Å tÄ›pÃ¡n RouÄka

List of Publications by Year
in descending order

46 papers	1,267 citations	759233 12 h-index	794594 19 g-index
48 all docs	48 docs citations	48 times ranked	1667 citing authors

#	Article	IF	Citations
1	SymPy: symbolic computing in Python. PeerJ Computer Science, 0, 3, e103.	4.5	830
2	PHOTODETACHMENT AS A DESTRUCTION MECHANISM FOR CN^{â€“}AND C₃N^{â€“}ANIONS IN CIRCUMSTELLAR ENVELOPES. Astrophysical Journal, 2013, 776, 25.	4.5	53
3	ION TRAP STUDIES OF H^{â€“}+ H â† H₂+e^{â€“}BETWEEN 10 AND 135 K. Astrophysical Journal, 2012, 749, 22.	4.5	39
4	Binary and ternary recombination of para-${m H}_3^+$H3+ and ortho-${m H}_3^+$H3+ with electrons: State selective study at 77â€“200 K. Journal of Chemical Physics, 2012, 136, 244304.	3.0	26
5	H/D exchange in reactions of OH^{â¯} with D₂ and of OD^{â¯} with H₂ at low temperatures. Physical Chemistry Chemical Physics, 2015, 17, 8732-8739.	2.8	25
6	Binary and ternary recombination of and ions with electrons in low temperature plasma. Molecular Physics, 2010, 108, 2253-2264.	1.7	24
7	[illegible]Ar<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msup><mml:mrow /><mml:mrow><mml:mo>+</mml:mo></mml:mrow></mml:msup></mml:mrow></mml:math><mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mo>+</mml:mo></mml:mrow></mml:math><mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"	2.5	24
8	Formation of H₂O⁺ and H₃O⁺ Cations in Reactions of OH⁺ and H₂O⁺ with H₂: Experimental Studies of the Reaction Rate Coefficients from TÂ=Â15 to 300 K. Astrophysical Journal, 2018, 854, 25.	4.5	24
9	[illegible]<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mmultiscripts><mml:mtext>D</mml:mtext><mml:mn>3</mml:mn><mml:none /><mml:none /><mml:mo>+</mml:mo></mml:mmultiscripts></mml:mrow></mml:math>ions with electrons in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>He-D</mml:mtext></mml:mrow><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml:math>. Physical Review A, 2009, 80, .	2.5	19
10	Reaction of NH⁺, NH₂⁺, and NH₃⁺ ions with H₂ at low temperatures. Astronomy and Astrophysics, 2019, 625, A74.	5.1	16
11	Temperature dependence of binary and ternary recombination of D3+ ions with electrons. Journal of Chemical Physics, 2010, 133, 034305.	3.0	15
12	Determining the energy distribution of electrons produced in associative detachment: The electron spectrometer with multipole trap. International Journal of Mass Spectrometry, 2013, 352, 19-28.	1.5	13
13	Binary recombination of para- and ortho-H 3 + with electrons at low temperatures. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2012, 370, 5101-5108.	3.4	12
14	Interaction of Oâ¯ and H2 at low temperatures. Journal of Chemical Physics, 2015, 142, 014304.	3.0	12
15	Ternary association of H⁺ion with H₂at 11ÂK, experimental study. EPJ Applied Physics, 2011, 56, 24010.	0.7	11
16	Recombination of H+3 ions with electrons in He/H₂ambient gas at temperatures from 240 K to 340 K. Plasma Sources Science and Technology, 2015, 24, 065017.	3.1	10
17	OH⁺ Formation in the Low-temperature O⁺(⁴S) + H₂ Reaction. Astrophysical Journal, 2018, 856, 100.	4.5	10
18	Effect of rotational excitation of H₂ on isotopic exchange reaction with OD^{â¯} at low temperatures. Astronomy and Astrophysics, 2018, 615, L6.	5.1	9

