

4. PRODUCTION AND PROPERTIES OF RADIATIONS

Table 4.4.5.5. $\langle j_2 \rangle$ form factors for 3d transition elements and their ions

Atom or ion	<i>A</i>	<i>a</i>	<i>B</i>	<i>b</i>	<i>C</i>	<i>c</i>	<i>D</i>	<i>e</i>
Sc	10.8172	54.327	4.7353	14.847	0.6071	4.218	0.0011	0.1212
Sc ⁺	8.5021	34.285	3.2116	10.994	0.4244	3.605	0.0009	0.1037
Sc ²⁺	4.3683	28.654	3.7231	10.823	0.6074	3.668	0.0014	0.0681
Ti	4.3583	36.056	3.8230	11.133	0.6855	3.469	0.0020	0.0967
Ti ⁺	6.1567	27.275	2.6833	8.983	0.4070	3.052	0.0011	0.0902
Ti ²⁺	4.3107	18.348	2.0960	6.797	0.2984	2.548	0.0007	0.0640
Ti ³⁺	3.3717	14.444	1.8258	5.713	0.2470	2.265	0.0005	0.0491
V	3.7600	21.831	2.4026	7.546	0.4464	2.663	0.0017	0.0556
V ⁺	4.7474	23.323	2.3609	7.808	0.4105	2.706	0.0014	0.0800
V ²⁺	3.4386	16.530	1.9638	6.141	0.2997	2.267	0.0009	0.0565
V ³⁺	2.3005	14.682	2.0364	6.130	0.4099	2.382	0.0014	0.0252
V ⁴⁺	1.8377	12.267	1.8247	5.458	0.3979	2.248	0.0012	0.0399
Cr	3.4085	20.127	2.1006	6.802	0.4266	2.394	0.0019	0.0662
Cr ⁺	3.7768	20.346	2.1028	6.893	0.4010	2.411	0.0017	0.0686
Cr ²⁺	2.6422	16.060	1.9198	6.253	0.4446	2.372	0.0020	0.0480
Cr ³⁺	1.6262	15.066	2.0618	6.284	0.5281	2.368	0.0023	0.0263
Cr ⁴⁺	1.0293	13.950	1.9933	6.059	0.5974	2.346	0.0027	0.0366
Mn	2.6681	16.060	1.7561	5.640	0.3675	2.049	0.0017	0.0595
Mn ⁺	3.2953	18.695	1.8792	6.240	0.3927	2.201	0.0022	0.0659
Mn ²⁺	2.0515	15.556	1.8841	6.063	0.4787	2.232	0.0027	0.0306
Mn ³⁺	1.2427	14.997	1.9567	6.118	0.5732	2.258	0.0031	0.0336
Mn ⁴⁺	0.7879	13.886	1.8717	5.743	0.5981	2.182	0.0034	0.0434
Fe	1.9405	18.473	1.9566	6.323	0.5166	2.161	0.0036	0.0394
Fe ⁺	2.6290	18.660	1.8704	6.331	0.4690	2.163	0.0031	0.0491
Fe ²⁺	1.6490	16.559	1.9064	6.133	0.5206	2.137	0.0035	0.0335
Fe ³⁺	1.3602	11.998	1.5188	5.003	0.4705	1.991	0.0038	0.0374
Fe ⁴⁺	1.5582	8.275	1.1863	3.279	0.1366	1.107	-0.0022	0.0327
Co	1.9678	14.170	1.4911	4.948	0.3844	1.797	0.0027	0.0452
Co ⁺	2.4097	16.161	1.5780	5.460	0.4095	1.914	0.0031	0.0581
Co ²⁺	1.9049	11.644	1.3159	4.357	0.3146	1.645	0.0017	0.0459
Co ³⁺	1.7058	8.859	1.1409	3.309	0.1474	1.090	-0.0025	0.0462
Co ⁴⁺	1.3110	8.025	1.1551	3.179	0.1608	1.130	-0.0011	0.0374
Ni	1.0302	12.252	1.4669	4.745	0.4521	1.744	0.0036	0.0338
Ni ⁺	2.1040	14.866	1.4302	5.071	0.4031	1.778	0.0034	0.0561
Ni ²⁺	1.7080	11.016	1.2147	4.103	0.3150	1.533	0.0018	0.0446
Ni ³⁺	1.4683	8.671	0.1794	1.106	1.1068	3.257	-0.0023	0.0373
Ni ⁴⁺	1.1612	7.700	1.0027	3.263	0.2719	1.378	0.0025	0.0326
Cu	1.9182	14.490	1.3329	4.730	0.3842	1.639	0.0035	0.0617
Cu ⁺	1.8814	13.433	1.2809	4.545	0.3646	1.602	0.0033	0.0590
Cu ²⁺	1.5189	10.478	1.1512	3.813	0.2918	1.398	0.0017	0.0429
Cu ³⁺	1.2797	8.450	1.0315	3.280	0.2401	1.250	0.0015	0.0389
Cu ⁴⁺	0.9568	7.448	0.9099	3.396	0.3729	1.494	0.0049	0.0330