

Magnus Gustafsson

List of Publications by Year in descending order

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63
papers

1,512
citations

394421

19
h-index

315739

38
g-index

65
all docs

65
docs citations

65
times ranked

1386
citing authors

#	ARTICLE	IF	CITATIONS
1	Formation of the BeH ⁺ and BeD ⁺ Molecules in Be ⁺ + H/D Collisions Through Radiative Association. <i>Frontiers in Astronomy and Space Sciences</i> , 2021, 8, .	2.8	4
2	Direct method for MD simulations of collision-induced absorption: Application to an Ar ⁺ Xe gas mixture. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2021, 276, 107926.	2.3	2
3	Formation of NaCl through radiative association: Computations accounting for non-adiabatic dynamics. <i>Journal of Chemical Physics</i> , 2020, 153, 114305.	3.0	8
4	Molecular dynamics calculations of collision-induced absorption in a gas mixture of neon and krypton. <i>Journal of Chemical Physics</i> , 2020, 152, 234302.	3.0	5
5	Formation of CO ⁺ by radiative association II. <i>Monthly Notices of the Royal Astronomical Society</i> , 2020, 492, 3794-3802.	4.4	9
6	A computational study of hydrogen dimers in giant-planet infrared spectra. <i>Journal of Physics: Conference Series</i> , 2019, 1289, 012010.	0.4	0
7	Contribution from dimers to the collision-induced absorption spectra in an Ar ⁺ Kr gas mixture. <i>Journal of Physics: Conference Series</i> , 2019, 1289, 012021.	0.4	1
8	Collision-induced absorption in Ar ⁺ Kr gas mixtures: A molecular dynamics study with new potential and dipole data. <i>Journal of Chemical Physics</i> , 2019, 151, 144303.	3.0	4
9	Formation of CO ⁺ by radiative association. <i>Monthly Notices of the Royal Astronomical Society</i> , 2019, 489, 2954-2960.	4.4	8
10	Semiclassical methods for calculating radiative association rate constants for different thermodynamic conditions: Application to formation of CO, CN, and SiN. <i>Journal of Chemical Physics</i> , 2019, 150, 224301.	3.0	11
11	Update of the HITRAN collision-induced absorption section. <i>Icarus</i> , 2019, 328, 160-175.	2.5	105
12	Multi-property isotropic intermolecular potentials and predicted spectral lineshapes of collision-induced absorption (CIA), collision-induced light scattering (CILS) and collision-induced hyper-Rayleigh scattering (CIHR) for H ₂ Ne, ⁸⁴ Ar and ¹³⁶ Xe. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2018, 209, 232-242.	2.3	5
13	Recent advances in collisional effects on spectra of molecular gases and their practical consequences. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2018, 213, 178-227.	2.3	85
14	Formation of the NH molecule and its isotopologues through radiative association. <i>Monthly Notices of the Royal Astronomical Society</i> , 2018, , .	4.4	7
15	Hydrogen Dimers in Giant-planet Infrared Spectra. <i>Astrophysical Journal, Supplement Series</i> , 2018, 235, 24.	7.7	77
16	A surface-hopping method for semiclassical calculations of cross sections for radiative association with electronic transitions. <i>Journal of Chemical Physics</i> , 2017, 147, 094308.	3.0	9
17	The rate constant for formation of HCl through radiative association. <i>Monthly Notices of the Royal Astronomical Society</i> , 2017, 470, 3068-3070.	4.4	6
18	Hydrogen dimer features in low temperature collision-induced spectra. <i>Journal of Physics: Conference Series</i> , 2017, 810, 012017.	0.4	1

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19	Molecular dynamics simulations of collision-induced absorption: Implementation in LAMMPS. Journal of Physics: Conference Series, 2017, 810, 012031.	0.4	4
20	Reaction rate constant for radiative association of CF ⁺ . Journal of Chemical Physics, 2016, 144, 044302.	3.0	7
21	Effects of anisotropic interaction-induced properties of hydrogen-rare gas compounds on rototranslational Raman scattering spectra: Comprehensive theoretical and numerical analysis. Journal of Chemical Physics, 2016, 145, 034303.	3.0	11
22	Formation of the Hydroxyl Radical by Radiative Association. Journal of Physical Chemistry A, 2015, 119, 12263-12269.	2.5	5
23	Radiative association rate constant for the formation of CO: the importance of the first excited 1 ¹ Σ ⁺ state. Monthly Notices of the Royal Astronomical Society, 2015, 448, 2562-2565.	4.4	14
24	Computational methods to study the formation of small molecules by radiative association. International Reviews in Physical Chemistry, 2015, 34, 385-428.	2.3	29
25	Intermolecular polarizabilities in H ₂ -rare-gas mixtures (H ₂ -He, Ne, Ar, Kr, Xe): Insight from collisional isotropic spectral properties. Journal of Chemical Physics, 2014, 141, 074315.	3.0	10
26	The rate constant for radiative association of HF: Comparing quantum and classical dynamics. Journal of Chemical Physics, 2014, 140, 184301.	3.0	16
27	The emission spectrum due to molecule formation through radiative association. Journal of Physics: Conference Series, 2014, 548, 012003.	0.4	1
28	Calculated isotropic Raman spectra from interacting H ₂ -rare-gas pairs. Journal of Physics: Conference Series, 2014, 548, 012027.	0.4	2
29	Formation of the SiP Radical through Radiative Association. Journal of Physical Chemistry A, 2013, 117, 8184-8188.	2.5	9
30	Classical calculations of radiative association in absence of electronic transitions. Journal of Chemical Physics, 2013, 138, 074308.	3.0	22
31	Isotope effect in the formation of carbon monoxide by radiative association. Monthly Notices of the Royal Astronomical Society, 2013, 430, 946-950.	4.4	11
32	Refined theoretical study of radiative association: Cross sections and rate constants for the formation of SiN. Journal of Chemical Physics, 2012, 137, 104301.	3.0	29
33	Collision-induced dipoles and polarizabilities of pairs of hydrogen molecules: Ab initio calculations and results from spherical tensor analysis. , 2012, , .		2
34	New section of the HITRAN database: Collision-induced absorption (CIA). Journal of Quantitative Spectroscopy and Radiative Transfer, 2012, 113, 1276-1285.	2.3	268
35	Formation of carbon monoxide by radiative association: a quantum dynamical study. Monthly Notices of the Royal Astronomical Society, 2011, 414, 3547-3550.	4.4	23
36	Spin-orbit and rotational couplings in radiative association of C(3 <i>P</i>) and N(4 <i>S</i>) atoms. Journal of Chemical Physics, 2011, 135, 184302.	3.0	19

