Tatsuo Tabata

List of Publications by Year
in descending order

91 papers	1,706 citations	304743 22 h-index	302126 39 g-index
95 all docs	95 docs citations	95 times ranked	1012 citing authors

#	Article	IF	Citations
1	Generalized semiempirical equations for the extrapolated range of electrons. Nuclear Instruments & Methods, 1972, 103, 85-91.	1.2	184
2	An empirical equation for the backscattering coefficient of electrons. Nuclear Instruments & Methods, 1971, 94, 509-513.	1.2	126
3	An Algorithm for the Energy Deposition by Fast Electrons. Nuclear Science and Engineering, 1974, 53, 226-239.	1.1	114
4	Cross sections for charge transfer of hydrogen atoms and ions colliding with gaseous atoms and molecules. Atomic Data and Nuclear Data Tables, 1987, 37, 69-101.	2.4	93
5	ANALYTIC CROSS SECTIONS FOR COLLISIONS OF H+, H2+, H3+, H, H2, AND Hâˆ' WITH HYDROGEN MOLECULES. Atomic Data and Nuclear Data Tables, 2000, 76, 1-25.	2.4	88
6	Analytic cross sections for electron impact collisions with nitrogen molecules. Atomic Data and Nuclear Data Tables, 2006, 92, 375-406.	2.4	81
7	ANALYTIC CROSS SECTIONS FOR ELECTRON COLLISIONS WITH HYDROCARBONS: CH4, C2H6, C2H4, C2H2, C3H8, AND C3H6. Atomic Data and Nuclear Data Tables, 2002, 80, 147-204.	2.4	77
8	ANALYTIC CROSS SECTIONS FOR ELECTRON COLLISIONS WITH CO, CO2, AND H2O RELEVANT TO EDGE PLASMA IMPURITIES. Atomic Data and Nuclear Data Tables, 2001, 79, 143-184.	2.4	58
9	A generalized empirical equation for the transmission coefficient of electrons. Nuclear Instruments & Methods, 1975, 127, 429-434.	1.2	56
10	Backscattering of Electrons from 3.2 to 14 MeV. Physical Review, 1967, 162, 336-347.	2.7	50
11	Angular Distributions of Protons from the Reaction 12C(Î±, p)15N. Journal of the Physical Society of Japan, 1959, 14, 1260-1268.	1.6	40
12	An analytic formula for the extrapolated range of electrons in condensed materials. Nuclear Instruments & Methods in Physics Research B, 1996, 119, 463-470.	1.4	37
13	Detour factors in water and plastic phantoms and their use for range and depth scaling in electron-beam dosimetry. Physics in Medicine and Biology, 1996, 41, 1119-1139.	3.0	34
14	Backscattering coefficients of H, D, and He ions from solids. Atomic Data and Nuclear Data Tables, 1983, 28, 493-530.	2.4	31
15	An Algorithm for Electron Depth-Dose Distributions in Multilayer Slab Absorbers. Japanese Journal of Applied Physics, 1981, 20, 249-258.	1.5	28
16	Energy-Deposition Distributions in Materials Irradiated by Plane-Parallel Electron Beams with Energies Between 0.1 and 100 MeV. Atomic Data and Nuclear Data Tables, 1994, 56, 105-131.	2.4	26
17	Effective treatment of the interpolation factor in Marquardt's nonlinear least-squares fit algorithm. Computer Journal, 1975, 18, 250-251.	2.4	25
18	Range distributions and projected ranges of 0.1- to 100-MeV electrons in elemental absorbers. Nuclear Instruments & Methods in Physics Research B, 1996, 108, 11-17.	1.4	24

