

Bobby Antony

List of Publications by Year in descending order

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Version: 2024-02-01

130
papers

1,802
citations

279798

23
h-index

361022

35
g-index

131
all docs

131
docs citations

131
times ranked

1001
citing authors

#	ARTICLE	IF	CITATIONS
1	The virtual atomic and molecular data centre (VAMDC) consortium. Journal of Physics B: Atomic, Molecular and Optical Physics, 2016, 49, 074003.	1.5	120
2	Calculated total cross sections of electron-impact ionization and excitations in tetrahedral(XY ₄)andSF ₆ molecules. Physical Review A, 2004, 69, .	2.5	107
3	Electron impact total and ionization cross-sections for some hydrocarbon molecules and radicals. European Physical Journal D, 2006, 37, 67-74.	1.3	58
4	Electron scattering and ionization of ozone, O ₂ and O ₄ molecules. Journal of Physics B: Atomic, Molecular and Optical Physics, 2002, 35, 4211-4221.	1.5	55
5	A Decade with VAMDC: Results and Ambitions. Atoms, 2020, 8, 76.	1.6	53
6	Temperature dependent dielectric studies of Ni/n-GaP Schottky diodes by capacitance and conductance measurements. Materials Science in Semiconductor Processing, 2016, 42, 378-382.	4.0	48
7	Calculations of elastic, ionization and total cross sections for inert gases upon electron impact: threshold to 2 keV. Journal of Physics B: Atomic, Molecular and Optical Physics, 2007, 40, 3259-3271.	1.5	44
8	Theoretical total ionization cross-sections of CH _x , CF _x , SiH _x , SiF _x (x=1-4) and CCl ₄ targets by electron impact. European Physical Journal D, 2003, 23, 81-90.	1.3	42
9	Total and ionization cross sections of electron scattering by fluorocarbons. Journal of Physics B: Atomic, Molecular and Optical Physics, 2005, 38, 189-205.	1.5	41
10	Electron impact ionization of cycloalkanes, aldehydes, and ketones. Journal of Chemical Physics, 2014, 141, 054303.	3.0	41
11	Electron impact total ionization cross sections for halogens and their hydrides. International Journal of Mass Spectrometry, 2010, 292, 7-13.	1.5	37
12	Calculation of total and ionization cross sections for electron scattering by primary benzene compounds. Journal of Chemical Physics, 2016, 145, 034309.	3.0	35
13	Self-broadening of water vapor transitions via the complex Robertâ€“Bonamy theory. Journal of Quantitative Spectroscopy and Radiative Transfer, 2007, 105, 148-163.	2.3	33
14	Electron-impact rotationally elastic total cross sections for H ₂ CO and HCOOH over a wide range of incident energy (0.01â€“2000 eV). Physical Review A, 2011, 84, .	2.5	32
15	Electron impact total ionization cross sections for atoms with $Z = 49$ â€“54. Journal of Physics B: Atomic, Molecular and Optical Physics, 2011, 44, 105204.	1.5	32
16	Electron impact ionization cross-section of C ₂ , C ₃ , Si ₂ , Si ₃ , SiC, SiC ₂ and Si ₂ C. Molecular Physics, 2013, 111, 269-275.	1.7	32
17	Total (including ionization) cross sections of electron impact on ground state and metastable Ne atoms. Physics Letters, Section A: General, Atomic and Solid State Physics, 2001, 289, 323-328.	2.1	28
18	N ₂ , O ₂ - and air-broadened half-widths and line shifts for transitions in the $\hat{1}\frac{1}{2}3$ band of methane in the 2726- to 3200-cm ⁻¹ spectral region. Journal of Molecular Spectroscopy, 2008, 251, 268-281.	1.2	28