#	ARTICLE	IF	CITATIONS
37	Collision-Induced Absorption by Supermolecular Complexes from a New Potential Energy and Induced Dipole Surface, Suited for Calculations up to Thousands of Kelvin. , 2010, , .		0
38	Calculation of interaction-induced spectra using complex absorbing potentials. , 2010, , .		0
39	Career Achievements of Professor Lothar Frommhold. , 2010, , .		0
40	The anisotropic polarizability of pairs of hydrogen molecules and the depolarized collision-induced roto-translational Raman light scattering spectra. Journal of Computational Methods in Sciences and Engineering, 2010, 10, 367-399.	0.2	4
41	Far Wing Asymmetry of Rotational Raman Lines in Hydrogen. International Journal of Spectroscopy, 2010, 2010, 1-5.	1.6	1
42	Infrared atmospheric emission and absorption by simple molecular complexes, from first principles. Molecular Physics, 2010, 108, 2265-2272.	1.7	21
43	Rate coefficient of CN formation through radiative association: A theoretical study of quantum effects. Journal of Chemical Physics, 2009, 131, 074302.	3.0	32
44	Collision-induced absorption at wavelengths near 5 μ m by dense hydrogen gas. Journal of Chemical Physics, 2009, 131, 181102.	3.0	6
45	Roto-translational Raman spectra of pairs of hydrogen molecules from first principles. Journal of Chemical Physics, 2009, 130, 164314.	3.0	23
46	Diatom-diatom interactions with light: Applications and line shape theoretical aspects. , 2008, , .		0
47	Probing stereodynamics in reactive collisions using helicity filtering. Chemical Physics Letters, 2007, 434, 20-24.	2.6	8
48	Revised ab initio models for H ₂ ⁺ -H ₂ collision-induced absorption at low temperatures. Icarus, 2007, 189, 544-549.	2.5	41
49	State to State to State Dynamics of the D+H ₂ ⁺ HD+H Reaction: Control of Transition-State Pathways via Reagent Orientation. Physical Review Letters, 2006, 96, 093201.	7.8	35
50	Observing the stereodynamics of chemical reactions using randomly oriented molecular beams. Journal of Chemical Physics, 2006, 124, 241105.	3.0	11
51	Observation of Feshbach Resonances in the F + H ₂ -> HF + H Reaction. Science, 2006, 311, 1440-1443.	12.6	278
52	Infrared absorption by H ₂ ⁺ collisional complexes and the anisotropy of the intermolecular interaction potential. Physical Review A, 2006, 74, .	2.5	7
53	The state-to-state-to-state model for direct chemical reactions: Application to D+H ₂ ⁺ HD+H. Journal of Chemical Physics, 2006, 124, 144311.	3.0	28
54	An improved potential energy surface for the F+H ₂ reaction. Chemical Physics, 2005, 308, 259-266.	1.9	40

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55	Far-infrared absorption by collisionally interacting nitrogen and methane molecules. Journal of Chemical Physics, 2004, 121, 2617.	3.0	13
56	Collision-induced absorption in the rototranslational band of dense hydrogen gas. Journal of Chemical Physics, 2003, 119, 12264-12270.	3.0	25
57	The H ₂ -H complex: Interaction-induced dipole surface and infrared absorption spectra. Journal of Chemical Physics, 2003, 118, 1667-1672.	3.0	11
58	Effects of the Anisotropy of the Intermolecular Potential on the Collision-induced Spectra of H ₂ -H, H ₂ -He, H ₂ -H ₂ , and HD-He. AIP Conference Proceedings, 2002, , .	0.4	0
59	The HD-He complex: Interaction-induced dipole surface and infrared absorption spectra. Journal of Chemical Physics, 2001, 115, 5427-5432.	3.0	13
60	Infrared absorption spectra of H ₂ -He collisional complexes: The effect of the anisotropy of the interaction potential. AIP Conference Proceedings, 2001, , .	0.4	0
61	Infrared Absorption Spectra of Collisionally Interacting He and H Atoms. Astrophysical Journal, 2001, 546, 1168-1170.	4.5	26
62	Intracollisional interference of R-lines of HD in mixtures of deuterium hydride and helium gas. Physical Review A, 2001, 63, .	2.5	14
63	Infrared absorption spectra by H ₂ -He collisional complexes: The effect of the anisotropy of the interaction potential. Journal of Chemical Physics, 2000, 113, 3641-3650.	3.0	45