.2, 12.1, 13.1, 13.4, 15.1, 23.2, 23.3, 23.4  
 Sigrell, J. A., 17.1  
 Siksnys, V., 24.4  
 Silfhout, R. G. van, 6.1  
 Siliqi, D., 16.1  
 Sillers, I. Y., 19.4  
 Silman, I., 19.3  
 Silva, A. M., 1.3, 15.2, 18.2  
 Silver, R. N., 6.2  
 Silvestrini, M. C., 1.3  
 Silvian, L. F., 1.3  
 Silzer, R. M., 6.1  
 Sim, G. A., 13.4, 15.1, 15.2, 16.1, 18.2, 25.2  
 Simanek, E. E., 22.4  
 Simeone, J. P., 1.3  
 Simmer, R., 1.3  
 Simon, M. I., 3.1  
 Simonson, T., 17.1, 18.2, 18.4, 22.3, 25.1, 25.2  
 Simpson, K., 19.4  
 Simpson, R. J., 21.1  
 Singer, B. S., 3.1  
 Singer, P., 23.4  
 Singh, A. K., 14.1  
 Singh, J., 22.4  
 Singh, R. K., 22.1  
 Singh, T. P., 10.2  
 Singman, L., 10.2  
 Sinha, S., 14.2  
 Sinning, I., 1.3, 4.2, 21.1  
 Sintchak, M. D., 19.1, 23.4  
 Sippl, M. J., 18.3, 21.1, 21.2  
 Sirawaraporn, P., 1.3  
 Sirawaraporn, R., 1.3  
 Sirawaraporn, W., 1.3  
 Sisson, G. W., 4.3  
 Sisson, W., 1.3  
 Sitkoff, D., 22.3  
 Siva, A. C., 19.6  
 Sivia, D. S., 6.2  
 Sixma, J. J., 1.3  
 Sixma, T. K., 1.3, 15.1, 16.1, 25.2  
 Sjoloin, L., 1.3, 19.1, 21.1, 23.4  
 Skalka, A. M., 4.3  
 Skarzynski, T., 1.3  
 Skehel, J. J., 1.3, 13.1, 13.4, 25.2  
 Skelton, J., 1.3  
 Skelton, N. J., 19.7  
 Skerra, A., 4.2  
 Skinner, J. M., 25.1  
 Skinner, R., 1.3  
 Sklenar, H., 23.3, 24.2  
 Sklenar, V., 23.3  
 Skoglund, U., 19.6  
 Skopik, D. M., 6.1  
 Skouri, M., 4.1  
 Skovoroda, T. P., 15.1, 15.2  
 Shore, S., 22.3  
 Slice, L. W., 3.1  
 Slidel, T., 24.5  
 Sligar, S. G., 3.1  
 Slingsby, C., 13.3  
 Sly, W. S., 1.3  
 Smalas, A., 23.4  
 Smallwood, A. M., 1.3  
 Smiley, I. E., 1.2  
 Smith, A. D., 1.3  
 Smith, B. E., 19.3  
 Smith, B. L., 19.2  
 Smith, B. S., 4.2  
 Smith, C., 4.1  
 Smith, D. L., 1.3  
 Smith, E. R., 20.2  
 Smith, F. R., 23.4  
 Smith, G. C., 6.2  
 Smith, G. D., 1.3, 8.1, 9.1, 16.1  
 Smith, G. M., 23.3  
 Smith, H. O., 1.3  
 Smith, J. A., 3.1  
 Smith, J. C., 20.2, 21.2, 23.4  
 Smith, J. L., 4.1, 8.1, 9.1, 13.4, 14.2, 16.1, 25.2  
 Smith, J. M., 19.6, 22.4, 24.3  
 Smith, J. M. A., 4.3  
 Smith, L. J., 20.1  
 Smith, M. F., 19.6  
 Smith, P. E., 20.1, 20.2, 22.3  
 Smith, P. J. C., 19.5  
 Smith, R. H. Jr., 1.3, 13.4  
 Smith, S. M., 16.1  
 Smith, T., 24.4  
 Smith, T. J., 19.6  
 Smith, W. W., 1.3, 21.3  
 Smither, R. K., 6.1  
 Smythe, M. L., 1.3  
 Sneden, D., 1.2  
 Snell, E., 4.1, 8.1, 8.2  
 Snell, K., 1.3  
 Sninsky, J. J., 3.1  
 Snow, C. P., 1.2  
 Snow, P. M., 1.3  
 Snyder, E. J., 17.2  
 Sodroski, J., 1.3, 3.1, 4.3, 24.1  
 Soeter, N. M., 13.4  
 Soffientini, A., 1.3  
 Soltis, S. M., 4.2, 10.1, 10.2  
 Somasundaram, T., 22.1  
 Somers, D. O., 1.3, 10.1, 13.4  
 Somers, W., 1.3  
 Somoza, J. R., 1.3  
 Sonnenberg, N., 23.2  
 Song, H. K., 1.3, 21.3  
 Song, L., 1.3, 4.2  
 Song, L.-S., 3.1  
 Song, S. P., 10.1  
 Sonhammer, E., 22.1  
 Soodak, H., 6.2  
 Sorge, J., 1.3  
 Soriano-Garcia, M., 1.3  
 Sosfenov, N. I., 19.4  
 Sosnick, T. R., 19.3  
 Souchon, H., 23.4  
 Souhassou, M., 18.4  
 Soumpassis, D. M., 23.3  
 Sousa, M. C., 19.3  
 Sousa, R., 4.1  
 Souza, D. H., 1.3  
 Sowder, R. C. I., 1.3  
 Sowdhamini, R., 23.1  
 Spagna, R., 8.1, 16.1, 25.1  
 Spahn, C. M. T., 19.6  
 Spangfort, M. D., 12.2  
 Spangler, B. D., 1.3  
 Spanier, J., 6.2  
 Sparks, C., 1.3  
 Sparks, R. A., 11.1, 11.5, 26.1  
 Spears, H. J., 19.6  
 Spehner, J.-C., 17.2, 25.1  
 Speir, J. A., 19.6  
 Spellmeyer, D. C., 25.1  
 Spence, J. C. H., 19.6  
 Spencer, R. H., 1.3, 4.2  
 Spencer, S. A., 19.1  
 Spencer, S. M., 19.6  
 Spenser, R. M., 12.1  
 Spieler, H., 7.1  
 Spithill, T. W., 1.3  
 Spitzfaden, C., 1.3, 19.7  
 Sportiello, M. G., 4.1  
 Spouge, J. L., 23.1  
 Spraggon, G., 1.3  
 Springer, J. P., 1.3  
 Springer, T., 6.2  
 Springhorn, S. S., 1.3  
 Sprou, D., 23.3  
 Spurlino, J. C., 1.3  
 Squares, R., 1.3  
 Squares, S., 1.3  
 Squillante, M. R., 7.1  
 Squire, J. M., 19.5  
 Srajer, V., 8.1, 8.2, 19.3  
 Sreenivasan, U., 22.1, 23.4  
 Sridhar, V., 1.3  
 Sridharan, S., 22.3  
 Srinivasan, A. R., 21.2, 22.4, 24.2, 24.4, 24.5  
 Srinivasan, R., 15.2, 18.2, 21.1  
 Srisodsuk, M., 21.1  
 Srivastava, S., 19.6  
 Stabinger, H., 5.2  
 Staden, R., 1.2, 13.4  
 Stähl, S., 3.1  
 Stahl, S. J., 19.6, 23.4  
 Stählberg, J., 21.1  
 Stallings, W. C., 1.3, 4.2  
 Stalon, V., 1.3  
 Stamm, M., 6.2  
 Stammers, D. K., 1.3, 10.1, 13.4  
 Stamm'ler, R. J. J., 6.2  
 Stampf, D. R., 24.1  
 Stams, T., 1.3  
 Standaert, R. F., 1.3  
 Standing, T. S., 8.1  
 Stanfield, R. L., 1.3  
 Stanford, R. H., 26.1  
 Stanley, B. A., 1.3, 16.1  
 Stanley, E., 5.1, 16.1  
 Stanton, M., 23.4  
 Stanton, M. J., 7.2  
 Stapelmann, J., 4.1  
 Starikov, E. B., 22.4  
 Stark, D. H., 1.3  
 Stark, W., 19.5  
 Stas, P. P. G., 23.4  
 States, D. J., 22.1, 25.1  
 Staub, U., 6.2  
 Stauffacher, C. V., 1.3  
 Stec, B., 16.1, 18.5  
 Stegeman, R. A., 1.3, 4.2  
 Stegun, I., 11.3, 18.2  
 Steiert, M., 4.2  
 Steigemann, W., 12.2, 13.1, 13.2, 23.4, 25.1  
 Stein, P. E., 1.3  
 Steinbacher, S., 12.1, 12.2  
 Steinberg, I. Z., 12.1  
 Steinbiss, H.-H., 3.1  
 Steiner, T., 22.4  
 Steinhauser, O., 20.2  
 Steinkuehler, C., 1.3  
 Steinrauf, L. K., 5.1, 26.1  
 Steipe, B., 4.3  
 Steitz, T. A., 1.2, 1.3, 4.1, 8.1, 13.4, 19.6, 23.1, 23.2, 23.3, 24.1  
 Steller, I., 11.1, 11.3, 11.4, 11.5  
 Stel'mashchuk, V. Y., 19.6  
 Stenflo, J., 19.3  
 Stenkamp, R. E., 1.3, 12.2  
 Stephanou, C., 6.2  
 Stephens, R. E., 19.5  
 Stern, L. J., 1.3  
 Sternberg, M. J. E., 1.3, 12.1, 22.4, 23.1  
 Stetefeld, J., 5.2  
 Stevels, A., 7.2  
 Steven, A. C., 19.6  
 Stevens, A. M., 1.3, 4.2  
 Stevens, R. C., 1.3  
 Stevenson, L. F., 1.3  
 Stewart, D., 1.3  
 Stewart, D. E., 18.3, 21.1  
 Stewart, J. W., 3.1  
 Stewart, L., 1.3  
 Stewart, M., 1.3, 19.6, 23.1  
 Stewart, P. L., 19.6  
 Stezaert, J., 23.4  
 Stezowski, J. J., 21.1  
 Stickle, D. F., 22.2  
 Stiehler, R., 7.1  
 Stier, G., 12.1  
 Stihle, M., 4.1  
 Still, C., 22.3  
 Stillman, T. J., 8.1  
 Stock, A. M., 3.1, 4.3  
 Stock, D., 12.2  
 Stock, J., 3.1  
 Stöckel, P., 19.4  
 Stocker, U., 20.1  
 Stockley, P. G., 23.2  
 Stoddard, B. L., 1.3, 8.2  
 Stoeckler, J. D., 1.3  
 Stoesser, G., 21.1  
 Stoichet, B. K., 22.4  
 Stojanoff, V., 1.3, 4.1, 8.1  
 Stokes, D. L., 19.2  
 Stoll, V. S., 4.3  
 Stone, A. J., 22.4, 24.3  
 Stone, D. B., 19.4  
 Stone, S. R., 1.3  
 Stonehouse, N. J., 23.2  
 Stoops, J. K., 19.6  
 Storm, R., 4.1  
 Stormo, G., 3.1  
 Stoschek, A., 19.6  
 Stote, R., 20.2, 21.2  
 Stout, G. H., 25.2  
 Stouten, P. F. W., 25.1  
 Stover, D. R., 1.3  
 Stowell, M., 19.2, 19.6  
 Stowell, M. H. B., 4.2, 10.2  
 Strand, A., 1.3  
 Strandberg, B., 1.3, 5.1  
 Strandberg, B. E., 1.2, 14.2, 26.1  
 Strassheim, M. L., 19.6  
 Strassmaier, T., 1.3  
 Straub, J., 20.2, 21.2  
 Strelkov, S. V., 11.1  
 Strelmann, J., 19.4  
 Strickland, C. L., 4.1  
 Strickland, D. K., 19.6  
 Strickler, M. D., 1.3  
 Strimpler, A. M., 1.3  
 Strokopytov, B. V., 25.1  
 Strominger, J. L., 1.3, 13.4, 26.1  
 Stroud, R. M., 1.3, 8.1, 18.5  
 Stroud, W. J., 19.5  
 Strouse, C. E., 11.1  
 Struhl, K., 3.1  
 Stryer, L., 26.1  
 Strynadka, N. C. J., 1.3, 22.4, 26.1  
 Strzelecka, T., 24.4  
 Stuart, A., 5.1, 18.4  
 Stuart, D., 1.3, 8.1, 11.4, 13.4, 22.1  
 Stuart, D. I., 1.3, 8.1, 10.1, 19.6  
 Stubbe, J., 16.1  
 Stubbings, S. J., 6.1  
 Stubbs, G., 1.2, 19.5, 19.6  
 Stubbs, M. T., 1.3, 12.2  
 Stuber, D., 1.3, 4.3  
 Stuckey, J. A., 1.3  
 Studier, F. W., 3.1  
 Stuhmann, H. B., 6.2, 8.1, 19.3, 19.4  
 Stull, J. T., 19.3  
 Stura, E. A., 1.3, 4.1, 4.3, 8.1  
 Sturman, E. J., 1.3  
 Su, M. S., 1.3  
 Subramaniam, S., 19.6, 22.3  
 Subramanian, E., 1.3, 18.2  
 Suck, D., 5.1, 12.1, 13.4, 17.2  
 Suddath, F. L., 1.2, 8.1, 11.2  
 Sugantino, M., 1.3  
 Sugio, S., 1.3, 23.4  
 Sugrue, M. F., 1.3  
 Suguna, K., 1.3, 8.1, 18.2  
 Suh, S. W., 1.3, 21.3  
 Sühnel, J., 24.5  
 Suller, V., 8.1  
 Sullivan, M. C., 24.4  
 Sullivan, P. A., 1.3  
 Sulston, J. E., 1.3  
 Suma, S., 1.3  
 Summani, A., 1.3  
 Summers, L., 12.2  
 Summers, M. F., 1.3  
 Sumner, I., 3.1  
 Sun, D.-P., 4.3  
 Sun, Y., 24.1  
 Sundaralingam, M., 22.2, 23.3  
 Sundquist, W. I., 1.3  
 Sundstrom, M., 1.3  
 Sunnerhagen, M., 19.3  
 Sussman, J. L., 9.1, 18.4, 19.3, 21.1, 22.4, 24.1, 24.3, 25.2  
 Sutcliffe, M. J., 1.3

