

Erhard W Rothe

List of Publications by Year in descending order

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87
papers

2,870
citations

147566

31
h-index

174990

52
g-index

88
all docs

88
docs citations

88
times ranked

874
citing authors

#	ARTICLE	IF	CITATIONS
1	Nuclear and electron dynamics in the photodissociation of water. Journal of Chemical Physics, 1984, 80, 2548-2569.	1.2	263
2	Total Collision Cross Sections for the Interaction of Atomic Beams of Alkali Metals with Gases. Journal of Chemical Physics, 1959, 31, 1619-1627.	1.2	239
3	Velocity Dependence of the Total Cross Section for the Scattering of Metastable He(3S1) by Helium, Argon, and Krypton. Journal of Chemical Physics, 1965, 42, 3310-3314.	1.2	132
4	Electron Impact Ionization of Atomic Hydrogen and Atomic Oxygen. Physical Review, 1962, 125, 582-583.	2.7	110
5	Analysis of chemical dynamics via \hat{I} doubling: Directed lobes in product molecules and transition states. Journal of Chemical Physics, 1985, 82, 3634-3640.	1.2	107
6	Merging Beams, A Different Approach to Collision Cross Section Measurements. Review of Scientific Instruments, 1966, 37, 1655-1661.	0.6	105
7	Strong propensity rules in the photodissociation of a single rotational quantum state of vibrationally excited H ₂ O. Journal of Chemical Physics, 1985, 83, 1429-1430.	1.2	78
8	Low-Energy Electron Scattering from Atomic Nitrogen. Physical Review, 1963, 129, 2069-2071.	2.7	74
9	Electron Impact Ionization of Atomic Nitrogen. Physical Review, 1962, 127, 1647-1649.	2.7	70
10	Scattering of Low-Energy Electrons by Atomic Hydrogen. Physical Review, 1961, 124, 135-136.	2.7	60
11	Measurement of electron affinities of O ₃ , SO ₂ , and SO ₃ by collisional ionization. Journal of Chemical Physics, 1975, 62, 3829.	1.2	60
12	Slotted Disk Velocity Selector of Extended Range. Review of Scientific Instruments, 1962, 33, 841-843.	0.6	59
13	Total Collision Cross Sections for the Interaction of Molecular Beams of Cesium Chloride with Gases. Influence of the Dipole-Dipole Force upon the Scattering. Journal of Chemical Physics, 1960, 33, 584-590.	1.2	54
14	Glory Scattering of Lithium by a Series of Molecules. I. Diatomics. Journal of Chemical Physics, 1968, 48, 3945-3955.	1.2	54
15	Observation of polarization of atomic fluorescence excited by laser-induced dissociation of Na ₂ . Chemical Physics Letters, 1980, 72, 100-103.	1.2	52
16	Measurements of Absolute Total Cross Sections for Rare Gas Scattering. Journal of Chemical Physics, 1965, 43, 4177-4179.	1.2	50
17	Avoiding Erroneous Submicron Pressure Readings: A Refrigerated McLeod. Journal of Vacuum Science and Technology, 1964, 1, 66-68.	1.9	47
18	Isotope fractionation in two-step photoionization of Li ₂ . Chemical Physics Letters, 1978, 53, 74-78.	1.2	44

