

Dieter Gerlich

List of Publications by Year in descending order

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84
papers

5,146
citations

87723

38
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88477

70
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84
all docs

84
docs citations

84
times ranked

2225
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 1 | The He ⁺ H ₃ ⁺ complex. I. Vibration-rotation-tunneling states and transition probabilities. Journal of Chemical Physics, 2022, 156, 144307. | 1.2 | 2 |
| 2 | The He ⁺ H ₃ ⁺ complex. II. Infrared predissociation spectrum and energy term diagram. Journal of Chemical Physics, 2022, 156, 144308. | 1.2 | 3 |
| 3 | Formation of H ₃ ⁺ in Collisions of H ₂ ⁺ with H ₂ Studied in a Guided Ion Beam Instrument. ChemPhysChem, 2020, 21, 1429-1435. | 1.0 | 9 |
| 4 | Electronic spectra of ions of astrochemical interest: from fast overview spectra to high resolution. Faraday Discussions, 2019, 217, 98-113. | 1.6 | 12 |
| 5 | Tagging fullerene ions with helium in a cryogenic quadrupole trap. International Journal of Mass Spectrometry, 2019, 438, 78-86. | 0.7 | 10 |
| 6 | OH ⁺ Formation in the Low-temperature O(⁴ S) + H ₂ Reaction. Astrophysical Journal, 2018, 856, 100. | 1.6 | 10 |
| 7 | Formation of H ₂ O ⁺ and H ₃ O ⁺ Cations in Reactions of OH ⁺ and H ₂ O ⁺ with H ₂ : Experimental Studies of the Reaction Rate Coefficients from T=15 to 300 K. Astrophysical Journal, 2018, 854, 25. | 1.6 | 24 |
| 8 | IR Spectroscopy of Fullerene Ions in a Cryogenic Quadrupole Trap. Astrophysical Journal, 2018, 864, 62. | 1.6 | 20 |
| 9 | Infrared spectroscopy of cold trapped molecular ions using He ⁺ tagging. Journal of the Chinese Chemical Society, 2018, 65, 637-653. | 0.8 | 41 |
| 10 | Near- and Mid-IR Gas-Phase Absorption Spectra of H ₂ @C ₆₀ ⁺ -He. Journal of Physical Chemistry A, 2018, 122, 8162-8166. | 1.1 | 8 |
| 11 | Effect of rotational excitation of H ₂ on isotopic exchange reaction with OD ⁺ at low temperatures. Astronomy and Astrophysics, 2018, 615, L6. | 2.1 | 9 |
| 12 | BerlinTrap: A new cryogenic 22-pole ion trap spectrometer. Journal of Molecular Spectroscopy, 2017, 332, 8-15. | 0.4 | 65 |
| 13 | Collisions of FeO ⁺ with H ₂ and He in a Cryogenic Ion Trap. ChemPhysChem, 2016, 17, 3723-3739. | 1.0 | 17 |
| 14 | GAS PHASE ABSORPTION SPECTROSCOPY OF AND IN A CRYOGENIC ION TRAP: COMPARISON WITH ASTRONOMICAL MEASUREMENTS*. Astrophysical Journal, 2016, 822, 17. | 1.6 | 101 |
| 15 | Helium Tagging Infrared Photodissociation Spectroscopy of Reactive Ions. Accounts of Chemical Research, 2016, 49, 223-230. | 7.6 | 135 |
| 16 | Single Nanoparticle Mass Spectrometry as a High Temperature Kinetics Tool: Sublimation, Oxidation, and Emission Spectra of Hot Carbon Nanoparticles. Journal of Physical Chemistry A, 2015, 119, 12538-12550. | 1.1 | 13 |
| 17 | Controlled synthesis and analysis of He ⁺ H ₃ ⁺ in a 3.7 K ion trap. Molecular Physics, 2015, 113, 2320-2332. | 0.8 | 46 |
| 18 | Electron Transfer and Associative Detachment in Low-Temperature Collisions of D ⁺ with H. Journal of Physical Chemistry Letters, 2015, 6, 4762-4766. | 2.1 | 5 |