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19	Cryo-FALP study of collisional-radiative recombination of Ar⁺ions at 40â€“200ÂK. EPJ Applied Physics, 2011, 56, 24011.	0.7	8
20	Complex formation and internal proton-transfer of hydroxyl-hydrogen anion complexes at low temperature. New Journal of Physics, 2015, 17, 075013.	2.9	8
21	Stationary afterglow apparatus with CRDS for study of processes in plasmas from 300 K down to 30 K. Review of Scientific Instruments, 2018, 89, 063116.	1.3	8
22	Binary and ternary recombination of ${m D}_3^+$D3+ ions at 80â€“130 K: Application of laser absorption spectroscopy. Journal of Chemical Physics, 2012, 137, 194320.	3.0	7
23	Experimental Study on CH⁺ Formation from Doubly Charged Carbon and Molecular Hydrogen. Astrophysical Journal, 2021, 910, 155.	4.5	7
24	Isotopic effects in the interaction of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msup><mml:mrow><mml:mi mathvariant="normal">O</mml:mi></mml:mrow><mml:mo>â^’</mml:mo></mml:msup></mml:math> with <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi mathvariant="normal">D</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:math> and <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi	2.5	6
25	Application of NIRâ€“CRDS for state selective study of recombination of para and ortho H₃⁺ions with electrons in low temperature plasma. Journal of Physics: Conference Series, 2010, 227, 012026.	0.4	5
26	Extending PIC Models to Higher Pressuresâ€”Enhanced Model of Collisions. IEEE Transactions on Plasma Science, 2011, 39, 3244-3250.	1.3	5
27	Electron Transfer and Associative Detachment in Low-Temperature Collisions of D^{â€“} with H. Journal of Physical Chemistry Letters, 2015, 6, 4762-4766.	4.6	5
28	Binary and ternary recombination of H₂D⁺ and HD₂⁺ ions with electrons at 80 K. Physical Chemistry Chemical Physics, 2016, 18, 23549-23553.	2.8	5
29	Stationary afterglow measurements of the temperature dependence of the electronâ€“ion recombination rate coefficients of ${{m{H}}}_{2}{{m{D}}}^{+}$ and ${mathrm{HD}}_{2}^{+}$ in He/Ar/H₂/D₂gas mixtures atT= 80â€“145 K. Plasma Sources Science and Technology, 2017, 26, 035006.	3.1	5
30	Towards state selective recombination of H₃⁺ under astrophysically relevant conditions. Faraday Discussions, 2019, 217, 220-234.	3.2	5
31	Study of plasmaâ€“solid interaction in electronegative gas mixtures at higher pressures. Vacuum, 2009, 84, 94-96.	3.5	4
32	Dissociative recombination of N2H+ ions with electrons in the temperature range of 80â€“350 K. Journal of Chemical Physics, 2020, 152, 024301.	3.0	4
33	Monitoring the removal of excited particles in He/Ar/H₂low temperature afterglow plasma at 80â€“300 K. EPJ Applied Physics, 2016, 75, 24707.	0.7	3
34	Electron-ion recombination in low temperature hydrogen/deuterium plasma. EPJ Applied Physics, 2017, 80, 30801.	0.7	2
35	Cavity ring-down spectroscopy study of neon assisted recombination of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si21.svg"><mml:mrow><mml:msubsup><mml:mrow><mml:mi mathvariant="normal">H</mml:mi></mml:mrow><mml:mrow><mml:mn>3</mml:mn></mml:mrow><mml:mrow><mml:mo>+</mml: ions with electrons. Journal of Molecular Spectroscopy, 2021, 378, 111450.	1.2	2
36	3D particle simulations of plasma-solid interaction: magnetized plasma and a cylindrical cavity. Journal of Physics: Conference Series, 2008, 100, 062010.	0.4	1

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37	Overtone spectroscopy of N₂H⁺ molecular ionsâ€"application of cavity ring-down spectroscopy. Journal of Instrumentation, 2017, 12, C10010-C10010.	1.2	1
38	The reaction of O+(4S) ions with H2, HD, and D2 at low temperatures: Experimental study of the isotope effect. Journal of Chemical Physics, 2021, 154, 094301.	3.0	1
39	Reaction of carbon dication <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msup><mml:mrow><mml:mi mathvariant="normal">C</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn><mml:mo>+</mml:mo></mml:mrow></mml:msup></mml:math> with <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi mathvariant="normal">O</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:math> , <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi mathvariant="normal">N</mml:mi>	2.5	1
40	Recombination in low temperature Ar+dominated plasmas. Journal of Physics: Conference Series, 2011, 300, 012021.	0.4	0
41	Interactions of H^{â^'}Anions with Atomic Hydrogenâ€"Ion Trap study at 10â€"100 K. Journal of Physics: Conference Series, 2012, 388, 082057.	0.4	0
42	Ion trap study of the charge transfer and associative detachment reactions of D^{â^'}+ H. Journal of Physics: Conference Series, 2015, 635, 022092.	0.4	0
43	Reaction of NH⁺with atomic hydrogen at low temperatures - an experimental study. Journal of Physics: Conference Series, 2015, 635, 022024.	0.4	0
44	Reactions of Oâ^'with D2at temperatures below 300 K. Journal of Physics: Conference Series, 2017, 875, 012015.	0.4	0
45	Reactions of Oâ^' with D2 at low temperatures 10 â^' 300 K. Journal of Physics: Conference Series, 2017, 875, 102020.	0.4	0
46	Reaction of dication C⁺⁺ with molecular hydrogen at temperature 20 K. Journal of Physics: Conference Series, 2020, 1412, 122007.	0.4	0