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19	Electron impact total cross section for acetylene over an extensive range of impact energies (1) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Computation of electron-impact total and differential cross sections for allene (C_3H_4) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 722	3.0	27
20		2.5	27
21	2013, 87, . Electron impact ionization cross sections for chlorinated and brominated methane and $C_nH_{2n+1}Cl$ (where $n=2, 3, 4$) molecules. International Journal of Mass Spectrometry, 2014, 360, 39-44.	1.5	27
22	Enhancement in electrical properties of Au/n-GaAs Schottky diodes exposed to ^{60}Co gamma rays. Materials Science in Semiconductor Processing, 2014, 21, 116-121.	4.0	24
23	Theoretical Formalism To Estimate the Positron Scattering Cross Section. Journal of Physical Chemistry A, 2016, 120, 5685-5692.	2.5	24
24	Electron impact ionization studies with aeronomic molecules. International Journal of Mass Spectrometry, 2004, 233, 207-214.	1.5	23
25	Calculation of electron impact total ionization cross sections for tungsten, uranium and their oxide radicals. International Journal of Mass Spectrometry, 2014, 372, 8-12.	1.5	22
26	Electron induced chemistry of disilane. RSC Advances, 2014, 4, 9197-9204.	3.6	21
27	Screening-corrected electron impact total and ionization cross sections for boron trifluoride (BF_3) and boron trichloride (BCl_3). Journal of Physics B: Atomic, Molecular and Optical Physics, 2008, 41, 245202.	1.5	20
28	Electron impact total ionisation cross sections for simple bio-molecules: a theoretical approach. Molecular Physics, 2014, 112, 1201-1209.	1.7	20
29	Positron total scattering cross-sections for alkali atoms. Journal of Physics B: Atomic, Molecular and Optical Physics, 2018, 51, 015204.	1.5	20
30	Study of inelastic channels by positron impact on simple molecules. Journal of Applied Physics, 2017, 121, .	2.5	19
31	Positron scattering from simple molecules. Journal of Physics B: Atomic, Molecular and Optical Physics, 2017, 50, 135202.	1.5	18
32	Total ionization cross section of cyclic organic molecules. Journal of Chemical Physics, 2019, 150, 064313.	3.0	18
33	Electron impact ionization of H ₂ O molecule in crystalline ice. Nuclear Instruments & Methods in Physics Research B, 2003, 212, 63-66.	1.4	17
34	Modified complex Robertâ€™Bonamy formalism calculations for strong to weak interacting systems. Molecular Physics, 2006, 104, 2791-2799.	1.7	15
35	Total cross section for chlorofluoromethanes and CCl_x radicals by electron impact. Journal of Electron Spectroscopy and Related Phenomena, 2013, 186, 25-29.	1.7	15
36	Cross sections for electron collisions with NF_3 $\langle \sigma \rangle = \frac{1}{2} \left(\frac{1}{Z} \sum_i \sigma_i + \sum_j \sigma_j \right)$. Physical Review A, 2013, 88, .	2.5	15

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37	Electron impact scattering by SF ₆ molecule over an extensive energy range. RSC Advances, 2014, 4, 30953-30962.	3.6	15
38	Electron-scattering studies of carbonyl fluoride. Physical Review A, 2015, 92, .	2.5	15
39	Electron impact total and ionization cross sections for Sr, Y, Ru, Pd, and Ag atoms. Canadian Journal of Physics, 2013, 91, 744-750.	1.1	14
40	Electron induced ionisation of C ₃ to C ₆ ethanoates. RSC Advances, 2015, 5, 20090-20097.	3.6	14
41	Electron induced inelastic and ionization cross section for plasma modeling. Physics of Plasmas, 2016, 23, .	1.9	14
42	Mean Free Paths and Cross Sections for Electron Scattering from Liquid Water. Journal of Physical Chemistry B, 2021, 125, 5479-5488.	2.6	14
43	Phase transition induced double-Gaussian barrier height distribution in Schottky diode. Physica B: Condensed Matter, 2013, 431, 6-10.	2.7	13
44	Electron impact ionization cross sections of atoms. Canadian Journal of Physics, 2015, 93, 617-625.	1.1	13
45	Interface and transport properties of gamma irradiated Au/n-GaP Schottky diode. Materials Science in Semiconductor Processing, 2018, 74, 1-6.	4.0	13
46	Self-broadened half-widths and self-induced line shifts for water vapor transitions in the 3.2-17.76 μ m spectral region via complex Robert-Bonamy theory. Journal of Molecular Spectroscopy, 2007, 243, 113-123.	1.2	12
47	Electron scattering studies of DMS, DMDS and DMSO homologous series. Molecular Physics, 2015, 113, 3883-3890.	1.7	12
48	Positron induced scattering cross sections for hydrocarbons relevant to plasma. Physics of Plasmas, 2018, 25, .	1.9	12
49	R-matrix calculation of low-energy electron collisions with LiH. Journal of Physics B: Atomic, Molecular and Optical Physics, 2004, 37, 1689-1697.	1.5	11
50	Electron-impact scattering by arsine. Physical Review A, 2014, 90, .	2.5	11
51	Electron scattering from C ₂ -C ₈ symmetric ether molecules. International Journal of Mass Spectrometry, 2016, 409, 1-8.	1.5	11
52	Frequency dependent negative capacitance effect and dielectric properties of swift heavy ion irradiated Ni/oxide/n-GaAs Schottky diode. Physica B: Condensed Matter, 2016, 489, 23-27.	2.7	11
53	Positron Scattering from Methyl Halides. Journal of Physical Chemistry A, 2018, 122, 2513-2522.	2.5	11
54	Ionization cross sections for plasma relevant molecules. Journal of Physics B: Atomic, Molecular and Optical Physics, 2020, 53, 145101.	1.5	11