## AUTHOR INDEX

- Sutor, D. J., 22.2  
 Sutton, G. G., 1.3  
 Sutton, L. E., 22.4  
 Sutton, R. B., 23.2  
 Suzuki, E., 19.5  
 Suzuki, H., 19.5  
 Suzuki, K., 1.3, 12.1  
 Suzuki, M., 11.4  
 Suzuki, T., 22.1  
 Suzuki, Y., 1.3, 4.1  
 Svensson, A., 1.3  
 Svensson, L. A., 12.2  
 Svensson, O. S., 8.1  
 Svensson, S. O., 7.2  
 Svergun, D. I., 19.3, 19.4, 19.6  
 Swain, A. L., 21.1  
 Swaminathan, S., 1.3, 13.4, 22.1, 25.1, 25.2  
 Swanson, C. A., 23.4  
 Swanson, S. M., 15.1, 22.4  
 Swarte, M. B. A., 4.1  
 Sweet, R., 8.1, 19.6  
 Sweet, R. M., 1.3, 9.1, 13.2, 17.1, 21.3, 23.4, 25.1  
 Sweet, R. W., 1.3, 3.1, 4.3, 24.1  
 Swen, H. M., 1.2  
 Swenson, D., 1.3  
 Swindells, M. B., 21.1, 23.1, 24.5  
 Syed, R., 1.3  
 Sygusch, J., 4.1  
 Sykes, B. D., 19.7, 22.1, 24.5  
 Symersky, J., 1.3  
 Syromyatnikov, F. V., 5.2  
 Syto, R., 4.3  
 Szabo, A., 20.2  
 Szawlowski, M., 7.1  
 Szebenyi, D., 8.1, 8.2  
 Szebenyi, M., 8.1  
 Szumowski, K. E., 19.5  
 Szyperski, T., 20.2
- Tabor, S., 3.1  
 Tago, K., 1.3  
 Tai, M., 3.1  
 Tainer, J. A., 1.3, 21.1, 22.1, 23.4, 24.4  
 Takaha, T., 16.1  
 Takahashi, H., 19.6  
 Takahashi, K., 6.2, 8.1  
 Takano, T., 1.2  
 Takashima, S., 22.3  
 Takeda, T., 6.2  
 Takeshima, K., 1.3  
 Takusagawa, F., 11.4  
 Talanian, R. V., 1.3  
 Taleb, M., 4.1  
 Talmon, Y., 19.6  
 Tamura, N., 19.6  
 Tamura, T., 19.6  
 Tan, K. L., 1.3  
 Tanaka, I., 6.2, 11.4, 22.4  
 Tanaka, N., 1.3, 5.1  
 Tanaka, T., 23.2  
 Tanford, C., 5.2, 22.1  
 Tang, J., 19.6  
 Tang, W.-J., 4.3  
 Tanner, J., 1.3  
 Tansik, R. L., 1.3  
 Tantillo, C., 1.3, 13.4  
 Tao, Y., 11.1, 19.6  
 Tardieu, A., 4.1, 19.3, 19.4  
 Tardif, C., 1.3  
 Tarr, G. E., 13.4  
 Tasumi, M., 1.3, 12.1, 14.2, 17.1, 18.4, 20.1, 21.1, 21.2, 24.2, 24.3, 24.5, 25.2  
 Tate, C., 16.1, 25.2  
 Tate, M. W., 7.1, 7.2, 8.1, 19.3  
 Tateno, Y., 21.1  
 Taveau, J.-C., 19.6  
 Taylor, A., 24.5  
 Taylor, G., 1.3  
 Taylor, G. R., 3.1  
 Taylor, H. C., 25.2  
 Taylor, I., 1.3, 23.4  
 Taylor, K., 1.3  
 Taylor, K. A., 19.6  
 Taylor, P., 1.3, 22.4  
 Taylor, R., 18.2, 21.1, 21.2, 22.1, 22.2, 22.4, 24.3
- Taylor, R. K., 1.3  
 Taylor, R. M. I., 17.2  
 Taylor, S., 23.4  
 Taylor, S. S., 3.1  
 Taylor, W. R., 23.1  
 Tazaki, S., 6.2  
 Tazzari, S., 6.1  
 Teale, M., 1.3  
 Teater, C., 1.3  
 Tecotzky, M., 7.2  
 Teeri, T. T., 21.1  
 Teeter, M. M., 1.2, 14.2, 16.1, 18.4, 18.5, 19.1, 23.4  
 Tegeni, M., 1.3  
 Teichert, M., 16.1  
 Teixeira-Dias, J. J. C., 22.4  
 Tekaia, F., 1.3  
 Teller, A., 18.2  
 Teller, D. C., 1.3  
 Teller, E., 18.2  
 Tello, D., 23.4  
 Temin, H. M., 3.1  
 Tempczyk, A., 1.3, 22.3  
 Tempczyk-Russell, A., 1.3  
 Templeton, D. H., 8.1, 14.2, 26.1  
 Templeton, L. K., 8.1, 14.2  
 Ten Eyck, L. F., 17.1, 17.2, 18.1, 18.4, 18.5, 21.1, 22.1, 25.1, 25.2  
 Teng, T.-Y., 8.1, 8.2, 10.2, 19.3  
 Teo, C.-H., 4.3  
 Teplyakov, A., 8.1, 12.2, 14.2  
 Tepp, W., 1.3  
 Terranova, M., 1.3  
 Terry, A. H., 23.4  
 Terry, H., 9.1  
 Terwilliger, T. C., 12.2, 14.2, 25.1, 25.2  
 Teschner, M., 17.2  
 Tesmer, J. J. G., 14.2  
 Testa, B., 1.3  
 Tete-Favier, F., 1.3  
 Tettelin, H., 1.3  
 Teukolsky, S. A., 11.4, 18.2  
 Tews, I., 1.3, 25.2  
 Teyton, L., 1.3, 4.3  
 Thaller, D., 4.1  
 Thanki, N., 22.2, 23.4  
 Thayer, M. M., 1.3  
 Theis, K., 1.3  
 Then, R. L., 1.3  
 Théobald-Dietrich, A., 4.1  
 Theuissen, H. J. M., 1.3  
 Theveneau, P., 9.1  
 Thibault, F., 4.1  
 Thiel, D. J., 6.1  
 Thieme, R., 1.3  
 Thierry, J.-C., 4.1, 8.1  
 Thiessen, K. J., 4.1  
 Thim, L., 21.3  
 Thirup, S., 17.1, 21.1  
 Thomas, B. R., 4.1  
 Thomas, C. D., 4.3  
 Thomas, D. H., 4.1  
 Thomas, I. M., 19.2  
 Thomas, J. M., 23.3  
 Thomas, K. A., 1.3, 23.3  
 Thomas, T. B., 23.3  
 Thompson, A., 1.3, 14.2  
 Thompson, A. W., 4.1, 7.2, 8.1, 8.2  
 Thompson, C. B., 1.3  
 Thompson, E. O. P., 1.2  
 Thompson, P., 8.2  
 Thompson, S. K., 1.3  
 Thomson, J. A., 4.1  
 Thornberry, N. A., 1.3  
 Thorne, R. E., 4.1  
 Thornley, A. E., 22.4  
 Thornton, J. M., 18.1, 18.3, 21.1, 21.2, 21.3, 22.1, 22.2, 22.4, 23.1, 23.4, 24.5, 25.1, 25.2  
 Thuman, P., 16.1  
 Thuman-Commike, P. A., 19.3, 19.6  
 Thut, R., 6.2  
 Thygesen, J., 12.1  
 Thylefors, B., 1.3  
 Tianer, J. A., 1.3  
 Tiao, G. C., 18.4
- Tickle, I. J., 12.1, 13.3, 18.4, 18.5, 21.1, 21.2, 25.2  
 Tidor, B., 23.4  
 Tiede, D., 4.2  
 Tiede, U., 17.2  
 Tiffany, K. A., 1.3  
 Tikkanen, R., 1.3  
 Tilton, R. F., 10.2  
 Timasheff, S. N., 4.1  
 Timkey, T., 1.3  
 Timmins, P. A., 4.2, 19.4  
 Timmis, K. N., 1.3  
 Timms, D., 23.4  
 Tinnel, E. P., 19.6  
 Tintelnot, M., 22.4  
 Tipper, D. J., 26.1  
 Tirado-Rives, J., 20.2  
 Tironi, I. G., 20.1, 20.2  
 Titball, R. W., 1.3  
 Tittmann, P., 19.2  
 Tjandra, N., 19.7  
 Tjian, R., 26.1  
 Tobias, J. W., 3.1  
 Tocilj, A., 8.1  
 Todd, A. E., 23.1  
 Todd, P., 4.1  
 Todd, R. J., 8.1  
 Togawa, R., 24.5  
 Tokuoka, R., 1.3  
 Toledo, L. M., 1.3  
 Tolley, S. P., 1.3  
 Tollin, P., 13.1, 13.2, 13.3  
 Tomaszek, T. A., 1.3  
 Tomei, L., 1.3  
 Tomizaki, T., 4.2, 8.1, 9.1  
 Toney, M. D., 1.3  
 Tong, L., 1.3, 11.5, 12.2, 13.1, 13.2, 13.3, 13.4, 15.1, 23.4, 25.1, 25.2  
 Toone, E. J., 23.4  
 Torbet, J., 19.5  
 Torda, A. E., 20.1, 23.4  
 Tormo, J., 23.1  
 Totrov, M. M., 21.1, 21.2  
 Towatari, T., 1.3  
 Toyoshima, C., 19.2, 19.6  
 Toyoshima, Y., 6.2  
 Trachtenberg, S., 19.6  
 Trainor, C., 23.4  
 Tran, P. H., 1.3  
 Transue, T. R., 23.4  
 Tranter, H. S., 1.3  
 Tranter, R., 1.3  
 Traveau, J.-C., 19.6  
 Travers, F., 10.1  
 Travis, J., 1.3  
 Treffry, A., 4.3  
 Tregear, R., 19.6  
 Treharne, A. M., 12.1  
 Trepod, C. M., 1.3  
 Trewhella, J., 19.3, 19.4  
 Tricot, C., 1.3  
 Trinh, E., 4.1  
 Trinick, J., 19.6  
 Tronrud, D. E., 17.1, 18.1, 18.4, 18.5, 21.1, 25.1, 25.2  
 Tropsha, A., 22.1  
 Trotman, C. N. A., 22.1  
 Trotta, P. P., 1.3, 4.1  
 Trueblood, K. N., 1.2, 18.4, 18.5, 21.1, 25.2, 26.1  
 Trump-Kallmeyer, S., 1.3  
 Trus, B. L., 19.6  
 Tsai, A.-H., 23.2  
 Tsai, D.-Y., 7.1  
 Tsai, J., 22.1  
 Tsaneva, I. R., 1.3  
 Tsao, J., 13.4, 15.1, 25.2  
 Tschesche, H., 1.3  
 Tschopp, J. F., 3.1  
 Tsernoglou, D., 12.1, 23.3, 24.4  
 Tskovskiy, Y. V., 1.3  
 Tsoucaris, G., 16.2  
 Tsugita, A., 21.1  
 Tsuji, N., 19.6  
 Tsujimoto, M., 24.4  
 Tsukihara, T., 4.2, 8.1, 11.2, 11.4, 11.5, 13.4  
 Tsunasawa, S., 3.1  
 Tsunogae, Y., 22.4
- Tsuru, M., 1.3  
 Tsuruta, H., 19.3  
 Tuchman, M., 1.3  
 Tucker, A. D., 1.3  
 Tucker, K. D., 1.3  
 Tucker, P. A., 1.3, 10.2  
 Tucker, P. W., 23.2  
 Tukalo, M., 23.2  
 Tulinsky, A., 1.3  
 Tung, C.-S., 23.3  
 Tung, M., 4.1, 12.1, 24.4  
 Tunncliffe, A., 1.3, 23.4  
 Tuppy, H., 1.2  
 Turk, D., 1.3, 12.2, 25.1  
 Turk, V., 1.3  
 Turkenburg, J., 9.1, 21.3  
 Turko, B., 8.1  
 Turko, G., 6.1  
 Turley, S., 1.3  
 Turner, B. G., 1.3  
 Turner, M., 1.3  
 Turner, M. A., 5.1, 8.1, 16.1  
 Turner-Jones, A., 1.2  
 Turon, M., 1.3  
 Tweten, R. K., 1.3  
 Twigg, P. D., 4.1  
 Tyler, P. C., 1.3  
 Typke, D., 19.6  
 Tyrrell, G. J., 1.3
- Uberbacher, E. C., 19.4  
 Uchikawa, K., 1.3  
 Udgaonkar, J. B., 21.2  
 Ueda, H., 23.2  
 Ueda, K., 7.1  
 Uesugi, S., 23.2  
 Ughetto, G., 1.3  
 Uhlén, M., 3.1, 4.3  
 Ullman, B., 1.3  
 Ulrich, E. L., 21.1, 24.5  
 Ultsch, M. H., 1.3  
 Uma, K., 16.1  
 Umland, T. C., 1.3  
 Umrana, Y., 22.2, 23.4  
 Unge, T., 13.4  
 Unger, R., 23.1  
 Unger, T. F., 3.1  
 Unger, V. M., 19.2, 19.6  
 Unser, M., 19.6  
 Unwin, N., 19.2, 19.6  
 Unwin, P. N., 19.2, 19.6  
 Urban, R. G., 1.3  
 Ursby, T., 4.1, 8.1, 8.2, 19.3  
 Urzhumtsev, A., 13.3, 15.2  
 Usha, R., 8.1  
 Usón, I., 16.1, 18.5, 25.2  
 Utsumi, S., 1.3  
 Utz, U., 1.3  
 Uversky, V. N., 19.3  
 Uyemura, K., 19.3
- Vacca, J. P., 1.3  
 Vachette, P., 19.3, 19.4  
 Vagin, A. A., 12.2, 14.2, 15.2, 18.1, 18.2, 18.4, 18.5, 21.1, 21.2, 25.1, 25.2  
 Vaguine, A. A., 18.3, 21.1, 21.2, 24.2, 24.5, 25.2  
 Vaidehi, N., 18.2  
 Vainshtein, B. K., 13.1, 19.4, 24.4  
 Vaisman, I. I., 22.1  
 Valax, P., 3.1  
 Valegard, K., 13.4, 23.2  
 Vali, G., 10.1  
 Valpuesta, J. M., 19.6  
 van Beek, C. G., 11.5  
 Van Duyne, G. D., 1.3  
 Van Phan, T., 1.3  
 Vanatalu, K., 19.4  
 Vand, V., 1.2, 19.5  
 Vanderhoff-Hanaver, P., 1.3  
 Vanderpuye, K., 7.1  
 Vanderveen, K., 1.3  
 Vandonselaar, M., 1.3  
 VanDrie, J., 1.3  
 Vaney, M. C., 4.1  
 Vanfleteren, J., 22.1  
 Varadarajan, R., 21.2  
 Varani, G., 23.2  
 Varghese, J. N., 1.3, 13.4
- Varlamov, V. P., 24.4  
 Varney, M. D., 1.3  
 Varshavsky, A., 3.1  
 Vassilev, A., 1.3  
 Vassilyev, D. G., 4.2, 19.2, 19.6, 24.4  
 Vath, G. M., 1.3  
 Vaughan, K. G., 1.3  
 Vaughan, M. R., 19.3  
 Vaughn, D. E., 1.3  
 Vavra, K. J., 1.3  
 Veber, D. F., 1.3  
 Vecchi, M. P., 18.2  
 Vedick, T. S., 3.1  
 Veerapandian, P., 1.3  
 Veessler, S., 4.1, 19.3, 20.2  
 Vekilov, P. G., 4.1  
 Velanker, S. S., 1.3  
 Velev, O. D., 4.1  
 Vellezzat, N., 6.2  
 Vellieux, F. M. D. A. P., 1.3, 13.4, 15.1, 15.2, 17.1, 21.1, 25.2  
 Vence, L. M., 3.1  
 Vénien-Bryan, C., 19.6  
 Venkatrami, L., 4.2  
 Venter, J. C., 1.3  
 Verdaguer, N., 19.6  
 Verdine, G. L., 1.3, 4.3, 23.2  
 Verdine, O. L., 12.1  
 Verdonk, M. L., 22.4, 24.3  
 Vereijken, J. M., 13.4  
 Veretnik, S., 17.1  
 Verger, D., 1.3  
 Verkman, A. S., 19.6  
 Verlet, L., 18.2, 20.2  
 Verlinde, C. L. M. J., 1.3, 17.1  
 Vermin, W. J., 16.1  
 Verner, G. E., 4.3  
 Vernon, C. A., 26.1  
 Vernon, W., 7.1  
 Vernoslova, E., 13.3  
 Verschoor, A., 19.6  
 Versichel, W., 22.2, 22.4  
 Vetter, L., 16.1  
 Vetter, W., 12.1  
 Vetterling, W. T., 11.4, 18.2  
 Viader, M. P., 1.3  
 Vidal, O., 4.1  
 Viedma, C., 4.1  
 Vigers, G. P., 1.3, 19.6  
 Vijay-Kumar, S., 1.3, 20.1  
 Vijayan, M., 1.2, 9.1, 24.1  
 Vilella, W., 24.5  
 Villafranca, J. E., 1.3, 4.3  
 Villeret, V., 1.3  
 Vilu, R., 19.4  
 Vimr, E., 1.3  
 Vinogradov, S. N., 19.6, 22.1  
 Visco, D. M., 1.3  
 Viswamitra, M. A., 22.4  
 Viterbo, D., 16.1, 25.2  
 Vitkup, D., 23.4  
 Vlassi, M., 1.3, 18.3  
 Vliegthart, J. A., 22.4  
 Vliegthart, J. F. G., 21.1  
 Vo, B., 4.3  
 Vockley, J., 1.3, 3.1  
 Voet, D., 23.3  
 Voet, J. G., 23.3  
 Vogt, T., 6.2  
 Vojtechovsky, J., 18.2, 18.3, 21.1, 21.2, 24.2  
 Volbeda, A., 23.2  
 Volkmann, N., 19.6  
 Volkov, V. V., 19.3, 19.4  
 Vollhardt, H., 17.2  
 Vonderviszt, F., 19.5, 19.6  
 Vondrasek, J., 1.3  
 Vorigas, C. E., 1.3, 25.2  
 Voronoi, G. F., 21.2, 22.1  
 Voss, E. W., 23.4  
 Voss, H., 19.4  
 Voss, N., 22.1  
 Vrhel, M., 19.6  
 Vriend, G., 1.2, 1.3, 8.1, 11.1, 11.4, 11.5, 12.2, 13.4, 18.1, 18.3, 21.1, 21.2, 21.3, 22.4, 23.1, 24.5, 25.1, 25.2  
 Vuillard, L., 4.1  
 Vyas, M. N., 23.2