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19	Lower Excited States in P29 from the Si28 (p, Î³) P29 Reaction. Journal of the Physical Society of Japan, 1960, 15, 1556-1564.	1.6	23
20	Cross section of the reaction ⁹Be(Î³, n) near threshold. Canadian Journal of Physics, 1982, 60, 1672-1677.	1.1	23
21	Average depths of electron penetration: use as characteristic depths of exposure. IEEE Transactions on Nuclear Science, 1998, 45, 626-631.	2.0	23
22	Empirical Formulas for the Backscattering of Light Ions from Solids. Japanese Journal of Applied Physics, 1981, 20, 1929-1937.	1.5	22
23	Dose perturbations at high-Z interfaces in kilovoltage photon beams: comparison with Monte Carlo simulations and measurements. Radiation Physics and Chemistry, 2002, 64, 173-179.	2.8	22
24	Charge Distribution Produced by 4- to 24-MeV Electrons in Elemental Materials. Physical Review B, 1971, 3, 572-583.	3.2	19
25	Extrapolated and Projected Ranges of 4â€•to 24â€•MeV Electrons in Elemental Materials. Journal of Applied Physics, 1971, 42, 3361-3366.	2.5	19
26	Unified empirical formulas for the backscattering coefficients of light ions. Nuclear Instruments & Methods in Physics Research B, 1985, 9, 113-122.	1.4	18
27	A Semiempirical Formula for Single-Electron-Capture Cross Sections of Multiply Charged Ions Colliding with H, H2and He. Physica Scripta, 1989, T28, 77-80.	2.5	18
28	An algorithm for depthâ€"dose curves of electrons fitted to Monte Carlo data. Radiation Physics and Chemistry, 1998, 53, 205-215.	2.8	18
29	Gamma-rays from the 7.56 MeV LeVel in O15. Journal of the Physical Society of Japan, 1960, 15, 1552-1555.	1.6	17
30	Simple calculation of the electron-backscatter factor. Medical Physics, 1992, 19, 1423-1426.	3.0	17
31	Depth profiles of charge deposition by electrons in elemental absorbers: Monte Carlo results, experimental benchmarks and derived parameters. Nuclear Instruments & Methods in Physics Research B, 1995, 95, 289-299.	1.4	17
32	An empirical relation for the transmission coefficient of electrons under oblique incidence. Nuclear Instruments & Methods, 1976, 136, 533-536.	1.2	15
33	Reflection of electrons and photons from solids bombarded by 0.1 - to 100-MeV electrons. Radiation Physics and Chemistry, 1993, 42, 761-764.	2.8	15
34	Approximations to Landau's distribution functions for the ionization energy loss of fast electrons. Nuclear Instruments & Methods, 1979, 158, 521-523.	1.2	14
35	Fractional energies of backscattered electrons and photon yields by electrons. Radiation Physics and Chemistry, 1999, 54, 11-18.	2.8	14
36	A Simple Calculation for Mean Projected Range of Fast Electrons. Journal of Applied Physics, 1968, 39, 5342-5343.	2.5	12