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55	Calculations of electron collision and ionisation of rare gas dimers. <i>Molecular Physics</i> , 2013, 111, 3047-3053.	1.7	10
56	Electron scattering from germanium tetrafluoride. <i>RSC Advances</i> , 2014, 4, 63817-63823.	3.6	10
57	Electron impact ionization cross sections for chloroethanes. <i>International Journal of Mass Spectrometry</i> , 2014, 373, 34-38.	1.5	10
58	Swift heavy ion induced capacitance and dielectric properties of Ni/n-GaAs Schottky diode. <i>Current Applied Physics</i> , 2015, 15, 1500-1505.	2.4	10
59	Interface state density and dielectric properties of Au/n-GaP Schottky diode. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2016, 34, .	1.2	10
60	Positronium formation and ionization of atoms and diatomic molecules by positron impact. <i>Europhysics Letters</i> , 2017, 119, 50006.	2.0	10
61	Positron Scattering from Pyridine and Pyrimidine. <i>Journal of Physical Chemistry A</i> , 2020, 124, 5147-5156.	2.5	10
62	Total and elastic cross sections for methyl halides by electron impact. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 2013, 189, 17-22.	1.7	8
63	Total cross sections for electron scattering with halocarbon molecules. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 2014, 193, 48-53.	1.7	8
64	Cross-section studies of cyanoacetylene by electron impact. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2016, 49, 225202.	1.5	8
65	Electron-silane scattering cross section for plasma assisted processes. <i>Physics of Plasmas</i> , 2017, 24, 033501.	1.9	8
66	Electron and positron interaction with pyrimidine: A theoretical investigation. <i>Journal of Applied Physics</i> , 2018, 123, .	2.5	8
67	Electron impact total ionization cross section for C4 and C5 isomeric alcohols. <i>International Journal of Mass Spectrometry</i> , 2018, 431, 37-42.	1.5	8
68	Total cross sections for O2 and S2 by electron impact. <i>Radiation Physics and Chemistry</i> , 2014, 97, 6-11.	2.8	7
69	Electron impact scattering and calculated ionization cross sections for SF _x (x = 1-5) radicals. <i>International Journal of Mass Spectrometry</i> , 2017, 417, 8-15.	1.5	7
70	Cross sections for electron collision with difluoroacetylene. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2017, 50, 085202.	1.5	7
71	Study of elastic and inelastic cross sections by positron impact on inert gases. <i>European Physical Journal D</i> , 2018, 72, 1.	1.3	7
72	Photoionization of CO Using R-matrix Theory. <i>Astrophysical Journal</i> , 2019, 887, 262.	4.5	7