## AUTHOR INDEX

- Vyas, N. K., 23.2, 23.4
- Waara, I., 1.3
- Wachtel, E. J., 19.5
- Wacker, T., 4.2, 19.4
- Wada, A., 22.3
- Wade, R. H., 19.6
- Wadzack, J., 19.4
- Wagenknecht, T., 19.6
- Wagner, G., 19.7, 23.4
- Wagner, V., 6.2
- Wah, D. A., 24.4
- Wahl, M. C., 22.2, 23.3
- Wahl, R. C., 1.3
- Wahl, R. D., 1.3
- Wahlstrom, E. E., 5.1
- Wakabayashi, K., 19.3
- Wakatsuki, S., 8.2, 9.1
- Wakayama, N. L., 4.1
- Waksman, G., 1.3
- Walder, J. A., 3.1
- Walder, R. Y., 3.1
- Waldmann, H., 1.3
- Walenta, A. H., 7.1
- Walker, J. E., 8.1, 14.2
- Walker, J. K., 19.5
- Walker, L. J., 10.1, 10.2
- Walker, M. L., 19.6
- Walker, N., 11.4
- Walker, N. P. C., 1.3
- Walkinshaw, M. D., 1.3, 19.5, 19.7, 22.4
- Wall, J. G., 3.1
- Wall, J. S., 12.1
- Wall, M. E., 7.2, 8.1
- Wallace, A. C., 24.5, 25.1
- Waller, J.-P., 3.1
- Wallimann, T., 22.1
- Walmsley, C., 22.4
- Walque, S. de, 1.3
- Walsh, C. T., 1.3, 17.1
- Walsh, M., 16.1, 18.3, 18.4, 25.2
- Walshaw, J., 23.4
- Walter, J., 18.3, 23.4
- Walter, L. J., 1.3, 4.3
- Walter, M. R., 1.3, 4.3
- Walter, R. L., 21.2
- Walther, D., 21.1, 25.2
- Walton, C., 23.2
- Walton, J., 7.1
- Walz, J., 19.6
- Walz, T., 19.2, 19.6
- Wampler, J. E., 18.3, 21.1
- Wandersman, C., 1.3
- Wang, A. H., 1.3, 23.3
- Wang, B., 19.6
- Wang, B.-C., 4.1, 13.1, 14.2, 15.1, 16.1, 25.2
- Wang, C., 1.3
- Wang, C. L., 19.4
- Wang, C. Y., 1.3
- Wang, D. N., 4.2, 19.2, 19.6
- Wang, G., 19.6
- Wang, H., 1.3, 19.5
- Wang, H.-P., 24.5
- Wang, J., 1.3, 13.4, 19.3, 21.2
- Wang, M., 1.3
- Wang, S., 22.4
- Wang, S. M., 23.2
- Wang, X. C., 1.3
- Wang, Y. F., 4.2, 17.1
- Wang, Z., 23.2
- Ward, J. M., 3.1
- Ward, K. B., 4.1, 13.3, 15.1, 22.1
- Ward, W. H., 26.1
- Ward, W. H. J., 23.4
- Wardell, M. R., 1.3
- Warner, P., 1.3
- Warren, G. L., 17.1, 18.2, 18.4, 25.1, 25.2
- Warrick, M. W., 1.3
- Warshel, A., 22.3, 23.2, 23.3
- Wartna, E. S., 1.3
- Warwicker, J., 22.3
- Waser, J., 2.1, 26.1
- Watanabe, K., 1.3, 4.1
- Watanabe, M., 21.2
- Watanabe, N., 8.1
- Watenpugh, K. D., 8.1, 10.2, 18.1, 18.5, 21.2, 22.2, 24.2, 24.5, 25.2
- Watkin, D., 21.1
- Watson, D. G., 18.4, 21.1, 21.2, 22.4, 24.2, 24.3, 25.2
- Watson, F. A., 3.1
- Watson, G. N., 13.2
- Watson, H. C., 1.3, 12.1, 13.2, 22.3, 26.1
- Watson, J. D., 1.2, 19.5, 23.3
- Watt, G., 6.2
- Wawrzak, Z., 1.3
- Waye, M. M. Y., 22.2
- Weatherley, B. C., 1.3
- Weaver, L. H., 4.1, 4.3, 15.1, 21.1, 23.4
- Weaver, T. M., 16.1
- Weaver, W., 16.2
- Webb, N. G., 8.1
- Weber, B. H., 4.1
- Weber, D., 19.6
- Weber, I. T., 1.3, 10.1, 21.1
- Weber, P. C., 1.3, 4.1, 23.4
- Webster, P., 8.1, 10.1, 10.2
- Webster, R. G., 1.3
- Weckert, E., 4.1, 8.1, 16.1
- Weckesser, J., 4.2
- Weeds, A. G., 1.3
- Weeks, C. M., 8.1, 14.2, 15.1, 16.1, 25.1, 25.2
- Weeks, J. D., 22.1
- Wehland, J., 1.3
- Wehling, F., 6.2
- Wei, A. Z., 1.3
- Wei, L., 1.3
- Wei Tam, M., 19.2
- Weickenmeyer, A., 6.1
- Weigl, D., 1.3
- Weik, M., 19.3
- Weinkauff, S., 12.2
- Weinstein, E., 19.4
- Weinstein, S., 8.1, 12.1
- Weinzierl, J., 1.2
- Weis, W. I., 14.2, 18.2, 21.1, 23.2, 25.2
- Weisgerber, S., 4.1, 8.1, 8.2
- Weisgraber, K., 24.4
- Weisman, J., 6.2
- Weiss, M. S., 4.2, 9.1, 16.1, 21.1
- Weissenhorn, W., 1.3
- Weissig, H., 21.2, 22.4, 23.4, 24.2, 24.5
- Weitzman, C., 4.3
- Welch, J. P., 1.3
- Well, A. A. van, 6.2
- Wells, J. T., 23.4
- Wells, M., 26.1
- Wells, T. N., 1.3, 24.1
- Welsh, K. M., 1.3
- Welte, W., 4.2, 19.4
- Wemmer, D. E., 23.3
- Wendoloski, J. J., 1.3, 23.3
- Wendt, E., 1.3
- Wendt, K. U., 4.2
- Weng, J., 23.1, 24.1
- Wengler, G., 11.5
- Wenzel, M., 26.1
- Werner, M. H., 3.1, 23.2
- Wernisch, L., 23.1
- Wery, J. P., 1.3, 8.1, 21.1
- Wesson, L., 16.1
- West, A., 3.1
- West, C. D., 6.2
- West, S. M., 3.1
- Westbrook, E. M., 1.3, 5.2, 7.2, 8.1, 11.4
- Westbrook, J., 21.2, 22.4, 23.4, 24.2, 24.4, 24.5
- Westbrook, M., 7.2
- Westbrook, M. L., 1.3
- Westhead, D., 24.5
- Westler, W. M., 24.1
- Weston, S. A., 1.3, 23.4
- Westphal, A. H., 19.6
- Wetlaufer, D. B., 23.1
- Whelan, M. J., 19.2
- Whisstock, J. C., 1.3
- White, D. M., 1.3
- White, H. D., 19.6
- White, H. F., 1.3
- White, J. G., 1.2
- White, J. L., 1.3
- White, O., 1.3
- White, P. S., 16.1
- White, S. P., 1.3
- White, S. W., 4.3
- White, T. J., 3.1
- Whitehead, P. C., 1.3
- Whitehead, S., 1.3
- Whitesides, G. M., 22.4
- Whitlow, M., 1.3
- Whittaker, J. W., 22.2
- Whittaker, M., 19.6
- Whittaker, M. M., 22.2
- Whittingham, J. L., 1.3
- Whittle, P. J., 1.3
- Wickersham, J. A., 1.3
- Wideburg, N., 1.3
- Wider, G., 1.3, 19.7
- Widmer, H., 1.3, 19.7
- Widom, J., 14.2
- Wiebecke, G., 17.2
- Wieczorek, H., 19.3
- Wiegand, R. C., 1.3
- Wien, M. W., 1.3
- Wiener, M. C., 10.2
- Wiener, N., 16.2
- Wierenga, R. K., 1.3, 10.1, 10.2, 13.4, 21.1
- Wiesmuller, L., 1.3
- Wigley, D. B., 15.1
- Wignall, G. D., 6.2
- Wikoff, W., 19.3, 19.6
- Wilbanks, S. M., 19.3
- Wilce, M. C. J., 1.3
- Wilcox, P. E., 1.2
- Wild, D. L., 8.1
- Wild, K., 1.3
- Wildegger, G., 19.3
- Wild, D., 1.3
- Wiley, D. C., 1.3, 7.1, 11.4, 13.1, 13.4, 24.1, 25.2
- Wilb, B. H., 8.1
- Wilkins, M. H. F., 18.5, 19.5, 23.3
- Wilkinson, A. J., 22.2
- Wilkinson, C., 6.2, 8.1, 19.1
- Wilkinson, D. L., 3.1
- Wilkinson, K. W., 1.3
- Wilks, J. W., 1.3
- Will, G., 26.1
- Wille, P., 6.2
- Willett, P., 22.4, 23.1
- Williams, D. H., 1.3
- Williams, D. M., 1.3
- Williams, D. R., 1.3, 21.1
- Williams, G. J. B., 1.3, 12.1, 14.2, 17.1, 18.4, 20.1, 21.1, 21.2, 24.2, 24.3, 24.5, 25.2
- Williams, H. R., 1.3
- Williams, J. C., 1.3
- Williams, M., 1.3
- Williams, M. A., 22.1, 22.2, 23.4
- Williams, M. M. R., 6.2
- Williams, P. A., 1.3
- Williams, R. J. P., 12.1
- Williams, R. L., 1.3
- Williams, R. S., 17.2
- Williams, S. P., 1.3
- Willingmann, P., 13.1, 13.4, 22.1
- Willis, B. T. M., 9.1
- Willumeit, R., 19.4
- Wilmanns, M., 8.1
- Wilson, A. J. C., 2.1, 11.4, 12.2, 14.2, 15.1, 15.2, 16.1, 18.4, 18.5, 21.1, 25.2, 26.1
- Wilson, C., 15.1, 23.3
- Wilson, D. K., 1.3, 23.2, 23.4
- Wilson, E., 4.1
- Wilson, H. R., 18.5, 23.3
- Wilson, I. A., 1.3, 4.1, 4.3, 12.1, 13.1, 13.4
- Wilson, I. H., 6.2
- Wilson, J. E., 1.3
- Wilson, K., 8.2, 22.2, 25.2
- Wilson, K. P., 1.3, 4.1, 4.3
- Wilson, K. S., 1.3, 8.1, 9.1, 12.2, 15.1, 16.1, 18.1, 18.3, 18.4, 18.5, 21.1, 21.2, 23.3, 24.4, 25.1, 25.2
- Wilson, S., 1.3
- Wilson, W. W., 4.1
- Wilson-Kubalek, E. M., 19.6
- Wimberly, B. T., 1.3
- Wimmer, E., 1.3, 22.1
- Windemuth, A., 22.3
- Windsor, C. G., 6.2
- Windsor, W. T., 1.3, 4.3
- Wingert, L. M., 1.3
- Wingfield, P. T., 19.6
- Winick, H., 6.1, 8.1
- Winicov, I., 23.2
- Winkelmann, D. A., 19.6
- Winkler, F. K., 1.2, 1.3, 11.2, 11.3, 11.4, 11.5, 13.4, 23.3, 24.4
- Winkler, H., 19.6
- Winkler, I., 1.3
- Winnacker, A., 6.2
- Winter, G., 1.3, 22.2
- Winter, R., 19.3
- Winter, W. T., 19.5
- Wiórkiewicz-Kuczera, J., 20.2, 21.2
- Wireko, F. C., 1.3
- Wirth, N., 11.3
- Wise, E. M., 26.1
- Wiseman, R. L., 19.5
- Wishart, D. S., 19.7
- Witherow, W. K., 4.1
- Witholt, B., 1.3, 4.1
- Witt, H. T., 4.2
- Wittinghofer, A., 1.3, 8.2
- Wittmann, H. G., 4.1, 8.1, 10.1, 10.2, 12.1
- Wittwer, A. J., 1.3
- Witz, J., 4.1, 8.1, 9.1
- Witzel, H., 9.1
- Wixted, R. L., 7.1, 8.1
- Wlodawer, A., 1.3, 4.3, 8.1, 19.1, 20.2, 21.1, 23.4
- Wodak, J., 23.1
- Wodak, S. J., 18.3, 21.1, 21.2, 22.1, 24.2, 24.5, 25.2
- Woerd, M. van der, 5.1
- Wokaun, A., 19.7
- Wolf, E., 1.3
- Wolf, S. G., 19.2, 19.6
- Wolf, W., 13.1, 13.2, 13.4
- Wolff, P. M. de, 11.1
- Wolthers, B. G., 1.2
- Wolynes, P. G., 20.2
- Won, Y., 25.1
- Wonacott, A., 1.3
- Wonacott, A. J., 1.2, 7.1, 9.1, 11.1, 11.4, 11.5, 19.5
- Wong, B. L., 1.3
- Wong, J., 1.3
- Wong, L., 22.3
- Wong, M., 19.6
- Wong, S. L., 1.3
- Wong, W., 3.1
- Wong, Y. N., 23.4
- Wong-Staal, F., 1.3
- Wood, I. G., 8.2
- Wood, S. A., 1.3
- Wood, S. P., 1.3, 12.1
- Wood, Z. A., 23.3
- Woodgate, R., 4.3
- Woods, J. M., 1.3
- Woodward, C., 20.2, 22.3
- Wolf, D. J., 1.3
- Woolfson, M. M., 15.1, 15.2, 16.1, 25.1, 25.2
- Woollard, T., 10.2
- Wootton, R., 1.3
- Word, J. M., 25.2
- Worland, S., 1.3
- Worm, S. H. van den, 23.2
- Worthmann, W., 19.4
- Worthylake, D., 1.3
- Wozniak, J. A., 4.3, 22.2
- Wriggers, W., 19.6
- Wright, B. S., 4.1
- Wright, P. E., 19.7, 24.5
- Wright, W. V., 17.2
- Wrighton, N. C., 1.3
- Wu, H., 12.1, 13.1, 13.3, 13.4, 14.2, 15.1, 25.2
- Wu, H.-M., 23.3
- Wu, S.-H., 1.3
- Wu, W. Y., 1.3
- Wu, Y. P., 5.1
- Wu, Z., 1.3
- Wulff, M., 4.1, 8.1, 8.2, 19.3
- Wunderlich, J. A., 26.1
- Wurmbach, P., 19.4
- Wüthrich, K., 1.3, 17.2, 19.7, 20.1, 20.2, 23.4, 24.5
- Wyatt, R., 1.3, 3.1, 4.3, 24.1
- Wychofski, C., 1.3
- Wyckoff, H. W., 1.2, 19.3, 19.5, 26.1
- Wylie, A., 7.1
- Wynn, R. M., 1.3
- Wynne, S. A., 1.3, 19.6
- Wyns, L., 23.4
- Wysocki, L. A., 3.1
- Wyssbrod, H. R., 12.1
- Xia, D., 1.3, 4.2, 13.1, 13.4, 15.1, 25.2
- Xia, J. Z., 4.2
- Xiang, S., 14.2
- Xie, Q., 22.1
- Xie, X., 1.3
- Xin, H.-B., 19.6
- Xu, H., 16.1
- Xu, M. Q., 3.1
- Xu, W., 1.3, 19.6
- Xu, Y., 1.3
- Xuan, J. C., 1.3
- Xue, Y., 1.3
- Xuong, N. H., 1.3, 6.1, 7.1, 8.1, 11.4
- Yadav, P. N., 1.3
- Yagi, N., 19.5
- Yagi, T., 4.1
- Yamada, M., 1.3
- Yamada, S., 6.2
- Yamagishi, H., 19.6
- Yamaguchi, H., 4.2, 8.1
- Yamaguchi, S., 19.6
- Yamaizumi, Z., 23.4
- Yamakura, F., 12.1
- Yamamoto, T., 3.1
- Yamane, T., 22.4
- Yamashita, E., 4.2, 8.1
- Yamashita, I., 19.5
- Yamashita, M. M., 19.3
- Yan, Y., 1.3, 8.1, 13.4
- Yanagi, K., 24.2
- Yanagishita, M., 4.2
- Yang, A., 22.3
- Yang, C. H., 1.3
- Yang, J., 1.3
- Yang, J. T., 26.1
- Yang, S.-W., 23.3
- Yang, W., 1.3, 4.3, 23.3
- Yang, X., 1.3, 8.2
- Yang, Z., 21.1
- Yanofsky, C., 23.2
- Yanofsky, S., 1.3
- Yao, J.-X., 16.1
- Yao, M., 4.2, 9.1, 11.4
- Yao, N., 1.3, 23.2
- Yano, R., 4.2, 8.1
- Yaremchuk, A., 23.2
- Yariv, J., 8.1, 18.5, 21.2
- Yasukawa, T., 3.1
- Ye, H., 19.5
- Ye, Q.-Z., 1.3
- Yeager, M., 19.2, 19.6
- Yeates, T. O., 4.2, 5.1, 21.1, 21.3, 25.2
- Yee, V. C., 1.3
- Yeh, J. I., 1.3
- Yelon, W. B., 6.2
- Yevitz, M. M., 8.1
- Yewdall, S. J., 4.3
- Yin, D., 21.2
- Yin, M., 1.3
- Yokota, H., 3.1
- Yonath, A., 4.1, 8.1, 10.1, 10.2, 12.1, 15.1
- Yonekura, K., 19.2, 19.6
- Yonemoto, W. M., 3.1
- Yoo, S., 1.3
- Yoon, C., 1.3

## AUTHOR INDEX

- Yoon, H. S., 1.3  
 Yoon, K.-H., 1.3  
 Yoon, L., 22.3  
 York, B., 16.1  
 York, D., 20.2  
 Yoshida, E., 4.1  
 Yoshida, N., 1.3  
 Yoshikawa, S., 4.2, 8.1  
 Yoshimatsu, M., 6.1  
 Yoshimoto, T., 1.3  
 Yoshimura, H., 19.6  
 You, Y., 1.3  
 Young, D., 1.3  
 Young, M. A., 23.3  
 Young, M. J., 19.6  
 Young, S. J., 17.2, 19.6  
 Yousafzai, F. K., 19.3  
 Ysern, X., 1.3  
 Yu, B., 6.2  
 Yu, C. A., 4.2  
 Yu, K., 1.3  
 Yu, L., 4.2  
 Yuan, C.-S., 8.1, 16.1  
 Yun, R.-H., 20.1  
 Yusupov, M. M., 1.3  
 Zabeau, M., 24.4  
 Zaccai, G., 4.1, 19.3, 19.4  
 Zacharias, W., 23.3  
 Zagalsky, P. F., 4.1  
 Zaitsev, V., 1.3  
 Zaitseva, I., 1.3  
 Zakomirdina, L. N., 1.3  
 Zalis, M. E., 25.2  
 Zalkin, H., 23.3  
 Zanotti, G., 16.1  
 Zanten, B. A. M. van, 1.3  
 Zardecki, C., 24.2  
 Zauhar, R., 22.3  
 Zauodny, P. J., 1.3  
 Zauscher, F., 4.1  
 Zdanov, A., 1.3  
 Zeelen, J. P., 1.3, 10.2, 21.1  
 Zegers, I., 23.4  
 Zehfus, M. H., 23.1  
 Zemb, T., 19.1  
 Zembryki, D., 1.3  
 Zemlin, F., 4.2, 19.2, 19.6  
 Zen, K. H., 4.3  
 Zentai, G., 11.4  
 Zeppenzauer, M., 4.1  
 Zhang, A., 1.3  
 Zhang, G., 4.3  
 Zhang, H., 1.3  
 Zhang, K. Y. J., 5.1, 13.4, 14.2, 15.1, 25.1, 25.2  
 Zhang, L., 4.2  
 Zhang, M., 19.5  
 Zhang, P., 19.2  
 Zhang, R. G., 1.3, 23.2, 23.4  
 Zhang, S., 1.3, 7.1, 17.1  
 Zhang, S. P., 3.1  
 Zhang, W., 1.3, 13.4  
 Zhang, X., 1.3  
 Zhang, X.-J., 4.3, 19.6, 23.4  
 Zhang, X.-Z., 19.6  
 Zhang, Y., 1.3  
 Zhang, Y. P., 11.5  
 Zhang, Z., 1.3, 13.4, 23.4  
 Zhang, Z. L., 4.2  
 Zhang, Z. Y., 1.3  
 Zhao, B., 1.3  
 Zhao, D., 22.4  
 Zhao, H., 1.3  
 Zhao, S., 19.6  
 Zhao, X., 19.6  
 Zhao, Y., 19.6  
 Zheng, C.-D., 16.1  
 Zheng, R., 1.3  
 Zheng, X.-F., 16.1  
 Zheng, Y., 19.3  
 Zhi, G., 19.3  
 Zhou, G., 21.2, 22.1  
 Zhou, H. X., 22.3  
 Zhou, K., 22.2  
 Zhou, L., 1.3  
 Zhou, R., 16.1, 18.5  
 Zhou, Z. H., 19.2, 19.6  
 Zhu, J., 19.6  
 Zhu, X., 1.3  
 Zhurkin, V. B., 23.3  
 Zhy, D. W., 1.3  
 Zielenkiewicz, P., 23.4  
 Ziéntara, S., 8.1, 19.6  
 Zillig, W., 19.4  
 Zimm, B. H., 17.2  
 Zimmermann, H., 2.1, 11.1  
 Zizka, G., 6.1, 8.1  
 Zlotnick, A., 13.4, 19.6  
 Zou, J.-Y., 13.4, 17.1, 18.4, 19.6, 21.1, 21.2, 25.1, 25.2  
 Zouni, A., 4.1  
 Zubay, G., 3.1, 19.6  
 Zuccola, H. J., 1.3  
 Zucic, D., 1.3  
 Zugenmaier, P., 19.5  
 Zuiderweg, E. R. P., 20.1  
 Zulauf, H., 4.2  
 Zulauf, M., 19.6  
 Zurek, S., 8.1, 8.2  
 Zurini, M. G. M., 1.3, 19.7  
 Zusupova, G. Z., 1.3  
 Zwick, M., 13.1, 14.2, 15.1  
 Zwickl, P., 12.2  
 Zwinderman, H. R. J., 20.1  
 Zydowsky, L. D., 1.3