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37	Varietal differences in the repair of gamma-radiation-induced lesions in barley. Environmental and Experimental Botany, 1980, 20, 161-168.	4.2	12
38	Extrapolated ranges of electrons determined from transmission and projected-range straggling curves. Radiation Physics and Chemistry, 2002, 64, 161-167.	2.8	12
39	An Empirical Equation for the Average Energy-Loss Fraction of Backscattered Electrons. II. Japanese Journal of Applied Physics, 1972, 11, 1220-1220.	1.5	11
40	Analytic cross sections for charge transfer of hydrogen atoms and ions colliding with metal vapors. Nuclear Instruments & Methods in Physics Research B, 1988, 31, 375-381.	1.4	10
41	Semiempirical algorithms for dose evaluation in electron-beam processing. International Journal of Radiation Applications and Instrumentation Nuclear Tracks and Radiation Measurements, 1990, 35, 821-825.	0.0	10
42	Semiempirical formulas for the detour factor of 1- to 50-MeV electrons in condensed materials. Radiation Physics and Chemistry, 1998, 53, 353-360.	2.8	10
43	Oxygen tracer diffusion in the YBa2Cu3Oy superconductor. Physica C: Superconductivity and Its Applications, 2001, 351, 357-362.	1.2	10
44	Nonobstructive Low Energy Electron Beam Monitor. Review of Scientific Instruments, 1961, 32, 1347-1348.	1.3	9
45	(α, p) Reactions near Z=26. Journal of the Physical Society of Japan, 1961, 16, 1853-1856.	1.6	8
46	Beam Profile Measurement for Electron Accelerators. Japanese Journal of Applied Physics, 1966, 5, 68-73.	1.5	8
47	Mirror reversal simply explained without recourse to psychological processes. Psychonomic Bulletin and Review, 2000, 7, 170-173.	2.8	8
48	A database for electron–material interactions. Radiation Physics and Chemistry, 2001, 60, 161.	2.8	8
49	Parametric representation of the energy deposition by fast electrons under oblique incidence. The International Journal of Applied Radiation and Isotopes, 1975, 26, 411-415.	0.7	6
50	Reflection of keV light ions from compound targets. Journal of Applied Physics, 1984, 55, 776-780.	2.5	6
51	Universal relations for reflection of keV light ions from solid targets. Journal of Nuclear Materials, 1984, 128-129, 681-686.	2.7	6
52	Anomalous emission in secondary emission beam monitors. Nuclear Instruments & Methods, 1964, 26, 349-350.	1.2	5
53	Projected-Range Straggling of 4- to 24-MeV Electrons in Elemental Materials. Japanese Journal of Applied Physics, 1971, 10, 1503-1508.	1.5	5
54	Simple method of evaluating absorbed dose in electron-beam processing. International Journal of Radiation Applications and Instrumentation Nuclear Tracks and Radiation Measurements, 1989, 33, 411-416.	0.0	5

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55	Harvesting backscatter electrons for radiation therapy. International Journal of Radiation Oncology Biology Physics, 1995, 33, 695-703.	0.8	5
56	A comparison of calculated and measured absorbed doses of electron beams. Radiation Physics and Chemistry, 1996, 47, 167-170.	2.8	5
57	Pulsed€Radiation€Induced Current in Crystalline and Fused Quartz. Journal of Applied Physics, 1969, 40, 2894-2898.	2.5	4
58	Analytic fits to Monte Carlo calculated depth-dose curves of 1- to 50-MeV electrons in water. Nuclear Instruments & Methods in Physics Research B, 1991, 58, 205-210.	1.4	4
59	Lower Excited States in P29. Journal of the Physical Society of Japan, 1960, 15, 364-365.	1.6	3
60	Beam Position Monitor for Accelerators. Review of Scientific Instruments, 1965, 36, 97-98.	1.3	3
61	On the Experimental Determination of the Maximum Range of Monoenergetic Electrons. Japanese Journal of Applied Physics, 1969, 8, 393-398.	1.5	3
62	A Fitting Function for Energy Dissipation Curves of Fast Electrons. Nuclear Science and Engineering, 1972, 49, 505-506.	1.1	3
63	Empirical formulas for the backscattering coefficients of light ions obliquely incident on solids. Radiation Effects, 1984, 84, 45-56.	0.4	3
64	An Empirical Equation for the Average Energy-Loss Fraction of Backscattered Electrons. Japanese Journal of Applied Physics, 1971, 10, 1729-1729.	1.5	2
65	An Improved Interpolation Formula for the ParameterBin Molière's Theory of Multiple Scattering. Japanese Journal of Applied Physics, 1976, 15, 1583-1584.	1.5	2
66	Interpolation formulas for quantities related to radiative energy-loss of electrons. Nuclear Instruments & Methods, 1977, 146, 435-438.	1.2	2
67	Utilization of natural mica for visualization of electron isodose curves in a medium. Nuclear Instruments & Methods, 1980, 172, 487-489.	1.2	2
68	Average depths of electron penetration. II. Angular dependence and use to evaluate secondary-electron yield by photons. IEEE Transactions on Nuclear Science, 1999, 46, 910-914.	2.0	2
69	Approximation of charge-deposition density in thin slabs irradiated by electrons. Radiation Physics and Chemistry, 2000, 59, 239-248.	2.8	2
70	Preparation of Bi-2201 thin films Bi2LnxCa2â^’xCu1Oz (, Ln=La, Pr, Nd, Sm, Eu and Gd) by laser ablation. Physica C: Superconductivity and Its Applications, 2001, 361, 189-194.	1.2	2
71	Relationship between Frames of Reference and Mirror-Image Reversals. Perception, 2007, 36, 1049-1056.	1.2	2
72	Energy Monitor for Electron Beams. Review of Scientific Instruments, 1966, 37, 309-310.	1.3	1