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|----|---|------|-----------|
| 19 | Two-Color Infrared Predissociation Spectroscopy of C ₆ H ₆ ⁺ Isomers Using Helium Tagging. <i>Journal of Physical Chemistry A</i> , 2015, 119, 2532-2542. | 1.1 | 48 |
| 20 | Laboratory confirmation of C ₆₀ ⁺ as the carrier of two diffuse interstellar bands. <i>Nature</i> , 2015, 523, 322-323. | 13.7 | 469 |
| 21 | Interaction of O ⁺ and H ₂ at low temperatures. <i>Journal of Chemical Physics</i> , 2015, 142, 014304. | 1.2 | 12 |
| 22 | H/D exchange in reactions of OH ⁺ with D ₂ and of OD ⁺ with H ₂ at low temperatures. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 8732-8739. | 1.3 | 25 |
| 23 | Trapping ions at high temperatures: thermal decay of C ₆₀ ⁺ . <i>Applied Physics B: Lasers and Optics</i> , 2014, 114, 257-266. | 1.1 | 19 |
| 24 | Probing Isomers of the Benzene Dication in a Low-Temperature Trap. <i>Journal of the American Chemical Society</i> , 2014, 136, 2960-2962. | 6.6 | 61 |
| 25 | LOW-TEMPERATURE ION TRAP STUDIES OF N ₃ ⁺ + H ₂ ⁺ → NH ₂ ⁺ + H. <i>Astrophysical Journal</i> , 2013, 768, 86. | 1.6 | 41 |
| 26 | A Novel Method to Measure Electronic Spectra of Cold Molecular Ions. <i>Journal of Physical Chemistry Letters</i> , 2013, 4, 4051-4054. | 2.1 | 78 |
| 27 | Infrared spectroscopy of trapped molecular dications below 4K. <i>International Journal of Mass Spectrometry</i> , 2013, 354-355, 204-210. | 0.7 | 127 |
| 28 | State Specific Stabilization of H ₂ ⁺ + H ₂ Collision Complexes. <i>Journal of Physical Chemistry A</i> , 2013, 117, 10068-10075. | 1.1 | 25 |
| 29 | Stabilization of H ₂ ⁺ + H ₂ collision complexes between 11 and 28K. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2012, 370, 5066-5073. | 1.6 | 23 |
| 30 | Transfer of a proton between H ₂ ⁺ and O ₂ ⁺ . <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2012, 370, 5041-5054. | 1.6 | 13 |
| 31 | ION TRAP STUDIES OF H ₂ ⁺ + H ₂ ⁺ BETWEEN 10 AND 135 K. <i>Astrophysical Journal</i> , 2012, 749, 22. | 1.6 | 39 |
| 32 | Dynamics of the D ₂ ⁺ + H ₂ and H ₂ ⁺ + D ₂ reactions: a detailed comparison between theory and experiment. <i>Physical Chemistry Chemical Physics</i> , 2012, 14, 3346. | 1.3 | 34 |
| 33 | Variable-Temperature Rate Coefficients for the Electron Transfer Reaction N ₂ ⁺ + H ₂ O Measured with a Coaxial Molecular Beam Radio Frequency Ring Electrode Ion Trap. <i>Journal of Physical Chemistry A</i> , 2011, 115, 25-29. | 1.1 | 6 |
| 34 | Ternary association of H ₂ ⁺ ion with H ₂ at 11 ÅK, experimental study. <i>EPJ Applied Physics</i> , 2011, 56, 24010. | 0.3 | 11 |
| 35 | REACTIONS OF COLD TRAPPED CH ₃ ⁺ IONS WITH SLOW H ATOMS. <i>Astrophysical Journal</i> , 2011, 737, 60. | 1.6 | 44 |
| 36 | Nuclear Spin Effect on Recombination of $H^+ + H_2 \rightarrow H_2^+ + H$ Ions with Electrons at 77 ÅK. <i>Physical Review Letters</i> , 2011, 106, 203201. | 2.9 | 28 |