# Subject index

- A-DNA, 588  
*A LA MODE*, 508  
A-tract bending, 607  
*Ab initio* phasing, 333  
  and atomic resolution, 395  
  in molecular replacement, 286  
  multisolution methods, 334  
Absolute configuration, 230, 298, 699  
Absorption, 59  
Absorption coefficient  
  atomic, 299  
  atomic mass, 59  
  linear, 59  
Absorption corrections, 60  
  for lysozyme, 759  
Absorption edge, 53, 59  
Absorption factor, 59  
Accuracy, 403  
  of unit-cell parameters, 212, 501  
Acid–base equilibria, 555  
*ADIT*, 675  
Affinity chromatography, 76  
Alternative conformations, 399  
*AMBER*, 690  
American method of crystal orientation, 209  
Amino-acid analogues as heavy-atom  
  derivatives, 255  
Amino acids  
  distribution of water molecules around, 625  
  hydrogen bonds in, 562  
  interactions with heavy-atom reagents, 250  
Amino-aromatic hydrogen bonding, 552  
Ammonium sulfate, 75, 84, 249, 671  
*AMoRe*, 688  
Amplitude contrast, 457  
Animation, 357, 364  
  kinemages, 727  
  of molecular-dynamics trajectories, 363  
Anion-exchange chromatography, 75  
Anisotropic atomic model, 394, 399  
Anisotropic mosaicity, 240  
Anisotropic scaling, 395, 697  
*ANOLEA*, 508  
Anomalous difference Patterson map, 260  
Anomalous-scatterer labels for MAD, 303  
Anomalous scattering (dispersion), 54, 295, 299  
  and direct methods, 344  
  data-collection strategies, 193  
  heavy-atom location, 293, 297  
  phase probability distribution, 296  
  phasing, 293  
  preparation of heavy-atom derivatives, 247  
  signal quality, 238, 241  
  sodium tartrate, 4  
  without isomorphous replacement, 297  
Anomalous scattering factors, 299  
  evaluation of, 299  
Antibody Fv fragments in crystallization of  
  membrane proteins, 98  
Antigen–antibody association, water molecules  
  in, 638  
Approximate-likelihood method, 699  
Archimedes' method, 119  
Area detectors, 144–145, 148, 212  
  and cross fire, 129  
  and synchrotron radiation, 161, 165  
Argand diagram, 53  
*ARP/wARP*, 374, 689, 720  
Astbury, W. T., 5  
Asymmetric unit, 47  
  choice of, 184  
Atomic absorption coefficient, 299  
Atomic charge distributions, 553  
Atomic displacement parameters (temperature  
  factors), 393  
  anisotropic, 56, 393  
  anisotropic, at atomic resolution, 399  
  anisotropic, refinement in *SHELXL*, 736  
  constraints, 397  
  effect of coordinate errors, 371  
  effect on coordinate uncertainty, 403  
  group *B* factors, 371  
  in structure validation, 504  
  isotropic, 56  
  refinement of, 371  
  restraints, 397, 719  
Atomic force microscopy (AFM), crystal-growth  
  studies, 90  
Atomic mass absorption coefficient, 59  
Atomic radii, 536  
  standard, 536  
  van der Waals, 536, 539  
Atomic resolution, 393  
  and *ab initio* phasing, 395  
  anisotropic atomic displacement  
  parameters, 399  
  automatic location of water sites, 400  
  crambin, 398  
  data collection, 194  
  data quality, 395  
  definition of, 395  
  deformation density, 401  
  hydrogen atoms, 398  
  ligands, 401  
  low-resolution data, 395  
  metal ions, 401  
  modelling alternative conformations, 399  
  ordered solvent, 399  
  ribonuclease Sa, 398  
  strategies, 398  
  structures for validation, 401, 517, 723  
  triclinic lysozyme, 398  
Atomic scattering factor, 54, 299  
  imaginary component, 299  
  real component, 299  
Atomic solvation parameters, 542  
Atomicity, 318, 393  
*AutoDep*, 649, 653–654, 680  
*Autographa californica* nuclear polyhedrosis  
  virus (AcNPV), 72  
Autoindexing, 209  
  basis vectors, 210  
  coordinate systems, 228  
  distribution of reciprocal-lattice vectors, 209  
  in *DENZO*, 227  
  misindexing, 228  
  twinning, 228  
Automated convolution method for molecular-  
  boundary identification, 313  
Automated structure solution for MAD and  
  MIR, 303  
Automatic location of water sites, 400  
Averaging of reflection intensities, 238  
  *R* factors, 238  
*AVGSYS*, 288  
B-DNA, 588  
  A-tract bending, 607  
B-DNA  
  minor-groove width, 603  
  sequence-dependent bendability, 603  
  sequence-dependent deformability, 603, 605–  
  606  
*BABCOCK*, 593  
Babinet inverted structure, 287  
Babinet's principle of complementarity, 403  
Background, determination of, 213, 221, 731  
Background corrections, 60  
Bacterial diseases, 13, 16  
Bacteriophages, filamentous, 450  
Bacteriorhodopsin, 95  
  electron diffraction studies, 426–427  
Baculovirus expression systems, 72  
  AcNPV, 72  
  BmNPV, 72  
'Baking', 336  
Balasubramanian plot, 502  
Base pairing, 589  
  Hoogsteen, 591  
  Watson–Crick, 591  
Basis vectors, 45  
  determination of, 220  
  in autoindexing, 210  
  standard, 45  
Batch methods of crystallization, 81  
Beam divergence, 180  
Beer's law, 59  
Beever, C. A., 4  
Beever–Lipson strips, 4  
Bending magnets, 127, 158  
Bernal, J. D., 4–5  
Bessel functions, 445  
  spherical, 274  
Best Fourier, 259, 295  
Best phase, 259  
Bias  
  and restraints, 382  
  in refinement, 328, 369  
  model, 325, 327–328, 375, 381, 499  
Biaxial crystals, 113  
Bidentate hydrogen bonding, 580  
Bifurcated hydrogen bonding, 546  
Bijvoet, J. M., 4  
Bijvoet differences, 300–301  
Bijvoet pairs, 60, 300, 304  
Bijvoet Patterson map, 8  
*BILDER*, 358  
Binding energies, 542  
  electrostatic contributions to, 556  
Biological Macromolecule Crystallization  
  Database (BMCD), 669  
  crystallization and crystal data, 669  
  crystallization procedures, 671  
  crystallization screens, 671  
  implementation, 670  
  macromolecule data, 669  
  web interface, 670  
*BIOMOL*, 685  
Birefringence, 113  
*BLANC*, 686  
Blind region, 186  
Blindness, 21  
Block-matrix approximation, 396, 409  
Blow, D. M., 6, 8  
Blow & Crick method, 294  
BMCD. *See* Biological Macromolecule  
  Crystallization Database

## SUBJECT INDEX

- Boltzmann model, 554  
*Bombyx mori* nuclear polyhedrosis virus (BmNPV), 72  
 Bond-angle restraints, 382, 384, 388  
 Bond-length restraints, 382, 384–385  
 Bond lengths from the CSD, 560  
 Bovine  $\alpha$ -lactalbumin, molecular-dynamics simulation, 492  
 Bovine pancreas ribonuclease A, molecular-dynamics simulation, 492  
 Bovine pancreatic trypsin inhibitor (BPTI) molecular-dynamics simulation, 481, 492  
 solvent structure, 637  
 Bragg, W. H., 4  
 Bragg, W. L., 4–5, 745  
 Bragg's law, 4, 56, 179  
 Bravais lattice, 52  
 determination of, 224, 732  
*Bremsstrahlung*, 125, 128  
 Brightness of synchrotron radiation, 155  
 Brilliance of synchrotron radiation, 155–156  
 5-Bromouridine, 303  
 Buckingham energy function, 448  
 Buffers, 249  
 acetate, 249  
 citrate, 249  
 Tris buffer, 249  
 Bulk solvent, modelling of, 400  
 Bunn, C. W., 4  
 Buried water molecules, 550, 632  
*BUSTER*, 689
- $C^{\alpha}$ -only model, 503  
 C–H...O hydrogen bonds, 551, 563  
 C–H...X hydrogen bonds, 563  
 Calcium-binding proteins, 581  
 calmodulin, 581  
 staphylococcal nuclease, 581  
 Calibration of CCD detectors, 149  
 in *XDS*, 731  
 Calmodulin, 581  
 Cambridge Crystallographic Data Centre (CCDC), 663  
 Cambridge Structural Database (CSD), 558, 663  
 accessing the database, 668  
 bibliographic and chemical data, 664  
 bond lengths, 560  
 chemical connectivity data, 664  
 composite crystal-field environments, 564  
 conformational libraries, 561  
 conformations, 560–561  
*ConQuest*, 666  
 content of, 663  
 crystal structure data, 664  
 CSD-Use database, 665  
 data acquisition, 558  
 data completeness, 558  
 data validation, 665  
 energies, 561  
 hydrogen-bonding motifs, 564  
 in structure validation, 507  
 IsoStar, 565, 668  
 knowledge-based structural libraries, 560, 562  
 knowledge engineering, 667  
 metal coordination, 562  
 Mogul, 668  
*Pluto*, 666  
*PreQuest*, 665  
*Quest3D*, 665  
 relevance to protein crystallography, 558–560  
 restraints from, 382
- Cambridge Structural Database (CSD)  
 searching the database, 665  
 software, 559, 665–666  
*SuperStar*, 566  
 van der Waals radii, 537  
*Vista*, 666  
 Cancers, 21  
 Carbohydrate-binding proteins, 579  
 Carbonyl–carbonyl interactions, 564  
 Carboxypeptidase, 7  
 Cardiovascular disorders, 21  
 Cartesian molecular dynamics, 378  
 CATH, 575–576  
 Cavities, locating, 355  
 CCD (charge-coupled device) detectors, 148  
 calibration, 149  
 dark-current subtraction, 149  
 flat-field corrections, 150  
 for cryo EM, 456, 458  
 geometric distortion, 150  
 obliquity correction, 151  
 CCP4 (Collaborative Computational Project, Number 4), 686  
 restraints, 507  
 Central limit theorem, 326  
 Centred (non-primitive) unit cell, 46  
 Centrosymmetric heavy-atom distributions, 297  
 Centrosymmetric point groups, 50  
 Channelling radiation, 125  
 Chaperones, use in protein folding, 70  
 Charge-coupled device (CCD) detectors, 148  
 calibration, 149  
 dark-current subtraction, 149  
 flat-field corrections, 150  
 for cryo EM, 456, 458  
 geometric distortion, 150  
 obliquity correction, 151  
 Charge distributions, atomic, 553  
 Charge-transfer equilibria, 555  
*CHARMM*, 690  
*Chemscape Chime*, 650  
 Cheshire group, 277  
 Chiral volume, 502  
 Chirality, 111, 502  
 Chromatic aberration, 457  
 Chromatography, 75  
 affinity, 76  
 anion-exchange, 75  
 dye-ligand, 76  
 hydrophobic interaction, 76  
 hydroxyapatite, 76  
 immuno-affinity, 76  
 size-exclusion, 76  
 Chymotrypsin, 7  
 CIF (crystallographic information file), 559, 663  
 Circular variance plots, 503  
 Class A metals, 248  
 Class B metals, 248, 251  
*CloserSite*, 651  
 Cluster analysis, 561  
 Codon usage, effect on expression levels, 69  
 Coherent neutron scattering, 438  
 Collaborative Computational Project, Number 4 (CCP4), 686  
 restraints, 507  
 Combined molecular replacement, 277  
 Complete rolling algorithm, 541  
 Complex formation, water molecules in, 638  
 Composite crystal-field environments, 564  
 Compton effect, 52  
 Compton scattering, 59
- Computer programs, 685  
 biological software from the EBI, 685  
 for data collection, 687  
 for data processing, 687  
 for density modification, 689  
 for dual-space phasing, 337  
 for electron-density averaging, 288  
 for model building, 690  
 for molecular graphics, 690  
 for phase determination, 688  
 for phase improvement, 689  
 for solution scattering, 436  
 for structure analysis, 691  
 for structure refinement, 689  
 for structure representation, 690, 693  
 for structure solution, 688  
 multipurpose crystallographic programs, 685  
 Computer simulations, 26  
 Concanavalin A, 406  
 Conceptual clustering, 561  
 Conformational equilibria, NMR studies of, 466  
 Conjugate-gradient method, 322, 373, 396  
 comparison with simulated annealing, 379  
 preconditioned, 373, 719  
 Connected rolling algorithm, 541  
 Connolly dot surface, 541  
 Connolly surface, 360  
*ConQuest*, 666  
 Constraints, 371  
 atomic displacement parameter, 397  
 coordinate, 397  
 for phase improvement, 321  
 geometrical, 371  
 in density modification, 312  
 in *SHELXL*, 736  
 nonlinear, 321  
 real-space, 336  
 Contact surface, 535, 540  
 Contrast matching, 439–440, 443  
 Contrast-transfer function, 426, 457  
 Contrast variation, 439, 443  
 Convex hull, 534  
 Cooperative hydrogen bonding, 546, 579, 582  
 Coordinate errors, 410  
 effect on atomic displacement parameters, 371  
 estimation of, 328, 505, 512  
 estimation of, using *SFCHECK*, 511  
 from cross validation, 375  
 variable, probability distributions, 326  
 Coordinate systems, 228  
 Coordinate systems in *DENZO*  
 beam– $2\theta$ , 228  
 beam–gravity, 228  
 beam–spindle, 228  
 data, 228  
 Coordinate uncertainty, 403  
 approximate methods, 409  
 block-matrix calculations, 409  
 low-resolution structures, 410  
 modified Fourier method, 409  
 Correlation-coefficient translation function, 275  
 Coulombic potential, 554  
 Covariances, 403  
 CPK models, 358  
 Crambin  
 at atomic resolution, 398  
 deformation density, 401  
 solvent structure, 637  
 Crick, F. H. C., 5–6  
 Critical angle for total external reflection, 130  
 Critical micellar concentration (CMC), 94, 97

## SUBJECT INDEX

- Critical wavelength, 126, 155  
 Cross fire, 128–129  
 Cross linking, 250  
 Cross-rotation function, 270  
   and noncrystallographic symmetry, 265  
 Cross-translation function and  
   noncrystallographic symmetry, 265  
 Cross validation, 374–375, 397, 504  
   in estimation of  $\sigma_A$  values, 329  
   in maximum-likelihood refinement, 377  
   restraints, 382  
 Cross vectors, 257–258  
 Crossed polarizers, 113  
 Crowther, R. A., 8  
 Cryo EM. *See* Electron cryomicroscopy  
 Cryocrystallography, 197, 202  
   and MAD, 301  
   apparatus, 199, 202  
   cooling rates, 198  
   cryogens, 198, 206  
   cryoprotectants, 198, 202  
   crystal mounting, 203, 205  
   crystal storage, 206  
   crystal transfer, 201, 206  
   dual-stream apparatus, 199  
   effect of crystal cooling on resolution,  
     197  
   flash cooling, 205  
   ice formation, 197–198, 202  
   ice nucleation, 197  
   preparation of crystals for, 202  
   solvent modification, 198  
   techniques, 202  
   temperature calibration, 201  
 Cryogens, 206  
 Cryoprotectants, 198, 202  
   ethylene glycol, 198, 202  
   glycerol, 202  
   2-methyl-2,4-pentanediol (MPD), 198, 202,  
     671  
   polyethylene glycol (PEG), 202, 671  
 CRY SOL, 432  
 Crystal-density measurement, 117  
   Archimedes' method, 119  
   by flotation, 119  
   by pycnometry, 118  
   by tomographic crystal-volume  
     measurement, 119  
   by volumetry, 119  
 Ficoll density gradients, 120–121  
 gradient-tube method, 120  
 immersion microbalance, 119  
 Crystal engineering, 564  
 Crystal faces, 111–112  
   indexing, 112  
   properties of, 112  
 Crystal growth, 81, 90  
   atomic force microscopy, 90  
   electron microscopy, 90  
   habits, 111  
   interferometry, 90  
   nucleation, 89  
   optical microscopy, 90  
   time-lapse video microscopy, 90  
 Crystal habit, 111  
   measurement of, 113  
 Crystal monochromators  
   for neutrons, 135  
   for X-rays, 131  
   highly ordered pyrolytic graphite  
     (HOPG), 131  
 Crystal morphology, 111  
 Crystal mounting, 111, 114  
   for cryocrystallography, 203, 205  
   loop mounting, 203  
   mechanical stability of, 197  
 Crystal orientation  
   accuracy of, for data integration, 212  
   American method, 209  
   determination of, 209  
   determination of, in XDS, 731  
 Crystal orientation matrix, 209  
 Crystal quality, 111  
   and protein engineering, 100–101  
   evaluation of, 91  
   mosaicity, 91  
 Crystal seeding, 86  
 Crystal systems, 47, 52  
   hexagonal, 47  
   monoclinic, 47  
   orthorhombic, 47  
   tetragonal, 47  
   triclinic, 47  
   trigonal, 47  
 Crystal-to-detector distance, choice of, 188  
 Crystallization, 81, 83  
   additives, 88, 95  
   batch methods, 81  
   Biological Macromolecule Crystallization  
     Database, 669  
   dialysis methods, 82  
   dynamic light scattering, 89  
   effect of pH, 87  
   effect of temperature, 87  
   fast screens, 669, 671  
   fluorescence spectroscopy, 90  
   gel acupuncture method, 84  
   hanging-drop method, 83  
   improving protein solubility, 100  
   impurities, 89, 91  
   in gelled media, 84  
   interface diffusion method, 84  
   miscellaneous methods, 86  
   neutron scattering, 90  
   nucleation, 89  
   of glutathione S-transferase, 670  
   of lysozyme, 89, 745  
   of membrane proteins, 94–95  
   phase diagrams, 82, 88  
   precipitants, 81, 95, 671  
   promotion of a crystal form, 102  
   sample purity, 88  
   second virial coefficient measurement, 90  
   sitting-drop method, 83  
   small-angle X-ray scattering, 90  
   solubilities, 88  
   supersaturation, 81  
   use of fusion proteins, 101  
   vapour diffusion methods, 82  
 Crystallizing agents, 81, 85–86  
 Crystallographic information file (CIF), 559,  
   663  
 Crystallography & NMR System (CNS), 373,  
   381, 686, 710  
 CSD. *See* Cambridge Structural Database  
 CSD-Use database, 665  
 Cubic bicontinuous lipidic phases, 99  
 Curved single-crystal monochromators, 162  
 CURVES, 593  
 Cyclooxygenase 1, 96  
 Cyclooxygenase 2, 96  
 Cylindrical averaging in fibre diffraction, 444  
 Cylindrical coordinates, 445  
 Cylindrically averaged Patterson function, 447  
 Cytochrome  $bc_1$  complex, 95  
 Cytochrome  $c$ , 7  
 Cytochrome  $c$  oxidase, 95  
   crystallization of, 98  
 $D_{m,m'}$  matrices, 273  
 D<sub>2</sub>O – H<sub>2</sub>O difference maps, 420–421, 624  
 DALI, 575–576  
 DALI domain dictionary, 576, 578  
 Daresbury Laue Software Suite, 170  
 Dark-current subtraction for CCD detectors, 149  
 Data collection  
   computer programs, 687  
   exposure time, 190  
   fine slicing, 181  
   geometries, 178  
   in electron diffraction, 423  
   in fibre diffraction, 446  
   in SAXS, 435  
   low-temperature, 197, 202  
   monochromatic, 177  
   precession method, 178  
   rotation method, 179  
   rotation range, 181–183, 186  
   still exposure, 179  
   strategies, 192, 733  
   use of single-counter diffractometers, 178  
   Weissenberg method, 178  
   wide slicing, 182  
 Data completeness, 177  
   and direct methods, 341  
   and refinement, 370  
   and structure validation, 501  
   in the rotation method, 183  
   in XDS, 730  
 Data integration, 212, 218, 221  
   accuracy, 212  
   background determination, 213  
   by profile fitting, 212, 214  
   by summation, 212–213  
   for fibre diffraction, 447  
   in XDS, 732–733  
   standard profiles, 214  
 Data processing  
   at the NDB, 657  
   autoindexing, 209  
   computer programs, 687  
   DENZO and SCALEPACK, 226  
   for lysozyme, 750, 759  
   in electron diffraction, 425  
   in fibre diffraction, 446  
   in SAXS, 435  
   in XDS, 730  
   integration, 212, 218, 221  
   partially recorded reflections, 236  
   scaling, 218  
 Data redundancy, 168–169, 184, 193, 302, 501  
 Data resolution  
   and direct methods, 341  
   and refinement, 370  
   and structure validation, 501  
   effective, 501  
   nominal, 501  
 Data-to-parameter ratio in fibre diffraction, 448  
 Databases  
   Biological Macromolecule Crystallization  
     Database, 669  
   Cambridge Structural Database, 558, 663  
   Heavy-atom data bank, 247, 255  
   Nucleic Acid Database, 657  
   Protein Data Bank, 675  
   Protein Data Bank (at Brookhaven), 649