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73	Contribution of Obliquely Scattered Electrons to the Irradiation under the Scanner Window. Japanese Journal of Applied Physics, 1969, 8, 1331-1334.	1.5	1
74	Current Profile Monitor for Use in Scanning Electron Beam Irradiations. Review of Scientific Instruments, 1970, 41, 1537-1539.	1.3	1
75	Simplification of the water bath method for calibrating a Raî—¸Be neutron source. Nuclear Instruments & Methods, 1975, 131, 259-261.	1.2	1
76	Influence of a dye film dosimeter inserted in a solid on electron behavior and dosimetry. Nuclear Instruments & Methods in Physics Research, 1982, 200, 443-447.	0.9	1
77	The effect of high gamma-ray doses on the thermal properties of muscovite mica: Application to dosimetry. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1986, 251, 374-379.	1.6	1
78	Charge-deposition in two-layer systems irradiated by electrons. Radiation Physics and Chemistry, 2001, 60, 151-156.	2.8	1
79	Preparation of metastable Bi-2223 phase of Bi2(LnxCa2â˘x)Ca2Cu3Oz thin films (0.3â©½xâ©½0.7, Ln=Pr, Nd, Sm, Eu) Tj ETQq1 1 0.7	1.2	1
80	Effect of Electric Field Direction on Pulsed Radiationâ€Induced Current in Crystalline Quartz. Journal of Applied Physics, 1971, 42, 3545-3547.	2.5	0
81	Transient electron current observed in gas ionization chambers. Nuclear Instruments & Methods, 1972, 104, 109-116.	1.2	0
82	Fitting function for the thermal neutron distribution in water due to a Raî—¸Be source. Nuclear Instruments & Methods, 1976, 137, 201-202.	1.2	0
83	Approximation to cosγ Appearing in the Formula for the Coulomb Scattering of Relativistic Electrons. Nuclear Science and Engineering, 1978, 65, 414-415.	1.1	0
84	Chinese vs. Japanese. Physics Today, 1983, 36, 90-91.	0.3	0
85	Data center activities oh plasma-wall interaction at institute of plasma physics at Nagoya University. Journal of Nuclear Materials, 1984, 123, 1613-1614.	2.7	0
86	Dosimetry and processing anomalies due to heterogeneities of materials irradiated with high-energy electrons. Influence of heterogeneities on e-irradiation. Radiation Physics and Chemistry (1977), 1985, 26, 679-683.	0.3	0
87	Nondestructive Detection of Small Voids in Solids by Transmission Electron Spectrometry. Japanese Journal of Applied Physics, 1986, 25, L848-L849.	1.5	0
88	An expression for the charge-deposition distribution near the surface of a semi-infinite medium irradiated by electrons. IEEE Transactions on Nuclear Science, 1999, 46, 280-283.	2.0	0
89	Analysis of a discrepancy in electronâ€"beam dose comparison between chemical dosimeters and a calorimeter. Applied Radiation and Isotopes, 2001, 55, 125-128.	1.5	0
90	Recent Trends in Radiation Physics. Nippon Genshiryoku Gakkaishi/Journal of the Atomic Energy Society of Japan, 1976, 18, 474-478.	0.0	0

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91	Fitting Function for the Thermal Neutron Distribution in Water due to a 252Cf Source. Radioisotopes, 1977, 26, 245-247.	0.2	0