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|----|---|-----|-----------|
| 37 | Reactions between Cold CH^+ and Slow H and H_2^+ . Zeitschrift Fur Physikalische Chemie, 2011, 225, 475-492. | 1.4 | 24 |
| 38 | Reactions of CO_2^+ with H, H_2 and deuterated analogues. International Journal of Mass Spectrometry, 2009, 280, 218-225. | 0.7 | 28 |
| 39 | Buffer gas cooling of polyatomic ions in rf multi-electrode traps. Faraday Discussions, 2009, 142, 57. | 1.6 | 37 |
| 40 | The Study of Cold Collisions Using Ion Guides and Traps. , 2008, , 121-174. | | 33 |
| 41 | The Production and Study of Ultra-Cold Molecular Ions. , 2008, , 295-343. | | 25 |
| 42 | Inhomogeneous RF Fields: A Versatile Tool for the Study of Processes with Slow Ions. Advances in Chemical Physics, 2007, , 1-176. | 0.3 | 397 |
| 43 | Laboratory astrochemistry: studying molecules under inter- and circumstellar conditions. Physica Scripta, 2006, 73, C25-C31. | 1.2 | 50 |
| 44 | Action spectroscopy of and D_2H^+ using overtone excitation. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2006, 364, 2931-2942. | 1.6 | 33 |
| 45 | Effects of molecular rotation in low-energy electron collisions of. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2006, 364, 2981-2997. | 1.6 | 28 |
| 46 | Dynamical constraints and nuclear spin caused restrictions in collision systems. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2006, 364, 3007-3034. | 1.6 | 41 |
| 47 | Apparatus for the study of electronic spectra of collisionally cooled cations: para-dichlorobenzene. Journal of Molecular Structure, 2006, 795, 93-97. | 1.8 | 43 |
| 48 | Some Routes in Forming C_3H_n^+ Ions and Deuterated Variants under Interstellar Conditions. AIP Conference Proceedings, 2006, , . | 0.3 | 1 |
| 49 | Low-Temperature Experiments on the Formation of Deuterated C_3H_3 . Astrophysical Journal, 2005, 621, 1163-1170. | 1.6 | 13 |
| 50 | Reactions of C_n ($n=1-3$) with ions stored in a temperature-variable radio-frequency trap. International Journal of Mass Spectrometry, 2005, 240, 139-147. | 0.7 | 21 |
| 51 | State-to-State Dynamics of High-n Rydberg H-Atom Scattering with D_2 . Physical Review Letters, 2005, 95, 013201. | 2.9 | 28 |
| 52 | Probing the structure of CH_5^+ ions and deuterated variants via collisions. Physical Chemistry Chemical Physics, 2005, 7, 1583. | 1.3 | 22 |
| 53 | Temperature variable ion trap studies of C_3H_n^+ with H_2 and HD . Physical Chemistry Chemical Physics, 2005, 7, 1026. | 1.3 | 34 |
| 54 | High-Resolution Dissociative Recombination of Cold H_3^+ and First Evidence for Nuclear Spin Effects. Physical Review Letters, 2005, 95, 263201. | 2.9 | 106 |

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|----|---|-----|-----------|
| 55 | Action spectroscopy and temperature diagnostics of H ₃ ⁺ by chemical probing. Journal of Chemical Physics, 2004, 121, 11030. | 1.2 | 62 |
| 56 | Deuterium fractionation in gas-phase reactions measured in the laboratory. Planetary and Space Science, 2002, 50, 1287-1297. | 1.6 | 45 |
| 57 | Interaction of electrons and molecules with a single trapped nanoparticle. Applied Physics A: Materials Science and Processing, 2004, 78, 629-636. | 1.1 | 29 |
| 58 | Variable temperature ion trap studies of CH ₄ ⁺ , H ₂ , HD and D ₂ : negative temperature dependence and significant isotope effect. Chemical Physics, 2004, 298, 97-105. | 0.9 | 33 |
| 59 | Applications of rf fields and collision dynamics in atomic mass spectrometry. The opinions expressed in the following article are entirely those of the author and do not necessarily represent the views of the Royal Society of Chemistry, the Editor or the Editorial Board of JAAS. Journal of Analytical Atomic Spectrometry, 2004, 19, 581. | 1.6 | 18 |
| 60 | Investigations of Protonated and Deprotonated Water Clusters Using a Low-Temperature 22-Pole Ion Trap. Journal of Physical Chemistry A, 2003, 107, 4217-4225. | 1.1 | 117 |
| 61 | Laser induced reactions in a 22-pole ion trap: C ₂ H ₂ ⁺ + h ^{1/2} 3 + H ₂ ⁺ → C ₂ H ₃ ⁺ + H. Journal of Chemical Physics, 2002, 117, 2068-2075. | 1.2 | 89 |
| 62 | H ₃ ⁺ + HD ⁺ → H ₂ D ⁺ + H ₂ : low-temperature laboratory measurements and interstellar implications. Planetary and Space Science, 2002, 50, 1275-1285. | 0.9 | 167 |
| 63 | Deuterium fractionation in gas-phase reactions measured in the laboratory. Planetary and Space Science, 2002, 50, 1287-1297. | 0.9 | 78 |
| 64 | Nondestructive high-resolution and absolute mass determination of single charged particles in a three-dimensional quadrupole trap. Journal of Applied Physics, 2001, 90, 5410-5418. | 1.1 | 99 |
| 65 | On the combination of a linear field free trap with a time-of-flight mass spectrometer. Review of Scientific Instruments, 2001, 72, 2900-2908. | 0.6 | 22 |
| 66 | Laser excited N ₂ ⁺ in a 22-pole ion trap. International Journal of Mass Spectrometry, 1999, 185-187, 589-602. | 0.7 | 112 |
| 67 | Single and Merged Beam Studies of the Reaction H ₂ ⁺ (v = 0,1; j = 0,4) + H ₂ ⁺ → H ₃ ⁺ + H. Israel Journal of Chemistry, 1997, 37, 343-352. | 1.0 | 41 |
| 68 | REMPI in a focusing rf-quadrupole: a new source for mass-, energy-, and state-selected ions. International Reviews in Physical Chemistry, 1996, 15, 283-298. | 0.9 | 12 |
| 69 | Ion-neutral collisions in a 22-pole trap at very low energies. Physica Scripta, 1995, T59, 256-263. | 1.2 | 222 |
| 70 | On the dynamics of the reaction of positive hydrogen cluster ions (H ₅ ⁺ to H ₂₃ ⁺) with para and normal hydrogen at 10 K. International Journal of Mass Spectrometry and Ion Processes, 1995, 149-150, 373-387. | 1.9 | 57 |
| 71 | Resonance-enhanced multiphoton ionization of argon: reactivity as a probe for the 2P _{1/2} /2P _{3/2} population. International Journal of Mass Spectrometry and Ion Processes, 1994, 135, 1-17. | 1.9 | 17 |
| 72 | Experimental investigations of ion-molecule reactions relevant to interstellar chemistry. Journal of the Chemical Society, Faraday Transactions, 1993, 89, 2199-2208. | 1.7 | 125 |