## SUBJECT INDEX

- DATAMAN*, 355  
*3DB Browser*, 650, 680  
 De-orthogonalization matrix, 282  
 Debye equation, 432, 438  
 Debye function, 429  
 Debye–Scherrer arcs, 445  
 3Dee, 575–576  
 Deformation density, 401  
   in crambin, 401  
*DEJAVU*, 355  
 Delaunay triangulation, 533  
*DEMON/ANGEL*, 288  
 Density modification, 311  
   computer programs, 689  
   constraints, 312  
   in *ARP/wARP*, 721  
   in *DM/DMMULTI*, 705  
   reciprocal-space interpretation of, 319  
   scaling of observed structure factors, 316  
*DENZO*, 209, 215, 226  
 Deposition of data, 653–654, 675  
 Detective quantum efficiency (DQE), 143, 148  
 Detector calibration, 149, 212  
 Detector distortions, 232  
 Detector overloads, 190, 216  
 Detectors  
   accuracy, 143  
   area, 144–145, 148, 212  
   CCD, 148  
   dynamic range, 144  
   film, 146  
   flat-field corrections, 144  
   gas discharge (wire) counters, 146  
   geometric distortion, 144  
   image plates, 136, 146  
   line spread function, 144  
   multiwire proportional counters, 136, 146  
   neutron, 136  
   photon counters, 145  
   photon integrators, 145–146  
   pixel array, 147  
   point, 145  
   point spread function, 143  
   reverse-biased semiconductor, 145  
   scintillator/photomultiplier, 145  
   signal-to-noise ratio, 143  
   spatial resolution, 143  
   stopping power, 144  
   storage phosphors, 146  
   synchrotron-radiation, 161  
   television, 146  
   two-dimensional, 179  
   X-ray, 143, 148  
 Detergents, 94, 97  
   in membrane-protein crystallization, 94–95  
 Diabetes, 21  
 Diagonal-approximation method, 323, 396  
 Dialysis methods of crystallization, 82  
 Dickerson, R. E., 6  
 Dielectric constant, 553  
   effective, 554  
 Difference density quality, 505  
 Difference distance matrix plot, 362  
 Difference Fourier maps, 258  
   in fibre diffraction, 448  
 Difference Fourier syntheses for heavy-atom  
   location, 297  
 Difference imaging, 461  
 Differential phase residual, 459  
 Diffraction-component precision index  
   (DPI), 410–411, 505, 511  
   examples, 411  
 Diffraction-pattern prediction, 218–219  
   in *DENZO*, 231  
 Diffraction-pattern symmetry, 60  
 Diffraction physics, 52, 226  
 Diffraction ripples in Patterson maps, 62  
 Diffractometer, single-counter, 178  
 Diphtheria toxin, structure validation, 524  
 Direct methods, 333  
   and anomalous dispersion, 344  
   and isomorphous replacement, 344  
   and maximum entropy, 346  
   and multiple-beam diffraction, 345  
   and Patterson methods in *SHELXD*,  
     735  
   false minima, 340  
   in *SHELXS*, 734  
   limitations, 348  
   minimal function, 335  
   multisolution methods, 334  
   parameter-shift method, 335  
   peak picking, 336  
   peaklist optimization, 336  
   tangent formula, 335  
 Directional atomic contact analysis, 503  
 Disorder, 371  
   dynamic, 371, 393  
   modelling in *SHELXL*, 737  
   rotational, 444  
   screw, 444  
   static, 371, 393  
   translational, 444  
 Displaying information, 362  
 Displaying structures, 357–358  
   animation, 364  
   computer programs, 690, 693  
   CPK models, 358  
   direct volume rendering, 361  
   geometric representation, 359  
   illustration, 363  
   isosurfaces, 361  
   kinemages, 727  
   physical models, 365  
   ray tracing, 359  
   stereolithography, 365  
   three-dimensional printing, 365  
   volumetric representation, 360  
 Distance matrix plot, 362  
 Distance measurements, 442–443  
*DM/DMMULTI*, 288, 690, 705  
 DNA, 5, 588, 601  
   A, B and Z helices, 599  
   A-DNA, 588  
   B-DNA, 588  
   B-to-Z interconversion, 600  
   handedness of helices, 596  
   hydrogen bonding in, 551  
   interactions with proteins, 581, 583  
   major groove, depth of, 596  
   minor groove, depth of, 596  
   torsion angles, 593  
   Watson–Crick Z-DNA, 601  
   Z-DNA, 588  
 DNA/RNA hybrids, 588  
*DOCK*, 566  
 Double-crystal monochromators, 163  
 DPI (diffraction-component precision  
   index), 410–411, 505, 511  
   examples, 411  
*DPS*, 211, 687  
 DQE (detective quantum efficiency), 143,  
   148  
*DREAR*, 333  
 Drug design, 12–13, 26  
   use of the CSD, 566  
   use of the PDB, 654  
 Drug metabolism, 24  
 Drug resistance, 15  
*DSSP*, 691  
 Duplex RNA, 588  
 Dye-ligand chromatography, 76  
 Dynamic disorder, 371, 393  
 Dynamic light scattering, 89  
 Dynamic processes  
   NMR studies of, 464, 466  
   SAXS studies of, 428  
*E. coli* expression systems, 67–68  
 Early structure determinations, 5, 7  
   carboxypeptidase, 7  
   chymotrypsin, 7  
   cytochrome *c*, 7  
   globular proteins, 5  
   glyceraldehyde-3-phosphate  
     dehydrogenase, 8  
   haemoglobin, 5, 7  
   insulin, 5, 7  
   lactate dehydrogenase, 7  
   lysozyme, 7, 745  
   membrane proteins, 8  
   myoglobin, 5, 7  
   papain, 7  
   penicillin, 4  
   pepsin, 5  
   ribonuclease, 7  
   sodium tartrate, 4  
   tobacco mosaic virus, 5  
   viruses, 8  
   vitamin B<sub>12</sub>, 4  
 EDSAC1 and 2, 6  
 Effective dielectric constant, 554  
 Elastase, solvent structure, 632  
 Elastic scattering, 52  
 Electron cryomicroscopy (cryo EM), 451  
   and X-ray crystallography, 462  
   difference imaging, 461  
   helical particles, 460  
   icosahedral particles, 461  
   image processing, 458–459  
   phasing, 462  
   specimen preparation, 455  
   three-dimensional, 453  
   two-dimensional crystals, 459  
   types of specimens, 455  
   use of CCD cameras, 456, 458  
   use of photographic film, 458  
   vitrification of specimens, 456  
 Electron crystallography, 423  
   of membrane proteins, 427  
 Electron density, calculation of, 59  
 Electron-density averaging, 279, 316–317  
   convergence, 286  
   in *DM/DMMULTI*, 707, 710  
   in *PHASES*, 695, 702  
   in *RAVE*, 354  
   multidomain, 287  
   multiple-crystal-form, 285, 287  
 Electron diffraction, 423  
   bacteriorhodopsin, 426–427  
   data collection, 423  
   data processing, 425  
   data sampling, 425  
   radiation damage, 424  
   refinement, 427  
   specimen preparation, 423

## SUBJECT INDEX

- Electron diffraction  
 structure factors, 426  
 tubulin, 427
- Electron microscopy, 423, 451  
 amplitude contrast, 457  
 chromatic aberration, 457  
 contrast-transfer function, 426, 457  
 crystal-growth studies, 90  
 electron sources, 423  
 field emission gun, 453  
 minimal (low-dose) procedure, 424  
 phase contrast, 457  
 recording media, 423  
 signal-to-noise ratio, 453  
 spatial coherence of electron beam, 453  
 spherical aberration, 457  
 temporal coherence of electron beam, 453  
 weak-phase-object approximation, 457
- Electron pair distribution function, 430–431
- Electron scattering, 423, 452  
 elastic, 452  
 inelastic, 452
- Electron-transfer equilibria, 555–556
- Electrostatic energy, 555
- Electrostatic fields, response of proteins to, 553
- Electrostatic force, 555
- Electrostatic free energy, 555
- Electrostatic interactions in proteins, 553
- Electrostatic polarization, 553
- Electrostatic potential  
 calculation of, 555  
 distributions, 553, 555
- Electrostatics, 553  
 acid–base equilibria, 555  
 Boltzmann model, 554  
 Coulombic potential, 554  
 dielectric constant, 553  
 effective dielectric constant, 554  
 electron-transfer equilibria, 555–556  
 electrostatic polarization, 553  
 ion binding, 555–556  
 Langevin model, 553  
 linear solvent dielectric models, 553  
 point inducible dipole, 553  
 Poisson–Boltzmann equation, 554  
 polarity, 554  
 polarizability, 553–554  
 reaction potential, 554  
 screening potential, 554  
 self-potential, 554  
 solvation potential, 554
- Enantiomorph, 287  
 selection of correct, 303, 700
- Enantiomorphic point groups, 47–48
- Enantiomorphism, 47
- Ensemble, 346
- ENTREZ, 575–576
- Entropy, 346  
 Shannon's theorems, 346
- ENVELOPE, 288
- Environment profiles, 508
- Enzyme catalysis, role of metal ions, 580
- ERRAT, 521
- Errors  
 coordinate, 410  
 coordinate, estimation of, 328, 505, 511  
 coordinate, from cross validation, 375  
 coordinate, probability distributions for, 326  
 detector, 214  
 effect on MAD phasing, 301  
 in protein-structure models, 497, 499, 520, 716
- Errors  
 instrument, 214  
 position, 410  
 systematic, in profile-fitted intensities, 217
- E.s.d. (estimated standard deviation), 403–404
- ESSENS, 354
- Ethylene glycol, 198, 202
- Euler parameterization, 273
- Ewald, P. P., 4
- Ewald sphere, 57–58, 167, 179  
 partial reflections, 236, 241–242
- Expected intensity factor, 326
- Exposure time, 190
- Expression systems, 66–67  
 baculoviruses, 72  
 constitutive, 68  
 constructs, 66  
*E. coli*, 67–68  
 fermentation, 69  
 growth media, 70  
 inducible, 68  
 insect cell–virus, 72  
 mammalian cells, 73  
 misfolded proteins, 70  
 plasmids, 67  
 post-translational modifications, 65–66, 71, 78  
 preparation of cDNA clones, 66  
 T7 polymerase, 68  
 yeasts, 71
- Extended-atom parameters, 489
- Extended atoms, 541
- Extinction, 59
- F<sub>1</sub> ATPase, synchrotron-radiation studies  
 of, 165
- False minima, 340
- Fankuchen, I., 5
- Fast Fourier transform (FFT), 396  
 in TNT, 719
- Fast rotation function, 271  
 angular resolution, 272
- FepA, 96
- FFT (fast Fourier transform), 396  
 in TNT, 719
- FhuA, 96
- Fibre diffraction, 444  
 background subtraction, 446  
 cylindrical averaging, 444  
 data collection, 446  
 data integration, 447  
 data processing, 446  
 Debye–Scherrer arcs, 445  
 difference Fourier maps, 448  
 early studies, 5  
 large assemblies, 450  
 layer lines, 445  
 polynucleotides, 449  
 polypeptides, 449  
 polysaccharides, 449  
 profile fitting, 446  
 refinement, 448  
 rotational disorder, 444  
 screw disorder, 444  
 selection rule, 445  
 simulated annealing, 448  
 structure determination, 447  
 structure factors, 445  
 time-resolved studies, 446  
 tobacco mosaic virus, 448  
 translational disorder, 444
- Fibre-optic tapers, 148
- Fibres, 444  
 noncrystalline, 444  
 polycrystalline, 444  
 preparation of, 446
- Ficoll density gradients, 120–121
- Figure-of-merit weighting for model  
 phases, 327
- Filamentous bacteriophages, 450
- FINDNCS, 690
- Fine slicing, 181
- Flash cooling, 205
- Flat-field corrections for CCD detectors, 150
- FLEXS, 566
- FLEX, 566
- Flood-field detector calibration, 230
- Flotation method, 119
- Flux of synchrotron radiation, 155
- Focusing collimators  
 capillary optics, 131  
 for microfocus sources, 131
- Force constants, 383
- Force-feedback devices, 365
- Force fields, 491  
 CHARMM, 507  
 CHARMM22, 491  
 GROMOS96, 481–482, 488  
 modifications for structure determination, 491  
 parameterization of, 491
- Fourier–Bessel structure factor, 445
- Fourier–Bessel syntheses, 445
- Fourier maps  
 difference, 258  
 in PHASES, 697
- Fourier methods, 4
- Fourier refinement, 336
- Fourier shell correlation, 459
- Fourier summation, 61
- Fourier syntheses in PHASES, 699–700
- Fourier transformation, 59  
 inverse, 59
- Fourier transforms, 59  
 in DM/DMMULTI, 710
- Fractional atomic coordinates, 59
- Frame shift, 497
- Franklin, R., 5
- Free-atom model, 721
- Free-electron model, 299
- Free phase residual, 427
- Free *R* factor, 375, 410, 499, 504, 510  
 precision of, 510
- FREEHELIX, 593
- Fresnel zone, 54
- Friedel pairs, 60, 301
- FRODO, 353, 358, 691
- Frost prevention, 199
- Full-matrix inversion  
 restrained, 406  
 unrestrained, 406, 408
- Fully recorded reflections, 181
- Fungi, 15, 19–20
- Fusion proteins, 67, 101
- $\gamma$  correction, 320  
 perturbation- $\gamma$  approach, 321, 708
- G* factors, 504
- GAP, 288
- Gauss–Bonnet theorem, 541
- Geis, I., 588, 769
- Gel acupuncture method, 84
- Gelder's law, 358
- Gels, crystallization in, 84
- Genetic algorithms, 259, 432

## SUBJECT INDEX

- Genetic diseases, 11  
 Geometric distortion in CCD detectors, 150  
 Global minimum, 375  
*GLRF*, 688  
 Glutaraldehyde, 250  
 Glutathione S-transferase, crystallization of, 670  
 Glyceraldehyde-3-phosphate dehydrogenase, 8  
 Glycerol, 202  
 Glycosyl bond angle, 596  
 Glycosyl bond geometry, 596–597  
   *anti*, 597  
 Glycosylation, 65, 71–72, 102  
*GOLD*, 566  
 Goodness of fit, 404–405  
 Gouraud shading, 359  
 Gradient-tube method, 120  
*GRAMPS/GRANNY*, 358  
*GRASP*, 359, 541, 543, 693  
*GRID*, 566  
*GRIP*, 358  
*GROMOS96*, 481–482, 488  
 Guinier plot, 430, 440
- h*-cell, 281  
 HAD (heavy-atom data bank), 247, 255  
 Haemoglobin, 5, 7  
   dimeric, water molecules in, 639  
 $\alpha$ -Haemolysin, 96  
 Hamilton, Rollett and Sparks method, 236  
   for partial reflections, 236  
   singular-value decomposition of the normal-equations matrix, 236  
 Hamilton's significance test, 397, 449  
 Handedness, 111, 258, 287, 298, 306, 700  
 Hanging-drop method, 83  
 Hard cations, 251  
 Hard ligands, 248  
 Hard metals, 580  
 Harker, D., 6  
 Harker lines, 62  
 Harker phase diagram, 293  
 Harker planes, 62  
 Harker sections, 257  
*HBPLUS*, 546–547, 692  
*HEAVY*, 259, 688  
 Heavy-atom data bank (HAD), 247, 255  
 Heavy-atom derivatives  
   amino-acid analogues, 255  
   of lysozyme, 746, 754  
   preparation of, 247  
 Heavy-atom distributions, centrosymmetric, 297  
 Heavy-atom location, 256, 293, 297  
   and direct methods, 343  
   *SHELXS* and *SHELXD*, 735  
 Heavy-atom reagents, 248  
   class B metals, 251  
   effect of concentration, 250  
   effect of pH, 248–249  
   effect of precipitants and buffers, 249  
   effect of temperature, 250  
   effect of time of soak, 250  
   electrostatic binding of, 253  
   hard cations, 251  
   hydrophobic, 253  
   interactions with amino acids, 250  
   lability, 248  
   oxidation states, 248  
   polynuclear, 254  
   solubility, 249  
   stability, 248  
 Heavy-atom sites in protein engineering, 103  
 Helical particles, 460  
 Helical symmetry, 263, 445  
 Helical viruses, 450  
 $\alpha$ -Helices, 5  
 Helices, hydrogen bonding in, 548  
 Helix capping, 550  
 Helix parameters  
   *BABCOCK*, 593  
   *CURVES*, 593  
   *FREEHELIX*, 593  
   horizontal displacement, 592  
   in nucleic acids, 588, 592  
   inclination, 592  
   *NEWHELIX*, 593  
   propeller, 592, 598  
   rise, 598  
   rise per base pair, 592  
   roll, 592  
   twist, 592, 598  
   *x* displacement, 592  
 Helix-termination motifs, 548  
 Helminths, 15, 19  
 Hemihedral twinning, 112  
 Hendrickson–Lattman coefficients, 320, 706  
 Hetero groups  
   HIC-Up, 356  
   structure validation, 507  
 Hexagonal crystal system, 47  
*HGEN*, 399  
 HIC-Up (Hetero-compound Information Centre – Uppsala), 356  
 Highly ordered pyrolytic graphite (HOPG), 131  
 Histogram matching, 314  
   in *DM/DMMULTI*, 705, 707, 710  
*HKL*, 226, 687  
 Hodgkin, D. C., 4  
 Holmes, K. C., 5  
 HOMSTRAD, 575–576  
 Hoogsteen base pairing, 449, 591  
 Hoppe, W., 9  
 Huber, R., 9  
 Hybrid models, 721  
*HYDRA*, 358  
 Hydration, estimation of, 118  
 Hydration surface, 540  
 Hydrogen atoms  
   at atomic resolution, 398  
   neutron diffraction, 419  
 Hydrogen bonding, 546  
   amino-aromatic, 552  
   analysis of in structure validation, 498, 503  
   and secondary structure, 548, 563  
   bidentate, 580  
   bifurcated, 546  
   C–H...O, 551, 563  
   C–H...X, 563  
   cooperative, 546, 579, 582  
   *HBPLUS*, 546–547, 692  
   in amino acids, 562  
   in helices, 548  
   in nucleic acids, 546, 551  
   in proteins, 546–547  
   in  $\beta$ -sheets, 548  
   in side chains, 549  
   in turns, 549  
   in ubiquitin, simulation of, 483–485  
   involving sulfur, 552  
   local, 549  
   N–H...carbonyl, 562  
   N–H... $\pi$ , 563  
   O–H...O, 562  
   O–H... $\pi$ , 563  
   protein–water, 550  
 Hydrogen bonding  
   resonance-assisted, 562  
   resonance-induced, 562  
   short, in phosphate-binding protein, 586  
   transition metals as proton acceptors, 564  
   use of the CSD, 562  
 Hydrogen-bonding criteria, 547  
 Hydrogen-bonding motifs, 549, 564  
 Hydrogen-bonding patterns, 546  
 Hydrogen-bonding potential, 546–547  
   saturation of, 548  
 Hydrogen/deuterium exchange, 422  
 Hydrophobic interaction chromatography, 76  
 Hydrophobicity, 540, 542  
 Hydroxyapatite chromatography, 76  
 Hyperglycosylation, 71–72
- I*/ $\sigma$ (*I*) ratio, 191, 194, 501  
 Ice formation, 197–198, 202  
   prevention of, 198  
 Ice nucleation, 197  
 Icosahedral particles, 461  
 Icosahedral point groups, 51  
 Icosahedral symmetry, 47  
 Image plates  
   for neutrons, 136  
   for X-rays, 146  
 Image processing in cryo EM, 458–459  
 Immersion microbalance, 119  
 Immuno-affinity chromatography, 76  
 Incoherent neutron scattering, 438  
 Indexing, 220  
   alternative schemes, 187–188  
   autoindexing, 209, 227  
   basis vectors, 210  
   distribution of reciprocal-lattice vectors, 209  
   in *XDS*, 731  
   local, 220, 732  
   misindexing, 732  
   of crystal faces, 112  
 Inelastic scattering, 52  
 Infectious diseases, 13  
 Information content of crystallographic data, 394–395  
 Information measure, 395  
   quadratic, 394  
 Insect cell–virus expression systems, 72  
 Insertion devices, 127, 155  
   multipole wigglers, 156  
   periodic magnet, 156  
   undulators, 156  
   wavelength shifters, 155  
*Insight II*, 544, 690  
 Insulin, 5, 7  
 Integration of diffraction data, 212, 218, 221  
   accuracy, 212  
   background determination, 213  
   by profile fitting, 212, 214  
   by summation, 212–213  
   from fibres, 447  
   in *XDS*, 732–733  
   standard profiles, 214  
 Inteins, 67  
 Intensity-based likelihood refinement, 397  
 Interface diffusion method of crystallization, 84  
 Intermolecular interactions  
   data from the CSD, 562, 668  
   energies of, 45  
   IsoStar, 668  
   weak, 564  
 Intermolecular perturbation theory, 564, 668  
 Internal contrast, variation of, 440