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19	Two-photon ionization of Li ₂ : isotopic separation and determination of IP(Li ₂) and De(Li ₂). Chemical Physics Letters, 1978, 56, 336-338.	1.2	43
20	Atomic-Beam Measurements of van der Waals Forces. Journal of Chemical Physics, 1965, 42, 3306-3309.	1.2	42
21	Ionization reactions of metal hexafluorides with alkali atoms and dimers. Journal of Chemical Physics, 1977, 67, 377-381.	1.2	42
22	Interaction Potentials from the Velocity Dependence of Total Atom-Atom Scattering Cross Sections. Physical Review, 1963, 130, 2333-2338.	2.7	41
23	Emission spectra from ArF laser ablation of high-Tc superconductor Bi ₂ CaSr ₂ Cu ₂ O ₉ . Applied Physics Letters, 1988, 53, 2698-2700.	1.5	41
24	Time-resolved emission spectra following the 193-nm photoablation of CuO, BaO ₂ , Y ₂ O ₃ , and YBa ₂ Cu ₃ O _{7-x} in vacuum and oxygen. Journal of Applied Physics, 1991, 70, 2337-2342.	1.1	41
25	Collisional ionization of Cs with SF ₆ . Journal of Chemical Physics, 1974, 61, 4929-4930.	1.2	40
26	Polarized LIF spectroscopy of OH formed by the photodissociation of H ₂ O by polarized 157 nm light. Journal of Chemical Physics, 1983, 78, 989-990.	1.2	40
27	Velocity Dependence of the Total Cross Section for the Scattering of Li and K by Xe. Physical Review, 1962, 128, 659-662.	2.7	39
28	Scattering of Thermal Rare Gas Beams by Argon. Influence of the Long-Range Dispersion Forces. Physical Review, 1962, 126, 598-602.	2.7	37
29	Symmetric-Resonance Charge Transfer in Ar from 0.1-20 eV Using Merging Beams. Physical Review, 1967, 157, 101-102.	2.7	35
30	Measurement of the electron affinity of NO ₂ . Journal of Chemical Physics, 1973, 58, 5801-5806.	1.2	35
31	Measurement of boron trihalide electron affinities: correlation with boron-nitrogen adduct strengths. Inorganic Chemistry, 1980, 19, 829-831.	1.9	34
32	Negative ion formation from energetic collisions of cesium with CO ₂ , CS ₂ , and COS. Journal of Chemical Physics, 1974, 61, 2592-2595.	1.2	32
33	Negative ions from phosphorus halides due to cesium charge exchange. Journal of Chemical Physics, 1976, 65, 565-569.	1.2	32
34	Negative ion formation in halocarbons by charge exchange with cesium. Journal of Chemical Physics, 1976, 64, 1270-1275.	1.2	31
35	A cesium impact source for negative-ion mass spectra. International Journal of Mass Spectrometry and Ion Physics, 1974, 14, 79-88.	1.3	29
36	Chemical ionization reactions of alkali dimers with halogen molecules. Journal of Chemical Physics, 1977, 66, 3847-3853.	1.2	28

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37	Photodissociation of Na ₂ and Rb ₂ : Analysis of atomic fine structure of 2P products. Journal of Chemical Physics, 1980, 72, 5145-5150.	1.2	28
38	Ionizing collisions of cesium with Cl ₂ , Br ₂ , and I ₂ . Journal of Chemical Physics, 1975, 62, 132.	1.2	27
39	The yttrium oxide chemiluminescence from the 308 nm excimer laser ablation of YBa ₂ Cu ₃ O _{7-x} , Y ₂ O ₃ , and YCl ₃ . Journal of Applied Physics, 1993, 73, 7810-7817.	1.1	27
40	Velocity Dependence of the Total Cross Section for Atom-Atom Scattering at Thermal Energies. Physical Review Letters, 1962, 9, 494-495.	2.9	22
41	Negative gaseous ions from nitric acid. Journal of Chemical Physics, 1976, 64, 1247-1248.	1.2	21
42	Glory Scattering of Lithium by a Series of Molecules. II. Fluorocarbons and Hydrocarbons. Journal of Chemical Physics, 1969, 50, 3531-3538.	1.2	20
43	Two-step photoionization of Na ₂ : dependence on alignment. Chemical Physics Letters, 1981, 78, 16-20.	1.2	20
44	Resonance-enhanced multiphoton ionization of vibrationally excited state-selected NH ₃ . Spectroscopy and collisional state transfer. Chemical Physics Letters, 1988, 146, 89-95.	1.2	20
45	Glory Extrema in Total Cross Sections: Li-Hg. Journal of Chemical Physics, 1967, 46, 1209-1210.	1.2	19
46	Nanobumps on silicon created with polystyrene spheres and 248 or 308 nm laser pulses. Applied Physics Letters, 2006, 89, 2231-13.	1.5	18
47	Photoablation of polymers at 193 nm: Shot-to-shot study of emission spectra, etch depths, and transmission. Journal of Applied Physics, 1989, 66, 1370-1374.	1.1	17
48	Alkali-Alkali Glory Scattering in the 3 ¹ Σ State. Journal of Chemical Physics, 1968, 49, 4750-4755.	1.2	16
49	Anion production from Cs + CF ₃ X: evidence for stripping. Chemical Physics Letters, 1974, 26, 434-436.	1.2	16
50	Two-photon ionization of Na ₂ by an Ar ⁺ laser. Journal of Chemical Physics, 1978, 68, 2518-2519.	1.2	16
51	Laser photodissociation of H ₂ O at 157 nm: rotational energy distribution in product OH(X ² I ₁). Chemical Physics Letters, 1982, 86, 270-274.	1.2	16
52	Substantiation of a Method for Obtaining Interatomic Potential Energy Parameters. Journal of Chemical Physics, 1963, 39, 493-494.	1.2	15
53	A Time-of-Flight Chemical Accelerator for Low Center-Mass Energy Spreads. Review of Scientific Instruments, 1972, 43, 917-925.	0.6	15
54	Systematic Error in Beam-Gas Experiments: The Electron Affinity of Br ₂ . Journal of Chemical Physics, 1971, 54, 4520-4522.	1.2	14