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73	Electron Scattering Cross Sections for Anthracene and Pyrene. <i>Journal of Physical Chemistry A</i> , 2020, 124, 7088-7100.	2.5	7
74	DC Breakdown Characteristics of Câ„Fâ„N/COâ„ Mixtures With Particle-in-Cell Simulation. <i>IEEE Transactions on Dielectrics and Electrical Insulation</i> , 2022, 29, 1005-1010.	2.9	7
75	Electron scattering studies of nitrogen dioxide. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 2013, 191, 71-78.	1.7	6
76	Electron induced ionization cross sections for astrophysical modelling. <i>International Journal of Mass Spectrometry</i> , 2015, 386, 24-31.	1.5	6
77	Elastic and total cross sections for simple biomolecules in the intermediate energy range. <i>AIP Advances</i> , 2015, 5, .	1.3	6
78	Electron impact ionisation cross section for organoplatinum compounds. <i>Molecular Physics</i> , 2016, 114, 3104-3111.	1.7	6
79	The role of electronic energy loss in SHI irradiated Ni/oxide/n-GaP Schottky diode. <i>Microelectronics Reliability</i> , 2017, 69, 40-46.	1.7	6
80	Electron and positron scattering cross sections for propene. <i>Journal of Applied Physics</i> , 2018, 124, 034901.	2.5	6
81	Positron Scattering: Total Elastic and Grand Total Cross Sections for Molecules of Astrophysical Importance. <i>ChemistrySelect</i> , 2019, 4, 4575-4581.	1.5	6
82	Positron Scattering from Atoms and Molecules. <i>Atoms</i> , 2020, 8, 29.	1.6	6
83	Total ionisation cross sections for chlorofluoromethanes and CCl _x radicals by electron impact. <i>Molecular Physics</i> , 2014, 112, 1816-1823.	1.7	5
84	Electron impact ionisation cross sections derived from total inelastic cross section for CF ₃ X and CF ₂ X ₂ (X = H, Cl, Br and I) molecules. <i>Molecular Physics</i> , 2016, 114, 1778-1786.	1.7	5
85	Barrier modification of Au/n-GaAs Schottky structure by organic interlayer. <i>Indian Journal of Physics</i> , 2016, 90, 307-312.	1.8	5
86	Study of BenW (nâ€‰=â€‰1â€‰-12) clusters: An electron collision perspective. <i>Physics of Plasmas</i> , 2017, 24, 083514.	1.9	5
87	Effect of Au ⁸⁺ irradiation on Ni/n-GaP Schottky diode: Its influence on interface state density and relaxation time. <i>Physica B: Condensed Matter</i> , 2017, 504, 133-138.	2.7	5
88	Positron scattering calculations of elastic, total and momentum transfer cross section for alkaline earth atoms. <i>International Journal of Mass Spectrometry</i> , 2018, 428, 22-28.	1.5	5
89	Plasma-relevant electron scattering cross sections of propene. <i>Plasma Sources Science and Technology</i> , 2018, 27, 105014.	3.1	5
90	Electron scattering from molecules relevant to Titan's atmosphere. <i>International Journal of Mass Spectrometry</i> , 2021, 470, 116708.	1.5	5

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91	Calculations of total ionization cross sections for halogen compounds on electron impact from threshold to 2 keV. Indian Journal of Physics, 2011, 85, 1761-1766.	1.8	4
92	Reverse leakage mechanisms of liquid metal contacts onto II-VI group semiconductor (Ga/p-WSe ₂). EPJ Applied Physics, 2013, 62, 20104.	0.7	4
93	On the electron impact ionization of silicon and metal containing organic molecules. International Journal of Mass Spectrometry, 2014, 361, 28-33.	1.5	4
94	Elastic and total scattering cross section for halogen substituted fluoromethane molecules. Journal of Electron Spectroscopy and Related Phenomena, 2016, 210, 30-35.	1.7	4
95	Transport properties of Gallium Phosphide based Schottky contact with thin insulating layer. Materials Science in Semiconductor Processing, 2017, 61, 145-149.	4.0	4
96	Theoretical study of positron scattering from pentane isomers. Chemical Physics Letters, 2018, 713, 282-288.	2.6	4
97	Inelastic cross sections for pentane isomers by positron impact. Molecular Physics, 2019, 117, 2527-2534.	1.7	4
98	Probing photon interaction with H ₂ O and D ₂ O. Journal of Physics B: Atomic, Molecular and Optical Physics, 2020, 53, 045202.	1.5	4
99	Effect of tunneling current on the reverse I-V characteristics of In, Al-pWSe ₂ Schottky diodes. EPJ Applied Physics, 2012, 60, 10104.	0.7	3
100	Electron impact total ionization cross sections for simple bio-molecules (H ₂ CO, HCOOH and) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 382	0.4	3
101	Total scattering cross sections for ethylene by electron impact for incident electron energies from 1 to 2000 eV. International Journal of Quantum Chemistry, 2014, 114, 271-277.	2.0	3
102	Cross section data for ionization of important cyanides. Journal of Electron Spectroscopy and Related Phenomena, 2015, 205, 74-82.	1.7	3
103	Theoretical study of positron scattering by group 14 tetra hydrides: A quantum mechanical approach. International Journal of Quantum Chemistry, 2018, 118, e25679.	2.0	3
104	Electron impact ionisation cross-sections for complex molecules. Journal of Physics B: Atomic, Molecular and Optical Physics, 2019, 52, 145202.	1.5	3
105	Electron induced scattering cross section for pyrrole and its isomers. European Physical Journal D, 2020, 74, 1.	1.3	3
106	Low-Energy Electron Scattering from Dimethyl Ether. Journal of Physical Chemistry A, 2020, 124, 3581-3589.	2.5	3
107	Electron scattering from HNCO. European Physical Journal D, 2021, 75, 1.	1.3	3
108	On the Electron Impact Integral Cross-Sections for Butanol and Pentanol Isomers. Atoms, 2021, 9, 43.	1.6	3