## SUBJECT INDEX

- International Tables for Crystallography*, 4, 27  
*Internationale Tabellen zur Bestimmung von Kristallstrukturen*, 4
- Inverse-beam geometry, 301  
Inverse Fourier transformation, 59  
Inversion symmetry, 46  
Ion binding, 555–556  
Isoelectric focusing, 77  
Isoelectric point, 673  
Isomorphism, lack of, 259  
Isomorphous replacement, 6, 293  
    and direct methods, 344  
    and fibre diffraction, 447  
    data-collection strategies, 192  
    height of peaks in a Patterson map, 61  
    location of heavy-atom sites, 256  
    noncrystallographic symmetry, 260  
    preparation of heavy-atom derivatives, 247  
    pseudosymmetry, 260  
IsoStar, 565, 668  
    access to, 668  
Isosurface representations, 361  
Isotopic substitution  
    statistical labelling method, 442  
    triple, 441
- Jaynes' maximum-entropy formalism, 347  
Jaynes' maximum-entropy principle, 346
- $K\alpha$  edge positions of different elements, 54  
Kendrew, J. C., 6  
Kendrew models, 9  
Kinemages, 727  
Klug, A., 5  
Knowledge-based interaction potentials, 508  
Kramers–Kronig transform, 55
- $L_1$  norm, 370  
 $L_2$  norm, 369  
Lack of closure error, 259, 296  
Lack of isomorphism, 259  
Lactate dehydrogenase, 7  
LALS (linked-atom least squares), 447  
Langevin model, 553  
Lattice plane, 45  
Lattice point, 45  
Lattice pseudosymmetry in autoindexing, 227  
Lattice symmetry in autoindexing, 227  
Laue, M. von, 4  
Laue conditions, 55  
Laue diffraction, 167  
    radiation damage, 169  
    time-resolved studies, 167, 170  
    use of synchrotron radiation, 162, 167  
    wavelength normalization curve, 162, 168  
*LaueView*, 170  
Layer-line splitting, 448  
Layer lines in fibre diffraction, 445  
LEAP, 170  
Least-squares full matrix, variances and covariances from, 403  
Least-squares methods, 369, 396, 404  
    in *SHELXL*, 736  
    normal equations, 404  
Legume lectins, solvent structure, 631  
Length distribution, 439  
Lennard–Jones 6–12 potential, 489  
Ligands at atomic resolution, 401  
Light-harvesting complex 2, 95  
Light-harvesting complex II, 95  
LIGPLOT, 693  
Linderström–Lang, K. U., 7
- Linear absorption coefficient, 59  
Linear diffractometer, 748, 756  
Linear solvent dielectric models, 553  
Linked-atom least squares (LALS), 447  
Lipson, H., 4  
Local hydrogen bonds, 549  
Local indexing method, 220, 732  
Local minima, 375  
Local scaling, 306, 697  
    in TNT, 719  
Locked rotation function, 272  
Locked translation function, 277  
LOCSC, 687  
Lonsdale, K., 4  
Lorentz factor, 59–60  
    errors in, 229  
Low-abundance tRNAs, 69  
Low-resolution data  
    importance of, 194  
    in atomic resolution refinement, 395  
Low-resolution structures, coordinate uncertainty, 410  
LSQMAN, 355  
LUDI, 567  
Lunes, 180  
Luzzati distribution, 326  
Luzzati plot, 328, 412, 505  
Lysozyme, 7, 745  
    absorption corrections, 759  
    at 2 Å resolution, 753, 763  
    at 6 Å resolution, 745, 751–752  
    biological function of, 765  
    calculation of phase values, 762  
    catalytic mechanism of, 768  
    crystal-type problem, 760  
    crystallization, 89, 745  
    data processing, 750, 759  
    heavy-atom derivatives, 746, 754  
    hen egg-white, molecular-dynamics simulation, 489, 492  
    intensity measurements at high resolution, 757  
    refinement of heavy-atom parameters, 761  
    scaling intensity data, 751  
    T4, solvent structure, 634  
    triclinic, at atomic resolution, 398
- Machine emittance, 155  
Machine learning, 561  
Macromolecular crystallographic information file (mmCIF), 508, 559, 653–654, 657  
    dictionary, 675  
MAD. *See* Multiwavelength anomalous diffraction  
MADSYS, 688  
MAGE, 727  
MAGICSQUASH, 288  
Magnesium sulfate, 249  
Magnet shimming, 161  
MAIN, 686  
Maltoporin, 96  
MAMA, 355  
Mammalian-cell expression systems, 73  
Mammalian-cell inducible promoters, 74  
MAPMAN, 355  
Marching-cube algorithm, 361, 541  
Mass spectrometry, 77  
Matthews number, 117  
MAVE, 288  
Maximum entropy, 346  
    and crystallography, 348  
    equations, 347
- Maximum entropy  
    Jaynes' formalism, 347  
    Jaynes' principle, 346  
Maximum likelihood, 369, 396  
    estimation of phase errors, 327  
    in CNS, 715  
    structure refinement, 329, 376  
MAXIT, 658, 675  
MDIR (multidimensional isomorphous replacement) in fibre diffraction, 448  
Mechanosensitive ion channel, 95  
Medicine and crystallography, 10, 26  
    bacterial diseases, 13, 16  
    blindness, 21  
    cancers, 21  
    cardiovascular disorders, 21  
    diabetes, 21  
    fungi, 15, 19–20  
    genetic diseases, 11  
    helminths, 15, 19  
    infectious diseases, 13  
    neurological disorders, 24  
    protozoan infections, 13, 19–20  
    structure-based drug design, 12–13, 26  
    viruses, 13–14  
Membrane proteins, 95  
    bacteriorhodopsin, 95  
    crystallization, 94–95  
    crystallization using additives, 95  
    crystallization using antibody Fv fragments, 98  
    crystallization using cubic bicontinuous lipidic phases, 99  
    crystallization using detergents, 94–95, 97  
    cyclooxygenase 1, 96  
    cyclooxygenase 2, 96  
    cytochrome  $bc_1$  complex, 95  
    cytochrome *c* oxidase, 95, 98  
    electron crystallography of, 427  
    FepA, 96  
    FhuA, 96  
     $\alpha$ -haemolysin, 96  
    light-harvesting complex 2, 95  
    light-harvesting complex II, 95  
    maltoporin, 96  
    mechanosensitive ion channel, 95  
    OmpA, 96  
    OmpF, 96  
    PhoE, 96  
    photosynthetic reaction centres, 8, 95  
    porins, 96  
    potassium channel, 95  
    precipitants, 95  
    prostaglandin  $H_2$  synthase, 96  
    squalene cyclase, 96  
Merging *R* factors, 500  
     $R_{\text{meas}}$ , 500  
     $R_{\text{merge}}$ , 500  
Metal coordination geometry, use of the CSD, 562  
Metal ions at atomic resolution, 401  
Metalloproteins, metal-ion replacement in, 254  
Metcalf's law, 358  
Methyl-group conformations from neutron diffraction, 420  
2-Methyl-2,4-pentanediol (MPD), 84, 198, 202, 671  
Metropolis Monte Carlo simulation, 378  
Micelles, 94  
Microfocus X-ray tubes, 126

## SUBJECT INDEX

- Microgravity, 91  
 growth of satellite tobacco mosaic virus crystals, 92  
 growth of thaumatin crystals, 92  
*MIDAS*, 358  
*MidasPlus*, 690  
 Miller indices, 46  
 reduced, 236  
 Minimal function, 335  
 modified, 344  
 Minor-groove-binding drugs, 613  
 MIR (multiple isomorphous replacement), 294, 299  
 preparation of heavy-atom derivatives, 247  
 Mirror symmetry, 46  
 Misfolded proteins, 70  
 Misindexing, 228, 732  
 Mis-setting angles, 237  
 Missing symmetry, 501  
 MLF target function, 377  
 MLHL target function, 377  
 MLI target function, 377  
*MLPHARE*, 688  
 mmCIF (macromolecular crystallographic information file), 508, 559, 653–654, 657  
 dictionary, 675  
*MMSX*, 358  
 Model bias, 325, 375, 381, 499  
 in combined phase maps, 328  
 in figure-of-merit weighted maps, 327  
 Model building, 353  
*ARP/wARP*, 720  
*ARP/wARP*, real-space manipulation in, 720  
 computer programs, 690  
*O*, 353  
 Model evaluation, 373  
 Model phases, figure-of-merit weighting, 327  
 Model rebuilding, 499  
 contact dots in kinemages, 729  
*Modeller*, 691  
 Moderators, 133  
 for cold neutrons, 134  
 for spallation sources, 138  
 for thermal neutrons, 134  
 Modified Fourier method for estimating coordinate uncertainty, 409  
 Modified minimal function, 344  
 Modified Patterson functions, 258  
 Modified tangent formula, 344  
 Mogul, 668  
*MolAuto*, 726  
 Molecular biology, 26, 65  
 Molecular-boundary identification by automated convolution method, 313  
 Molecular dynamics, 481, 489  
 animation of trajectories, 363  
 average structures, 491  
 Cartesian, 378  
 effect of crystallographic resolution, 492  
 extended-atom parameters, 489  
 in fibre diffraction, 448  
 in simulated annealing, 373, 378  
 internal motions, 491  
 particle mesh Ewald method, 490  
 potential-energy functions, 489  
 relaxation periods, 482  
 restraints, 481, 490  
 simple point charge model, 481  
 torsion-angle, 378  
 united-atom approach, 481  
 Molecular-dynamics simulation  
 bovine  $\alpha$ -lactalbumin, 492  
 Molecular-dynamics simulation  
 bovine pancreas ribonuclease A, 492  
 BPTI, 481, 492  
 hen egg-white lysozyme, 489, 492  
 trypsin, 492  
 ubiquitin, 481  
 ubiquitin, atomic mean-square position fluctuations, 483  
 ubiquitin, averaging period, 486  
 ubiquitin, dihedral-angle fluctuations, 487–488  
 ubiquitin, hydrogen bonding, 483–485  
 ubiquitin, internal motions, 487  
 ubiquitin, potential energy, 482  
 ubiquitin, root-mean-square atom-position deviation, 482  
 ubiquitin, translational and rotational fitting, 483  
 ubiquitin, water diffusion, 488  
 Molecular envelopes, 279  
 determination of, 283  
*MAMA*, 355  
 Molecular graphics, 27, 357–358  
 animation, 364  
 computer programs, 690, 693  
 CPK models, 358  
 direct volume rendering, 361  
 geometric representation, 359  
 illustration, 363  
 kinemages, 727  
 ray tracing, 359  
 volumetric representation, 360  
 Molecular masks, 279  
 in *PHASES*, 700  
 Molecular packing, 114  
 efficiency, 537  
 measurement of, 537  
 Molecular replacement, 8  
 combined, 277  
 data-collection strategies, 193  
 electron-density averaging, 279  
 in fibre diffraction, 448  
 noncrystallographic symmetry, 263  
 rotation functions, 269  
 systematic, 27  
 translation functions, 275  
 using an NMR structure, 464  
 Molecular surface, 360, 535, 539  
*Molecular Surface*, 692  
 Molecular volumes, 531  
 Delaunay triangulation, 533  
 Voronoi construction, 531  
 Molecular weight  
 measurement using SANS, 441  
 measurement using SAXS, 431  
*MOLEMAN2*, 355  
*MOLMOL*, 691  
*MolScript*, 359, 363, 693, 725  
 Monochromatic data collection, 177  
 data-collection geometries, 178  
 detectors, 179  
 exposure time, 190  
 fine slicing, 181  
 precession method, 178  
 rotation range, 181–183, 186  
 still exposure, 179  
 use of single-counter diffractometers, 178  
 Weissenberg method, 178  
 wide slicing, 182  
 Monochromators  
 crystal, for neutrons, 135  
 crystal, for X-rays, 131  
 Monochromators  
 curved single-crystal, 162  
 double-crystal, 163  
 for synchrotron radiation, 162  
 multilayer, for neutrons, 135  
 polarizing multilayer, for neutrons, 135  
 Monoclinic crystal system, 47  
 Monteath Robertson, J., 4  
 Moore's law, 27, 358  
 Mosaic spread, 58, 129  
 Mosaicity, 58, 180, 232  
 and data integration, 212  
 anisotropic, 240  
 crystal quality, 91  
 ideal, 59  
 X-ray rocking widths, 91  
 X-ray topography, 91  
*MOSFLM*, 211, 215, 687  
*MSMS*, 692  
*MULTAN88*, 689  
 Multiconformer models, 380  
 Multidimensional isomorphous replacement (MDIR) in fibre diffraction, 448  
 Multidimensional NMR, 464  
 Multidomain averaging, 287  
 Multilayer monochromators for neutrons, 135  
 Multiple-beam diffraction and direct methods, 345  
 Multiple-crystal-form averaging, 287  
 in *DM/DMMULTI*, 706, 710  
 Multiple isomorphous replacement (MIR), 294, 299  
 preparation of heavy-atom derivatives, 247  
 Multistart refinement, 380  
 Multivariate statistical analysis, 459, 561  
 Multiwavelength anomalous diffraction (MAD), 299  
 advantages of cryocrystallography, 301  
 and synchrotron radiation, 165  
 anomalous-scatterer labels, 303  
 automated structure solution, 303  
 conversion of data to a pseudo-SIRAS form, 304  
 data-collection strategies, 193  
 data handling, 302  
 design of experiments, 301  
 effect of errors, 301  
 phasing, 300, 302  
 phasing signal strength, 301  
 Multiwire proportional counters  
 for neutrons, 136  
 for X-rays, 146  
 Mutations  
 acceleration of crystallization, 101  
 improving crystal quality, 101  
 site-directed, 100  
 surface, 100  
 Myoglobin, 5, 7, 580  
 N–H...carbonyl hydrogen bonding, 562  
 N–H... $\pi$  hydrogen bonding, 563  
 N-terminal heterogeneity, 77  
*NACCESS*, 692  
 Nanomanipulator, 365  
*NAOMI*, 692  
 NDB. *See* Nucleic Acid Database  
 Negative-density truncation in *PHASES*, 695, 700  
 Neurological disorders, 24  
 Neutron-beam collimators, 135  
 Neutron-beam filters, 135  
 Neutron beamline optics, 139



## SUBJECT INDEX

- Neutron density maps, 419
- Neutron detectors, 136  
 image plates, 136  
 multiwire proportional counters, 136
- Neutron diffraction, 419  
 and solvent structure, 624  
 D<sub>2</sub>O – H<sub>2</sub>O difference maps, 420–421  
 geometries, 419  
 phasing, 420  
 quasi-Laue, 419  
 refinement, 421  
 time-of-flight, 139
- Neutron guides, 136
- Neutron instrument resolution functions, 137
- Neutron scattering  
 coherent, 438  
 incoherent, 438
- Neutron scattering lengths, 419
- Neutron sources, 133  
 reactors, 133  
 spallation, 137
- NEWHELIX*, 593
- Nicol prism, 113
- Nonbonded interactions  
 IsoStar, 565  
 restraints, 391
- Noncrystalline fibres, 444
- Noncrystallographic asymmetric unit, 280
- Noncrystallographic point-group symmetry, 263
- Noncrystallographic redundancy, 281
- Noncrystallographic symmetry, 263, 279  
 cross-rotation function, 265  
 cross-translation function, 265  
 determination of, 316  
 eigendensity functions, 267  
 electron-density averaging, 279, 317  
 electron-density averaging in *DM/*  
*DMMULTI*, 707, 710  
 electron-density averaging in *PHASES*, 695,  
 702  
 electron-density averaging in *RAVE*, 354  
 generalized, 263  
 improper, 279  
 in isomorphous replacement, 260  
 in phasing, 280  
 in structure determination, 265, 267  
 in structure validation, 503, 505  
 overdetermination ratio, 266  
 proper, 279–280  
 refinement of, 317  
 restraints in *SHELXL*, 737  
 rotation functions, 263  
 self-rotation function, 264  
 standard, 263  
 subunits, 263  
 translation functions, 264  
 use of Patterson function, 263
- Nonlinear constraints, 321
- Non-primitive (centred) unit cell, 46
- Normal equations, 372, 404
- Normal-mode analysis, 382
- Normalized structure factors, 57, 333
- NUCheck*, 658, 676
- Nuclear magnetic resonance (NMR), 464  
 and single-crystal X-ray diffraction, 466  
 and solvent structure, 624  
*cis-trans* isomerization of peptide bonds, 464  
 conformational equilibria, 466  
 deposition of data at the PDB, 677  
 dynamic processes, 464, 466  
 multidimensional, 464  
 proton exchange, 464
- Nuclear magnetic resonance (NMR)  
 resonance assignments, 465  
 ring flipping, 464, 466  
 structure determination, 464  
 studies of solvation, 466  
 transient local conformational states, 464  
 triple-resonance experiments, 465  
 water-molecule location, 466  
 water-molecule residence times, 466
- Nuclear Overhauser effect (NOE), 465  
 upper-distance constraints, 465
- Nucleation, 89
- Nucleic Acid Database (NDB), 657  
 Atlas pages, 659  
 data distribution, 659  
 data processing, 657  
*MAXIT*, 658  
 mirror sites, 662  
*NUCheck*, 658  
 searching the NDB, 659  
*SFCHECK*, 659  
 structure validation, 507
- Nucleic acids, 588  
 A, B and Z helices, 596  
 A-DNA, 588  
 B-DNA, 588  
 backbone geometry, 588  
 base pairing, 589  
 DNA, 588  
 DNA/RNA hybrids, 588  
 duplex RNA, 588  
 duplexes, 588  
 glycosyl bond geometry, 596–597  
 helix parameters, 588, 592  
 Hoogsteen base pairing, 591  
 hydrogen bonding in, 546, 551  
 interactions with proteins, 581  
 Nucleic Acid Database, 657  
 stacking of base pairs, 599  
 structure validation, 507  
 sugar ring conformations, 588, 593, 597  
 Watson–Crick base pairing, 591  
 Z-DNA, 588
- Nucleophilicity, 248
- NUCPLLOT*, 694
- O*, 353, 373, 691  
*O* database, 353  
 plotting objects in *O*, 353
- O–H...O hydrogen bonding, 562
- O–H... $\pi$  hydrogen bonding, 563
- Obliquity correction for CCD detectors, 151
- Observational equations, 372
- Obsolete PDB entries, archive of, 522, 524
- Oligonucleotides, 588
- OmpA, 96
- OmpF, 96
- OOPS*, 499
- OOPS2*, 356
- OpenGL, 726
- Opening angle of synchrotron radiation, 155
- Optical properties of crystals, 111, 113
- Optimization methods, 370, 372  
 first-order, 372  
 Monte Carlo, 372  
 second-order, 372  
 simulated annealing, 372  
 zero-order, 372
- Origin-removed Patterson refinement, 304
- ORTEP*, 357, 363, 694
- Orthogonalization matrix, 282
- Orthorhombic crystal system, 47
- Outliers  
 in data integration, 213, 216  
 in derivation of restraints, 383  
 in protein-structure models, 373, 498  
 rejection of, in *PHASES*, 697
- Overdetermination ratio, 266
- Overfitting, 375, 499
- Overloads, 216
- p*-cell, 281
- Packing coefficient, 537
- Packing density, 537
- Packing efficiency, 537
- Papain, 7
- Parallel-axis theorem, 441
- Parameter-shift method, 335
- Parseval's theorem, 325
- Partial occupancy, 393, 397  
 water-molecule sites, 400
- Partial specific volume, 117
- Partiality, 219, 232, 236
- Partiality model, 241
- Partially recorded reflections, 181  
 in data processing, 236  
 profile fitting, 217
- Particle mesh Ewald method, 490
- PASS*, 692
- Patterson, A. L., 4
- Patterson-correlation translation function, 276
- Patterson functions, 61, 257  
 and direct methods in *SHELXD*, 735  
 and noncrystallographic symmetry, 263  
 cross vectors, 257–258  
 cylindrically averaged, 447  
 modified, 258  
 origin peak, 257  
 self vectors, 258  
 use of, in *Shake-and-Bake*, 340
- Patterson maps, 61  
 anomalous difference, 260  
 Bijvoet, 8  
 diffraction ripples in, 62  
 interpretation in *SHELXS*, 734–735  
 number of peaks in, 62  
 sharpening of, 62
- Patterson minimum function, 259
- Patterson superposition minimum function, 735
- Patterson synthesis, 4
- Pauling, L., 5
- PCR (polymerase chain reaction), 66
- PDB. See Protein Data Bank
- PDB Browser*, 649
- PDB-SHELL*, 649–650
- PDBLite*, 680
- Peak picking, 336
- Peaklist optimization, 336
- Penicillin, 4
- Pepinsky, R., 4, 357
- Pepsin, 5
- Peptide flip, 498, 502
- Peptides  
*cis*, 502  
*cis-trans* isomerization, NMR studies of, 464  
*trans*, 502
- Perturbation- $\gamma$  correction, 321  
 in *DM/DMMULTI*, 708
- Perutz, M. F., 5
- Phase combination, 311, 319, 328  
 in *DM/DMMULTI*, 707  
 in *PHASES*, 696, 701
- Phase contrast, 457
- Phase-contrast electron microscopy, 452