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55	Effect of electronic alignment upon the reaction $2\text{Na}(2P_{3/2}) + \text{Na}^{++} \rightarrow \text{Na}^{++} + \text{Na}$. Physical Review A, 1985, 31, 1362-1365.	1.0	14
56	Scattering of Lithium by a Series of Molecules. IV. Miscellaneous Molecules. Journal of Chemical Physics, 1970, 53, 2501-2505.	1.2	12
57	Internal state populations and the time-of-flight of ground-state species ejected after the 193 nm excimer laser ablation of CuO, BaO ₂ , and Y ₂ O ₃ . Journal of Applied Physics, 1994, 75, 522-528.	1.1	12
58	High-sensitivity, state-specific detection of H ₂ by three-photon direct ionization in gases and discharges. Optics Communications, 1986, 58, 113-117.	1.0	11
59	The effects of the electric field associated with a laser-induced pulsed discharge on the ablation-generated plumes of YBa ₂ Cu ₃ O _{7-x} . Journal of Applied Physics, 1992, 72, 1113-1125.	1.1	11
60	Collisional ionization of cesium: Relaxation of product fragments. Journal of Chemical Physics, 1974, 60, 4096-4097.	1.2	10
61	Negative ions from reactions of alkalis with SnCl ₄ , GeCl ₄ and TiCl ₄ . International Journal of Mass Spectrometry and Ion Physics, 1979, 31, 77-84.	1.3	10
62	Chemical ionization in thermal energy collisions of K ₂ and Cs ₂ with halogen molecules. Journal of Chemical Physics, 1976, 65, 2912-2913.	1.2	9
63	Influence of electrical resonance on the interpretation of optogalvanic data. Journal of Applied Physics, 1987, 61, 109-112.	1.1	9
64	Large mirage effect in supercritical CO ₂ . Journal of Supercritical Fluids, 2000, 18, 193-200.	1.6	9
65	Near-threshold ionization of excited Na(3P) by collisions with O ₂ and SO ₂ . Chemical Physics Letters, 1977, 51, 71-74.	1.2	8
66	Absorption of laser light in air in the 193 nm range: Analysis of laser locking. Journal of Quantitative Spectroscopy and Radiative Transfer, 1990, 44, 373-378.	1.1	7
67	Imaging of the Fluorescence Created by Ablation of Y ₂ O ₃ , BaO ₂ , CuO, and YBa ₂ Cu ₃ O _{7-x} by 308-nm Laser Light. Applied Spectroscopy, 1993, 47, 1046-1057.	1.2	7
68	Collision-induced dissociation of aligned ions. Chemical Physics Letters, 1981, 81, 175-178.	1.2	6
69	One-dimensional imaging of H ₂ densities and of temperatures via rotational Raman scattering of narrow-band, 248 nm, laser light. Journal of Raman Spectroscopy, 1997, 28, 605-612.	1.2	6
70	Laser-Induced Fluorescence of CF ₂ from a CH ₄ Flame and an H ₂ Flame with Addition of HCFC-22 and HFC-134a. Combustion and Flame, 1998, 113, 236-241.	2.8	6
71	Ionization reactions of halogens and metal polyhalides with alkali atoms and dimers: Absolute cross sections. Journal of Chemical Physics, 1980, 73, 1280-1285.	1.2	5
72	Rayleigh Scattering of Excimer Laser Light from Some Simple Molecules at 193 nm and 248 nm: The Effect of Polarization upon Imaging Diagnostics. Applied Spectroscopy, 1997, 51, 1012-1016.	1.2	5