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109	Electron scattering studies of BF and BF ₂ . Journal of Physics B: Atomic, Molecular and Optical Physics, 2020, 53, 225203.	1.5	3
110	0.1–2000eV electron impact cross sections for dichlorine monoxide. Journal of Electron Spectroscopy and Related Phenomena, 2014, 193, 86-91.	1.7	2
111	Positron scattering studies of different inelastic channels for group IIA elements. Chemical Physics Letters, 2018, 692, 242-248.	2.6	2
112	Electron-induced scattering dynamics of Boron, Aluminium and Gallium trihalides in the intermediate energy domain. Molecular Physics, 2018, 116, 1208-1217.	1.7	2
113	Elastic scattering of electrons by silicon, germanium and tin tetrahalides. Journal of Electron Spectroscopy and Related Phenomena, 2018, 222, 51-56.	1.7	2
114	Electron impact scattering from pentane molecules and effect of isomerism on cross section. Chemical Physics Impact, 2021, 3, 100032.	3.5	2
115	Electron and positron backscattering from condensed targets. Journal of Physics B: Atomic, Molecular and Optical Physics, 2021, 54, 205001.	1.5	2
116	Electron induced scattering from germane. European Physical Journal D, 2018, 72, 1.	1.3	1
117	Electron scattering from FO. Journal of Physics B: Atomic, Molecular and Optical Physics, 2019, 52, 095202.	1.5	1
118	Computation of Electron Impact Cross Sections from Molecules of Astrophysical Importance. Journal of Modern Physics, 2011, 02, 1088-1092.	0.6	1
119	Electron collision with N_2H and HCO. European Physical Journal D, 2021, 75, 1.	1.3	1
120	Investigation of Electron Scattering from Vinyl Ether and Its Isomers. Atoms, 2022, 10, 43.	1.6	1
121	The Roles of the S1 and S2 Scattering Matrix Terms on Half-Widths and Their Temperature Dependence for the Water Vapor-Nitrogen System. AIP Conference Proceedings, 2006, , .	0.4	0
122	Calculation of electron impact total ionization cross sections for the atoms Ga, Ge, As, Se, Br and Kr. Journal of Physics: Conference Series, 2012, 388, 042041.	0.4	0
123	Theoretical and experimental analysis of barrier distribution in nearly ideal Schottky diodes. AIP Conference Proceedings, 2015, , .	0.4	0
124	Absolute cross sections for silver clusters (Ag n , n=1-4) by electron impact. Journal of Physics: Conference Series, 2017, 875, 062023.	0.4	0
125	Electron and positron scattering from pyridine. Journal of Physics: Conference Series, 2020, 1412, 222009.	0.4	0
126	Half-Widths and Line Shifts of Water Vapor for Atmospheric Applications: Measurement and Theory. , 2006, , 203-220.		0

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127	Theoretical Investigation of Electron Impact Total Ionization Cross Sections for N(CH ₃) ₃ , NH(CH ₃) ₂ , NH ₂ CH ₃ , P(CH ₃) ₃ , PH(CH ₃) ₂ , and PH ₂ CH ₃ Molecules. Journal of the Korean Physical Society, 2011, 59, 2873-2876.	0.7	0
128	Positron Collision Dynamics for C ₂ –C ₃ Hydrocarbons. Springer Proceedings in Physics, 2019, , 239-249.	0.2	0
129	Electron induced excitation of Furfural (C ₅ H ₄ O ₂). Journal of Physics: Conference Series, 2020, 1412, 142024.	0.4	0
130	Rydberg transitions and photoionisation cross section of NH ₃ . Journal of Physics B: Atomic, Molecular and Optical Physics, 2020, 54, 015204.	1.5	0