## SUBJECT INDEX

- Phase diagrams and crystallization, 82, 88
- Phase expansion in reciprocal space, 335
- Phase extension  
and noncrystallographic symmetry, 285  
by electron-density averaging, 279  
in *DM/DMMULTI*, 708  
in *PHASES*, 696, 701
- Phase improvement, 311  
computer programs, 689  
constraints, 321  
in *DM/DMMULTI*, 705
- Phase probability, 259
- Phase probability distributions, 294  
Bayesian calculation of, 304  
for anomalous scattering, 296
- Phase problem, 26, 256
- Phase refinement  
approximate-likelihood method, 699  
by electron-density averaging, 279  
in *PHASES*, 699  
in reciprocal space, 335
- Phased translation function, 275–276
- PHASES*, 288, 686, 695
- Phasing  
*ab initio*, 333  
*ab initio*, in molecular replacement, 286  
and atomic resolution, 395  
computer programs, 688  
in neutron diffraction, 420  
in *PHASES*, 695, 697  
MAD, 302  
multisolution methods, 334  
power of, 286  
using anomalous scattering, 293  
using electron cryomicroscopy, 462  
using noncrystallographic symmetry, 280
- Phasing figure of merit, 259, 295, 305
- Phasing power, 259
- PhoE, 96
- Phong shading, 359
- Phosphate-binding protein, 585  
short hydrogen bond to phosphate, 586
- Photon-counting X-ray detectors, 145
- Photon-integrating X-ray detectors, 145–146
- Photosynthetic reaction centres, 95
- Planarity restraints, 390
- Plasma X-ray sources, 125
- Pluto*, 363, 666
- Point groups, 47  
centrosymmetric, 50  
enantiomorphic, 47–48  
icosahedral, 51
- Point inducible dipole, 553
- Point X-ray detectors, 145
- Poisson–Boltzmann equation, 554
- Polarity, 554
- Polarizability, 553–554  
hard and soft metals, 580
- Polarization factor, 59–60
- Polarization of synchrotron radiation, 155
- Polarizing multilayer monochromators for neutrons, 135
- Polycrystalline fibres, 444
- Polyethylene glycol (PEG), 75, 84, 94, 202, 671
- Polymerase chain reaction (PCR), 66
- Polymorphism, 111, 263
- Pooled coefficient of variation, 500
- Porins, 96
- Position error, 410
- Positional shifts, 412
- Post refinement, 218, 223  
in *SCALEPACK*, 233  
partially recorded reflections, 236
- Post-translational modifications, 65–66, 71, 78, 102
- Potassium channel, 95
- Potential-energy functions, 489
- PovRay*, 354
- Power of phase determination, 286
- Precession method of data collection, 178
- Precipitants, 81, 95, 249, 671  
ammonium sulfate, 75, 249, 671  
magnesium sulfate, 249  
sodium/potassium phosphate, 249, 671
- Precision, 403  
full-matrix estimates of, 408  
relative, 510
- Preconditioned conjugate-gradient method, 373, 719  
in *TNT*, 719
- Pre-nucleation, 89
- PreQuest*, 665
- Primitive unit cell, 46
- Principal component analysis, 561
- PROBE*, 727
- Probe radius, 537
- Probe sphere, 534
- PROCHECK*, 373, 507–508, 520, 676, 692, 722
- PROCHECK-NMR*, 723
- Profile fitting, 212, 214  
in fibre diffraction, 446  
in *XDS*, 733  
partially recorded reflections, 217  
standard profiles, 222  
strong reflections, 216  
systematic errors, 217  
weak reflections, 216
- ProFit*, 692
- Project MAC, 357
- cis*-Prolines, frequency of, 382
- PROLSQ*, 373, 689
- PROSA*, 693
- PROSA II*, 508
- Prostaglandin H<sub>2</sub> synthase, 96
- PROTEIN*, 259, 686
- Protein–carbohydrate recognition, 579
- Protein–DNA recognition, water molecules in, 638
- Protein–ligand docking programs, 566
- Protein–ligand interactions, 579  
carbohydrates, 579  
IsoStar, 565  
metals, 580  
phosphate, 585  
role of water molecules, 623, 629  
sulfate, 585  
use of the CSD, 562, 565
- Protein–nucleic acid complexes in the NDB, 657
- Protein–nucleic acid interactions, 581  
DNA, 581, 583  
RNA, 583–584  
transfer RNA, 583
- Protein–water interactions  
database analysis, 625  
effect of secondary structure, 627  
effect of tertiary structure, 629
- Protein Data Bank (PDB), 675  
*ADIT*, 675  
at Brookhaven, 649  
Atlas pages, 651  
*AutoDep*, 649, 653–654, 680
- Protein Data Bank (PDB)  
*CloserSite*, 651  
content of, 675  
data acquisition, 675  
data archiving, 679  
data deposition, 653  
data processing, 675  
data validation, 676  
database architecture, 677  
*3DB Browser*, 650, 680  
distribution of, 679  
IsoStar, 565  
*MAXIT*, 675  
mirror sites, 651, 679  
NMR data, 677  
*NUCheck*, 676  
*PDB Browser*, 649  
*PDB-SHELL*, 649–650  
*PDBLite*, 680  
*PROCHECK*, 676  
*SearchFields*, 678  
searching the database, 678  
*SearchLite*, 678  
*SFCHECK*, 677  
*Status Query*, 678
- Protein domains, 577  
boundaries, 577  
discontinuous, 577  
identification, 575, 577–578
- Protein engineering, 26, 65  
acceleration of crystallization, 101  
creation of heavy-atom sites, 103  
fusion proteins, 101  
improving crystal quality, 100–101  
improving protein solubility, 100  
promotion of a crystal form, 102  
site-directed mutagenesis, 100  
surface mutations, 100
- Protein expression, 65–67  
baculoviruses, 72  
constitutive, 68  
constructs, 66  
fermentation, 69  
growth media, 70  
in *E. coli*, 67–68  
in yeasts, 71  
inducible, 68  
insect cell–virus, 72  
mammalian cells, 73  
misfolded proteins, 70  
plasmids, 67  
post-translational modifications, 65–66, 71, 78, 102  
preparation of cDNA clones, 66  
T7 polymerase, 68
- Protein families, 575
- Protein folding, 70  
hydrogen bonding in, 547  
*in vivo*, 70  
misfolded proteins, 70  
refolding, 77  
role of water molecules, 623  
studied by SAXS, 437  
use of chaperones, 70
- Protein function  
role of metal ions, 580  
role of water molecules, 623
- Protein heterogeneity, 88, 102  
avoidance of, 102  
conformational, 88
- Protein kinase A, solvent structure, 636

## SUBJECT INDEX

- Protein purification, 75  
 chromatography, 75  
 isoelectric focusing, 77  
 mass spectrometry, 77  
 N-terminal heterogeneity, 77  
 sample heterogeneity, 78  
 SDS-PAGE, 77, 88
- Protein refolding, 77
- Protein stability  
 effect of hydrogen bonding, 547  
 role of metal ions, 580
- Protein structure classification, 575, 577  
 CATH, 575–576  
 DALI, 575–576  
 DALI domain dictionary, 576, 578  
 3Dee, 575–576  
 ENTREZ, 575–576  
 HOMSTRAD, 575–576  
 SCOP, 575–576  
 SSAP, 575  
 STAMP, 575  
 VAST, 576
- Protein superfamilies, 576
- Proteins, storage of, 78
- Proteolysis  
 in *E. coli*, 71  
 N-end rule, 69  
 non-specific, 101  
 of recombinant proteins, 71  
 prevention of, 101  
 proteolytic trimming, 101
- Proton exchange, NMR studies of, 464
- Protozoan infections, 13, 19–20  
*PROVE*, 509  
*PS79*, 447
- Pseudo-crystallographic symmetry, 263
- Pseudosymmetry, 501  
 in isomorphous replacement, 260  
*PUXTAL*, 686
- Pycnometry, 118
- Q* factor, 459
- Quadratic information measure, 394
- Quality indicators, 498, 500  
*G* factors, 504  
 merging *R* factors, 500  
 pooled coefficient of variation, 500
- QUANTA*, 691
- Quasi-Laue neutron diffraction, 419  
*Quest3D*, 665
- R*-factor translation function, 275
- R* factors, 374  
 crystallographic, 499, 504, 510  
 in fibre diffraction, 449  
 $R_{\text{Cullis}}$ , 259  
 $R_{\text{free}}$ , 374–375, 410, 499, 504, 510  
 $R_{\text{Kraut}}$ , 259  
 $R_{\text{merge}}$ , 191, 194, 238, 426  
 $R_{\text{sym}}$ , 426  
 real-space, 505, 510
- Radiation damage, 191, 202  
 and cryogenic freezing, 192  
 and Laue diffraction, 169  
 and synchrotron radiation, 192  
 free radicals, 197  
 in electron diffraction, 424  
 in electron microscopy, 452  
 prevention of, 197
- Radioactive X-ray sources, 125
- Radius of convergence, 369
- Radius of gyration, 430, 432, 439
- Ramachandran plot, 362, 498, 502, 520, 561, 723  
 multiple-model, 503
- Random-atom model, 348
- Random omit maps, 336
- RasMol*, 359, 650, 659, 694
- Raster3D*, 543, 694, 726
- RAVE*, 288, 354, 690
- Ray tracing, 359  
*PovRay*, 354
- Rayleigh scattering, 59
- Re-entrant surface, 535, 540
- Reaction potential, 554
- Real-space constraints, 336
- Real-space fit, 498, 505
- Real-space *R* factor, 505, 510
- Real-space refinement in *ARP/wARP*, 720
- Recentring, 348
- Reciprocal lattice, 57
- Reciprocal-lattice points, non-integral, 281
- Reciprocal-lattice vectors, distribution of, 209
- Reciprocal space, 57
- Reciprocal-space refinement in *ARP/wARP*, 721
- Recombinant proteins, 26, 65  
 incorporation of selenomethionine, 66  
 minimizing proteolysis of, 71  
 toxicity of, to host, 71
- Reduced cell, 210, 224–225, 732
- Reduced Miller indices, 236
- Redundancy, 168–169, 184, 193, 302, 501  
 noncrystallographic, 281
- Refinement, 369  
 against intensities, 370  
 atomic resolution, 393  
 bias, 328  
 block-matrix approximation, 396  
 computer programs, 689  
 conjugate-gradient method, 322, 373, 396  
 conjugate-gradient method,  
 preconditioned, 373, 719  
 coordinate uncertainty, 403  
 data quality, 370  
 diagonal-approximation method, 396  
 difference-Fourier method, 369  
 global minimum, 375  
 in *ARP/wARP*, 720  
 in electron diffraction, 427  
 in fibre diffraction, 448  
 in *PHASES*, 698  
 in *SHELX*, 734  
 in *SHELXL*, 736  
 in *TNT*, 716  
 intensity-based likelihood, 397  
 least-squares, 369, 396, 404  
 local minima, 375  
 maximum-likelihood, 329, 369, 376, 396  
 modelling of solvent, 372, 374  
 models, 370  
 neutron diffraction data, 421  
 normal equations, 372, 404  
 observational equations, 372  
 partial occupancy, 397  
 radius of convergence, 369  
 restrained, 405, 408  
 restraints, 382  
 rigid groups, 371  
 simulated annealing, 373, 375  
 singularity in, 373  
 target functions, 375  
 torsion-angle, 375  
 weighting, 370, 404
- Reflection centroid, 219
- Reflection intensity, integrated, 58
- Reflection-omit method, 320  
 in *DM/DMMULTI*, 708
- Reflection profiles, 190
- REFMAC*, 396, 398, 400, 689
- Refraction, 113
- Refractive index, 113
- Register error, 497
- Relative Wilson scaling, 696
- Representation of information, 362
- Representation of structures, 357–358  
 animation, 364  
 computer programs, 690, 693  
 CPK models, 358  
 direct volume rendering, 361  
 geometric, 359  
 illustration, 363  
 isosurfaces, 361  
 kinemages, 727  
 physical models, 365  
 ray tracing, 359  
 stereolithography, 365  
 three-dimensional printing, 365  
 volumetric, 360
- Representation of surfaces, 359, 539, 543  
 colour coding, 360  
 Gouraud shading, 359  
 Phong shading, 359  
 photorealistic rendering, 543  
 roadmaps, 544  
 shaded backbone, 543  
 texture mapping, 360
- Residual function, 405
- Resonance-assisted hydrogen bonding, 562
- Resonance-induced hydrogen bonding, 562
- RESTRAIN*, 395
- Restrained full-matrix inversion for  
 concanavalin A, 406
- Restrained refinement, 405, 408  
 in fibre diffraction, 448  
 residual function, 405  
 two-atom model, 405
- Restraints, 371, 382  
 atomic displacement parameter, 397  
 bond-angle, 382, 384, 388  
 bond-length, 382, 384–385  
 choice of, 383  
 coordinate, 397  
 effect on error estimates, 396  
 ensemble-averaged, 481  
 geometrical, 371  
 in molecular dynamics, 481, 490  
 in *SHELXL*, 736  
 in *TNT*, 716  
 nonbonded interactions, 391  
 planarity, 390  
 special geometries, 391  
 target parameters, 382  
 time-averaged, 481  
 torsion-angle, 390  
 use of the CSD, 382  
 weighting of, 406
- Ribbons*, 694
- Ribonuclease, 7  
 A, solvent structure, 635  
 Sa at atomic resolution, 398  
 T1, solvent structure, 635
- Ribosomes, synchrotron-radiation studies  
 of, 165
- Ribulose-1,5-bisphosphate carboxylase/  
 oxygenase (RuBisCO), structure  
 validation, 521

## SUBJECT INDEX

- Richards box, 9, 358
- Rigid-body superposition, 575
- Rigid-group refinement, 371  
in *PHASES*, 699  
in *TNT*, 719
- Ring flipping, NMR studies of, 464, 466
- RNA  
duplex RNA, 588  
hydrogen bonding in, 551  
interactions with proteins, 583–584
- Robertson sorting board, 4
- Rocking curve, 180
- Rocking width, 163
- Rossmann, M. G., 8
- Rotamer conformations, 502
- Rotamer side-chain fit, 498
- Rotating-anode X-ray tubes, 125
- Rotation axes, 46–47
- Rotation functions, 269  
and noncrystallographic symmetry, 263  
computation of, 271  
cross-rotation, 270  
fast, 271  
locked, 272  
sampling of, 271  
self-rotation, 270  
symmetry properties of, 272
- Rotation group, 270  
metric of, 269
- Rotation method of data collection, 179
- Rotation range, 181–183, 186  
in *XDS*, 730
- Rotational disorder in fibre diffraction, 444
- Rotational symmetry, 46
- Rotations in three-dimensional Euclidean space, 269
- Royal Institution, The, 745
- RSRef*, 689
- Rusticyanin, structure validation, 511
- $\sigma_A$  plot, 328, 505
- $\sigma_A$  values, estimation of, 327
- $\sigma_A$  weighting, 320
- Saddlepoint method, 348
- Sample acceptance, 156
- SANS. *See* Small-angle neutron scattering
- SARF*, 693
- SAXS. *See* Small-angle X-ray scattering
- Sayre's equation  
application to macromolecules at non-atomic resolution, 318  
for phase refinement and extension, 318  
in real and reciprocal space, 318  
shape function, 318
- SCALA*, 688
- SCALEPACK*, 226
- Scaling, 218, 222  
anisotropic, 395, 697  
Hamilton, Rollett and Sparks method, 236  
in density modification, 316  
in *DM/DMMULTI*, 709  
in *SCALEPACK*, 233  
in *SFCHECK*, 510  
in *XDS*, 733  
local, 306, 697  
native and derivative data in *PHASES*, 696  
of intensity data for lysozyme, 751  
of structure factors, 56  
partially recorded reflections, 236  
*R* factors, 238  
relative Wilson scaling, 696  
restraints and constraints, 237
- Scaling  
selection of reflections for, 237
- Scattering, 59  
Compton, 59  
elastic, 52  
electron, 423  
inelastic, 52  
Rayleigh, 59  
Thomson, 53
- Scattering factors  
anomalous, 299  
atomic, 54, 299  
atomic, solvent-corrected, 448
- Scattering lengths, neutron, 419
- SCOP, 575–576
- Screening potential, 554
- Screw axes, 46, 61
- Screw disorder in fibre diffraction, 444
- SDS–PAGE, 77, 88
- SearchFields*, 678
- SearchLite*, 678
- Second virial coefficient, 90
- Secondary structure  
and hydrogen bonding, 548, 563  
effect on protein–water interactions, 627  
from NMR studies, 464  
of RNA, 583
- Selection rule in fibre diffraction, 445
- Selenocysteine, 255
- Selenomethionine, 66, 103, 247, 255, 303
- Self-potential, 554
- Self-rotation function, 264, 270
- Self vectors, 258
- Sequence tags, 67
- Serine proteases, solvent structure, 630
- SETOR*, 694
- SFCHECK*, 505, 510, 677  
global quality indicators, 511, 513  
local quality indicators, 511, 514  
use at the NDB, 659
- Shake-and-Bake*, 333, 339, 688, 735
- 'Shaking', 335
- Shannon's sampling theorem, 285
- Shape function, 318
- SHARP*, 688
- $\beta$ -Sheets, 5  
hydrogen bonding in, 548
- SHELX*, 734
- SHELX97*, 689
- SHELXD*, 337
- SHELXL*, 394, 510, 734
- SHELXL98*, 373–374
- SHELXPRO*, 737
- SHELXS*, 734
- Shine–Dalgarno sequence, 68, 102
- Side-chain hydrogen bonding, 549
- Side-chain torsion angles, 502
- SIGMAA*, 327–328
- Signal strength and structure validation, 501
- Sim distribution, 325–326, 376
- Sim weighting, 320  
in *DM/DMMULTI*, 707  
in *PHASES*, 701
- Simple point charge (SPC) model, 481
- Simulated annealing, 373, 375  
annealing schedules, 378  
comparison with conjugate-gradient method, 379  
in *CNS*, 715  
in fibre diffraction, 448  
molecular dynamics, 378  
multistart refinement, 380
- Simulated annealing  
searching conformational space, 377  
temperature, 377–378
- Single-counter diffractometer, 178
- Single isomorphous replacement (SIR), 297  
and direct methods, 333
- Single-wavelength anomalous scattering (dispersion)  
and direct methods, 333  
data-collection strategies, 193
- Singularity in refinement, 373
- SIR97*, 689
- Site-directed mutagenesis, 100, 247, 255
- Sitting-drop method, 83
- Size-exclusion chromatography, 76
- Skeletonization, 317  
in *DM/DMMULTI*, 705, 707
- Small amphiphile concept, 98
- Small-angle neutron scattering (SANS), 438  
crystallization studies, 90  
Debye equation, 438  
distance measurements, 442–443  
length distribution, 439  
molecular weights, 441
- Small-angle X-ray scattering (SAXS), 428  
computer programs, 436  
crystallization studies, 90  
data collection, 435  
data processing, 435  
experiment design, 435  
instrumentation for conventional sources, 433  
low-resolution model determination, 432  
sample handling, 434  
sample preparation, 434  
single-crystal, 428  
solution, 429  
synchrotron instrumentation, 433
- SnB*, 337–338
- Sodium/potassium phosphate, 249, 671
- Soft ligands, 248
- Soft metals, 580
- SOLOMON*, 690
- Solubility of proteins, improvement of, 100
- Solution X-ray scattering, 429  
and crystal structures, 431  
computer programs, 436  
data collection, 435  
data processing, 435  
Debye formula, 432  
Debye function, 429  
electron pair distribution function, 430–431  
experiment design, 435  
Guinier plot, 430  
instrumentation for conventional sources, 433  
low-resolution model determination, 432  
molecular weights, 431  
radius of gyration, 430, 432  
sample handling, 434  
sample preparation, 434  
synchrotron instrumentation, 433
- Solvation, NMR studies of, 466
- Solvation potential, 554
- Solve*, 259, 303, 307, 687
- scoring trial heavy-atom solutions, 305
- Solvent  
bound, 118  
bulk, modelling of, 372, 374, 400  
in structure validation, 503  
modelling in *SHELXL*, 737  
ordered, at atomic resolution, 399  
variation of density, 439
- Solvent-accessible surface, 360, 535, 539