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73	Superior mirage effect in supercritical CO ₂ : Experiment and model. Journal of Supercritical Fluids, 2005, 35, 260-264.	1.6	5
74	Molecular beam reaction Na ₃ +SF ₆ . A triple electron-jump mechanism. Journal of Chemical Physics, 1982, 76, 5650-5651.	1.2	4
75	YO ² / _{2,3/2} Vibrational State Distributions Measured after the Excimer Laser Ablation of Y ₂ O ₃ Using a Laser-Initiated Pulsed Discharge as a Probe. Applied Spectroscopy, 1994, 48, 248-251.	1.2	4
76	Graphitization of synthetic diamond by 193 nm laser light: Comparison of ¹² C-enriched diamonds with those of natural isotopic composition. Diamond and Related Materials, 1994, 3, 195-197.	1.8	4
77	Organic nanostructures on silicon, created with semitransparent polystyrene spheres and 248 nm laser pulses. Nanotechnology, 2008, 19, 165301.	1.3	4
78	Comments on "Size dependence of the lattice parameters of carbon supported platinum nanoparticles: X-ray diffraction analysis and theoretical considerations," RSC Adv., 2014, 4, 35959-35965. RSC Advances, 2022, 12, 7584-7586.	1.7	4
79	Ultra-rapid cooling of aluminum: Homogeneous solidification to anisotropic nanocrystals. AIP Advances, 2020, 10, 045319.	0.6	3
80	Measurement of the Li-Hg Total Cross Section at Very Low Energies. Journal of Chemical Physics, 1967, 46, 4549-4550.	1.2	2
81	Crossed beam study of Na*(2P _{3/2})+O ₂ →Na++O ₂ . The dependence of the total cross section upon Na* alignment. Journal of Chemical Physics, 1988, 88, 5981-5982.	1.2	2
82	Determination of Concentrations of Solutes in Gaseous, Liquid, and Supercritical CO ₂ by Means of UV Raman Spectroscopy. Chemical Engineering Communications, 2005, 192, 581-596.	1.5	1
83	One-dimensional imaging of H ₂ densities and of temperatures via rotational Raman scattering of narrow-band, 248 nm, laser light. Journal of Raman Spectroscopy, 1997, 28, 605-612.	1.2	1
84	Trujillo and confluent beams. Physics Today, 1968, 21, 18-18.	0.3	0
85	Resonance enhanced multiphoton ionization (2+1) in NH ₃ using linearly and circularly polarized light. Chemical Physics, 1988, 126, 145-150.	0.9	0
86	Optogalvanic OH (A ⁺ X) spectrum. Journal of Quantitative Spectroscopy and Radiative Transfer, 1988, 39, 339-340.	1.1	0
87	Comment on: Polarized absorption spectroscopy of lambda-doublet molecules: Transition moment vs electron density distribution. Journal of Chemical Physics, 1988, 89, 5965-5966.	1.2	0