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|----|---|------|-----------|
| 73 | Experimental investigation of radiative association processes as related to interstellar chemistry. Chemical Reviews, 1992, 92, 1509-1539. | 23.0 | 254 |
| 74 | Ortho-para transitions in reactive H ⁺ +H ₂ collisions. Journal of Chemical Physics, 1990, 92, 2377-2388. | 1.2 | 109 |
| 75 | Kinematic averaging effects in thermal and low energy ion-molecule collisions: Influence on product ion kinetic energy distributions. Journal of Chemical Physics, 1989, 90, 127-139. | 1.2 | 33 |
| 76 | Reactive scattering of N ⁺ +H ₂ and deuterated analogs: Statistical calculation of cross sections and rate coefficients. Journal of Chemical Physics, 1989, 90, 3574-3581. | 1.2 | 35 |
| 77 | Energy partitioning in Ar ⁺ +O ₂ collisions at low energies: Analysis of product states by laser-induced predissociation. Journal of Chemical Physics, 1989, 90, 1610-1623. | 1.2 | 40 |
| 78 | Association reactions with state selected ions at meV collision energies: CO ⁺ (v=0, j) + 2 CO → (CO) ₂ + CO. Zeitschrift für Physik D-Atoms Molecules and Clusters, 1989, 13, 259-268. | 1.0 | 23 |
| 79 | Ion trap studies of association processes in collisions of CH ₃ ⁺ and CD ₃ ⁺ with n-H ₂ , p-H ₂ , D ₂ , and He at 80 K. Astrophysical Journal, 1989, 347, 849. | 1.6 | 62 |
| 80 | C ⁺ +H ₂ (v=0, j) → CH ⁺ +H: The effect of reagent rotation on the integral cross section in the threshold region. Journal of Chemical Physics, 1987, 87, 350-359. | 1.2 | 59 |
| 81 | Spin-forbidden radiative decay of the ⁴ Σ ⁺ state of O ₂ . Journal of Chemical Physics, 1987, 86, 508-515. | 1.2 | 31 |
| 82 | The effect of vibration and translational energy on the reaction dynamics of the H ₂ +H ₂ system. Journal of Chemical Physics, 1981, 75, 2153-2162. | 1.2 | 76 |
| 83 | Complex formation in proton-D ₂ collisions. Chemical Physics, 1980, 47, 245-255. | 0.9 | 72 |
| 84 | Integral cross sections for ion-molecule reactions. I. The guided beam technique. Chemical Physics, 1974, 4, 417-427. | 0.9 | 410 |