## SUBJECT INDEX

- Solvent-corrected atomic scattering factor, 448
- Solvent density, 121
- Solvent-excluding surface, 360, 540
- Solvent flattening, 311  
in *DM/DMMULTI*, 705, 707  
in fibre diffraction, 448  
in *PHASES*, 695, 700
- Solvent flipping, 314, 320
- Solvent masks, in *DM/DMMULTI*, 706, 709
- Solvent modification, 198
- Solvent structure, 623  
D<sub>2</sub>O – H<sub>2</sub>O difference maps, 421  
neutron diffraction, 420, 624  
NMR studies, 624  
simulation of, 624  
solution X-ray scattering, 432
- Source entropy, 346
- Space-group assignment, 218, 224, 501
- Space groups, 46  
common, for protein crystals, 46
- Spallation neutron sources, 137
- SPASM*, 355
- Special positions, 47
- Spherical aberration, 457
- Spherical Bessel functions, 274
- Spherical harmonics, 274
- Spin contrast variation, 441, 443
- Squalene cyclase, 96
- SQUASH*, 288, 690
- SQUID*, 693
- SSAP*, 575
- STAMP*, 575, 693
- Standard atomic radii, 536
- Standard atomic volumes, 539  
in structure validation, 509
- Standard basis vectors, 45
- Standard profiles, 214, 222
- Standard residue volumes, 538
- Standard uncertainty (s.u.), 403–404, 510  
estimation in *SHELXL*, 736
- Stanley, W., 5
- Staphylococcal nuclease, 581
- Static disorder, 371, 393
- Stationary-target X-ray tubes, 125
- Status Query*, 678
- Stereographic projections, 47
- Stereolithography, 365
- Still exposure, 179
- Storage of crystals at low temperature, 206
- Storage of proteins, 78
- STRATEGY*, 688
- Structural genomics, 10, 26, 165, 685
- Structure analysis  
computer programs, 685, 691  
using *O*, 355
- Structure-based drug design, 12–13, 26  
use of the CSD, 566  
use of the PDB, 654
- Structure determination  
by fibre diffraction, 447  
by NMR, 464  
by single-crystal X-ray diffraction and NMR, 466  
computer programs, 685  
in *CNS*, 710  
in *SHELX*, 734  
using noncrystallographic symmetry, 265, 267
- Structure-determination language,  
symbolic, 710
- Structure-factor averaging, 380
- Structure-factor probability distributions, 325  
general treatment, 326  
Luzzati, 326  
Sim, 325–326, 376  
Wilson, 325  
Woolfson, 326
- Structure factors, 55–56  
centrosymmetric structures, 56  
Fourier–Bessel, 445  
in electron diffraction, 426  
in fibre diffraction, 445  
noncentrosymmetric structures, 56  
normalized, 57, 333  
placing on an absolute scale, 56
- Structure invariants, 334
- Structure representation, 357–358  
animation, 364  
computer programs, 690, 693  
CPK models, 358  
direct volume rendering, 361  
geometric, 359  
illustration, 363  
isosurfaces, 361  
kinemages, 727  
physical models, 365  
ray tracing, 359  
stereolithography, 365  
three-dimensional printing, 365  
volumetric, 360
- Structure solution  
automated, for MAD and MIR, 303  
computer programs, 688
- Structure validation, 497, 507, 520  
agreement of model with experimental data, 507, 509  
at the NDB, 507  
at the PDB, 676  
Balasubramanian plot, 502  
bond angles, 501, 507, 723  
bond lengths, 501, 507, 723  
C<sup>α</sup>-only models, 503  
choice of reference structures, 521  
data completeness, 501  
data resolution, 501  
detection of outliers, 498  
difference density quality, 505  
diphtheria toxin, 524  
directional atomic contact analysis, 503  
environment profiles, 508  
geometric parameters, 501, 507  
hetero groups, 507  
hydrogen-bonding analysis, 498, 503  
knowledge-based interaction potentials, 508  
main-chain torsion angles, 520  
nonbonded interactions, 520  
nonbonded parameters, 508  
noncrystallographic symmetry, 503, 505  
nucleic acids, 507  
packing, 520  
pep-flip value, 498  
planarity, 502  
*PROCHECK*, 722  
quality indicators, 498  
Ramachandran plot, 498, 502, 520, 723  
real-space fit, 498, 505  
rotamer side-chain fit, 498  
RuBisCO, 521  
rusticyanin, 511  
*SFCHECK*, 510  
side-chain torsion angles, 502  
signal strength, 501  
solvent, 503
- Structure validation  
standard atomic volumes, 509  
standard values, 507–508  
stereochemical parameters, 501, 507–508  
torsion angles, 502  
triacylglycerol lipase, 523  
unit-cell parameters, 501  
use of the CSD, 507, 559
- Stuhrmann equation, 440
- S.u. (standard uncertainty), 403–404, 510
- Subtilisin, 7
- Sugar ring conformations, 588, 593, 597  
C2'-endo, 589  
C3'-endo, 589  
envelope (E), 588
- Sulfate-binding protein, 585
- Summation integration, 212–213
- Supermirrors for neutrons, 135
- Superposition of molecules, 355
- Supersaturation, 81
- SuperStar*, 566
- Supramolecular synthons, 564
- Surface-area calculation, 539–540  
analytical, 541  
complete rolling algorithm, 541  
connected rolling algorithm, 541  
Connolly dot surface algorithm, 541  
extended atoms, 541  
Gauss–Bonnet theorem, 541  
Lee & Richards planar slices, 541  
marching-cube algorithm, 541
- Surface areas, 531
- Surface mutations, 100
- Surfaces, 539  
Connolly dot surface, 543  
Connolly surface, 360  
contact surface, 535, 540  
convex hull, 534  
definitions of, 534  
*GRASP* surfaces, 543  
hydration surface, 540  
molecular surface, 360, 535, 539–540  
occluded molecular surface, 540  
probe sphere, 534  
re-entrant surface, 535, 540  
solid polyhedral surfaces, 543  
solvent-accessible surface, 360, 535, 539  
solvent-excluding surface, 360, 540  
van der Waals surface, 535, 539  
Voronoi polyhedra, 534
- Surfaces, representation of, 359, 539, 543  
colour coding, 360  
Gouraud shading, 359  
Phong shading, 359  
photorealistic rendering, 543  
roadmaps, 544  
shaded backbone, 543  
texture mapping, 360
- SURFNET*, 693
- SurVol*, 509
- SYBYL*, 691
- Symmetry, 46  
helical, 263, 445  
icosahedral, 47  
in diffraction patterns, 60  
inversion, 46  
mirror, 46  
missing, 501  
rotational, 46  
translational, 46
- Symmetry correction, 266–267

## SUBJECT INDEX

- Synchrotron radiation, 155, 178  
 and Laue diffraction, 162, 167  
 and MAD, 165  
 and SAXS, 433  
 area detectors, 161, 165  
 atomic resolution studies, 165  
 beamlines for macromolecular  
 crystallography, 157  
 bending magnets, 127, 158  
 brightness, 155  
 brilliance, 155–156  
 collimation, 155  
 critical wavelength, 126, 155  
 detectors, 161  
 F<sub>1</sub> ATPase, 165  
 flux, 155  
 harmonic emission, 161  
 high photon energies, 161  
 in protein crystallography, 164  
 insertion devices, 127, 155–156  
 instrumentation, 155, 161  
 intensity, 156  
 long-wavelength, 161  
 machine emittance, 155  
 magnet shimming, 161  
 monochromatic, 162  
 monochromators, 162  
 multipole wigglers, 156  
 opening angle, 155  
 polarization, 155  
 production of, 155  
 properties of, 155  
 sample acceptance, 156  
 sources, 126  
 sources, first-generation, 158  
 sources, second-generation, 160  
 sources, third-generation, 160  
 speed of data collection, 26  
 studies of multi-macromolecular  
 complexes, 165  
 studies of small crystals, 165  
 studies of the ribosome, 165  
 time-resolved studies, 165  
 total radiated power, 155  
 tunability, 155  
 undulators, 127, 156  
 universal curve, 155  
 wavelength shifters, 155  
 wigglers, 127
- Systematic absences, 61
- T4 lysozyme, solvent structure, 634  
 T7 polymerase expression system, 68  
 Tags, 67  
 removal of, 67  
 Tangent formula, 335  
 modified, 344  
 Target functions, 375  
 in CNS, 710, 712  
 MLF, 377  
 MLHL, 377  
 MLI, 377  
 Target parameters, 382  
 Telluromethionine, 103, 247  
 Temperature factors (atomic displacement  
 parameters), 393  
 anisotropic, 56, 393  
 anisotropic, at atomic resolution, 399  
 anisotropic, refinement in *SHELXL*, 736  
 constraints, 397  
 effect of coordinate errors, 371  
 effect on coordinate uncertainty, 403
- Temperature factors (atomic displacement  
 parameters)  
 group *B* factors, 371  
 in structure validation, 504  
 isotropic, 56  
 refinement of, 371  
 restraints, 397, 719  
 Temperature (in simulated annealing), 377–378  
 Tertiary structure  
 effect on protein–water interactions, 629  
 of RNA, 583  
 Tetragonal crystal system, 47  
 Texture mapping, 360  
 Thermal parameter, 56  
 Thomson scattering, 53  
 Three-dimensional image reconstruction, 453,  
 455, 459–460  
 differential phase residual, 459  
 Fourier shell correlation, 459  
*Q* factor, 459  
 Three-dimensional printing, 365  
 Three-dimensional reconstruction in electron  
 diffraction, 425  
 Time-resolved studies, 165, 167, 170  
 in fibre diffraction, 446  
 using SAXS, 437  
 TNT, 373, 689, 716  
 Tobacco mosaic virus (TMV), 5  
 fibre diffraction, 448  
 Tomographic crystal-volume measurement,  
 119  
 Torsion-angle molecular dynamics, 378  
 Torsion-angle refinement, 375  
 Torsion-angle restraints, 390  
 Torsion angles  
 in DNA, 593  
 in nucleic acid backbone chains, 588  
 Transfection, 73  
 Transfer RNA  
 interactions with proteins, 583  
 low-abundance, 69  
 Translation functions, 275  
 and noncrystallographic symmetry, 264  
 correlation-coefficient, 275  
 locked, 277  
 packing analysis, 277  
 Patterson-correlation, 276  
 phased, 275–276  
*R*-factor, 275  
 Translation, libration and screw tensor, 372,  
 393, 395, 399  
 Translational disorder in fibre diffraction, 444  
 Translational symmetry, 46  
 Transmission factor, 59  
 Transverse relaxation-optimized spectroscopy  
 (TROSY), 465  
 Triacylglycerol lipase, structure validation, 523  
 Triangulation number, 47  
 Triclinic crystal system, 47  
 Trigonal crystal system, 47  
 Triple isotopic substitution, 441  
 Triplet invariants, 334  
 Tris buffer, 249  
 Trueblood, K. N., 4  
 Trypsin, molecular-dynamics simulation, 492  
 Tubulin, electron diffraction studies, 427  
 Tunability of synchrotron radiation, 155  
 Turbo *FRODO*, 691  
 Turns, hydrogen bonding in, 549  
 ‘Twice baking’, 336  
 Twinning, 112  
 hemihedral, 112
- Twinning  
 in autoindexing, 228  
 treatment in *SHELXL*, 737  
 Two-dimensional crystals, 425, 427, 459
- Ubiquitin, molecular-dynamics simulation, 481  
 Undulators, 127, 156  
 Uniaxial crystals, 113  
 Unified-atom approach, 536  
 Unit cell, 45  
 non-primitive (centred), 46  
 origin choice, 45  
 primitive, 46  
 Unit-cell parameters, accuracy of, 212, 501  
 Unified-atom approach, 481  
 Universal curve, 155  
 Unrestrained full-matrix inversion  
 for an immunoglobulin, 408  
 for concanavalin A, 406  
*USF*, 687
- Vaccines, 24, 26  
 Validation. *See* Structure validation  
 van der Waals radii, 536, 539, 562  
 from the CSD, 537  
 van der Waals surface, 535  
 Vapour diffusion methods of crystallization, 82  
 Variable virtual bond method, 447  
 Variances, 403  
 VAST, 576  
 Velocity selectors, 136  
*VERIFY3D*, 521  
 Vertex error, 533  
 Virtual reality, 27, 358  
 Virtual Reality Modeling Language  
 (VRML), 726  
 Viruses, 13–14  
 early studies, 8  
 helical, 450  
 icosahedral symmetry, 47  
*Vista*, 666  
 Visualization of information, 362  
 Vitamin B<sub>12</sub>, 4  
 Vitrification of specimens for cryo EM, 456  
*VMD*, 694  
*VOIDOO*, 355  
 Volume *Z* score, 509  
 Volumetry, 119  
 Voronoi construction, 509, 531  
 Voronoi polyhedra, 531  
 and surfaces, 534  
 chopping-down method, 533  
 for proteins, 532  
 method B, 532  
 radical-plane method, 533  
 ratio method, 532  
 vertex error, 533  
 VRML (Virtual Reality Modeling  
 Language), 726
- Water molecules  
 as mediators in complex formation, 638  
 automatic location of, 400  
 buried, 550, 632  
 channel sites, 632  
 criteria for placing in electron-density  
 maps, 624  
 crystal-contact sites, 632  
 D<sub>2</sub>O – H<sub>2</sub>O difference maps, 421–422  
 determining position of, 624  
 distribution around amino acids, 625  
 in antigen–antibody association, 638

## SUBJECT INDEX

- Water molecules  
 in dimeric haemoglobin, 639  
 in protein–DNA recognition, 638  
 interactions with proteins, 625  
 location by NMR, 466  
 NMR studies, 624  
 orientation of, from neutron diffraction, 420, 422  
 partially occupied sites, 400  
 residence times, 466  
 role in protein folding, 623  
 role in protein structure and function, 623  
 surface sites, 632
- Watson, J. D., 5
- Watson–Crick base pairing, 591
- Watson–Crick Z-DNA, 601
- Wavelength bandpass, 180
- Wavelength normalization curve, 162, 168
- Wavelength shifters, 155
- Weak intensity data, inclusion in refinement, 370
- Weak intermolecular interactions, 564
- Weak-phase-object approximation, 457
- Weighting, 404  
 $\sigma_A$ , 320  
 of data in refinement, 370  
 of diffraction data and restraints, 406  
 Sim, 320
- Weissenberg camera, 183
- Weissenberg method, 178
- WHAT CHECK*, 693
- WHAT IF*, 373, 507–508, 521, 693
- Wide slicing, 182
- Wigglers, 127  
 multipole, 156
- Wilson distribution, 325
- Wilson plot, 56–57
- Wilson scaling, relative, 696
- Woolfson distribution, 326
- X-PLOR*, 373, 491, 687  
 for fibre diffraction, 448  
 restraints, 507
- X-RAC, 357
- X-ray detectors, 143, 148  
 accuracy, 143  
 and synchrotron radiation, 161  
 area, 145  
 dynamic range, 144  
 film, 146  
 flat-field corrections, 144  
 gas discharge (wire) counters, 146  
 geometric distortion, 144  
 image plates, 146  
 line spread function, 144  
 multiwire proportional counters, 146  
 photon counters, 145  
 photon integrators, 145–146  
 pixel array, 147  
 point, 145  
 point spread function, 143  
 reverse-biased semiconductor, 145  
 scintillator/photomultiplier, 145  
 signal-to-noise ratio, 143  
 spatial resolution, 143  
 stopping power, 144
- X-ray detectors  
 storage phosphors, 146  
 television, 146
- X-ray free electron laser, 161
- X-ray generation, 125
- X-ray mirrors, 129
- X-ray rocking widths and mosaicity, 91
- X-ray sources, 125  
 channelling radiation, 125  
 for monochromatic data collection, 177  
 microfocus X-ray tubes, 126  
 plasmas, 125  
 radioactive sources, 125  
 rotating-anode X-ray tubes, 125  
 stationary-target X-ray tubes, 125  
 X-ray free electron laser, 161
- X-ray topography studies of mosaicity, 91
- X-ray tubes  
 characteristic radiation, 126  
 microfocus, 126  
 rotating-anode, 125  
 stationary-target, 125
- X-ray wavelength, choice of, 128, 188
- XDS*, 219, 730
- XSCALE*, 222, 733
- Xtal*, 687
- XtalView*, 259, 373, 687
- Yeasts as expression systems, 71
- z-buffer, 359
- Z-DNA, 588
- Zingers, 149