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List of Publications

Journals

2025

137. *R-matrix calculations of photoionization cross sections of sulfur-containing compounds*. Sapna Mahla and Bobby Antony. *MNRAS* **in press** (2025) .

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136. *Positron scattering from interstellar phosphorus-bearing compounds*. Irabati Chakraborty, Nafees Uddin, Bobby Antony. *RSC Advances* **14** (2024) 38855.
135. *Photoionization of hydrogen halides using the R-matrix method*. Sapna Mahla and Bobby Antony. *MNRAS* **533** (2024) 2048.
134. *Calculation of electron-impact ionization of various benzene derivatives*. Anirudh Krishnadas, Nidhi Sinha, Tom Kirchner and Bobby Antony. *Phys. Scr.* **99** (2024) 95403.
133. *Electron scattering cross sectional data for precursors used in plasma-assisted deposition*. Meenu Pandey and Bobby Antony. *J. Appl. Phys.* **136** (2024) 044901.
132. *Ionization of sulfur clusters, Sn (n = 2-8) by electron collisions*. Himani Tomer, Nafees Uddin and Bobby Antony. *Rad. Phys. Chem.* **222** (2024) 111827.
131. *Calculations of electron scattering cross sections from tungsten precursors used in FEBID*. Meenu Pandey and Bobby Antony. *J. Electron Spec. Rel. Phenom.* **271** (2024) 147430.
130. *Positron scattering from structurally related biomolecules*. Sapna Mahla and Bobby Antony. *RSC Advances* **14** (2024) 1397.
129. *Electron impact ionization of prebiotic interstellar molecules*. Irabati Chakraborty, Nidhi Sinha and Bobby Antony. *Rad. Phys. Chem.* **216** (2024) 111421.

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128. *Low energy electron scattering from pyrrole and its isomers*. Himani Tomer, Biplab Goswami, Paresh Modak, Mohammad Jane Alam, Shabbir Ahmad and Bobby Antony. *J. Phys. Chem. A* **127** (2023) 10464.
127. *Theoretical Investigations of Positron Collisions with Phosphorus-containing Compounds*. Sapna Mahla, and Bobby Antony. *J. Appl. Phys.* **134** (2023) 124901.
126. *Study of Electron Collisions with Isoprene, 1,2-Butadiene, and Their Isomers*. Sapna Mahla, Paresh Modak and Bobby Antony. *J. Phys. Chem. A* **127** (2023) 5414.
125. *Electron impact cross section of C5H10 isomers*. Irabati Chakraborty, Nidhi Sinha and Bobby Antony. *Chem. Phys.* **573** (2023) 111974.
124. *Determination and assessment of a complete and self-consistent electron-neutral collision cross-section set for the C4F7N molecule*. Boya Zhang, Mai Hao, Yuyang Yao, Jiayu Xiong, Xingwen Li, Anthony B Murphy, Nidhi Sinha, Bobby Antony and H B Ambalampitiya. *J. Phys. D: Appl. Phys.* **56** (2023) 134001.
123. *Electron scattering and ionization of astrophysical molecules*. Nafees Uddin, Himani Tomer, Bobby Antony. *Rad. Phys. Chem.* **204** (2023) 110686.

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122. *DC Breakdown Characteristics of C4 F7 N/CO2 Mixtures with Particle-in-cell Simulation*. Jianwei Zhang, Nidhi Sinha, Ming Jiang, Hongguang Wang, Yongdong Li, Bobby Antony, Chunliang Liu. *IEEE Trans. Dielectr. Electr. Insul.* **29** (2022) 1005.
121. *Investigation of Electron Scattering from Vinyl Ether and Its Isomers*. Himani Tomer, Biplab Goswami, Bobby Antony. *Int. J. Mass Spectrom.* **10** (2022) 43.

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120. *Electron and positron backscattering from condensed targets*. Nidhi Sinha, Priyanka Subraveti and Bobby Antony. *J. Phys. B: At. Mol. Opt. Phys.* **54** (2021) 205001.
119. *Electron scattering from molecules relevant to Titan's atmosphere*. Himani Tomer, Paresh Modak, Mohammad Jane Alam, Shabbir Ahmad, Bobby Antony. *Int. J. Mass Spectrom.* **470** (2021) 116708.
118. *Electron collision with N2H and HCO*. Paresh Modak, Abhisek Singh, Biplab Goswami, Bobby Antony. *Euro. Phys. J. D* **75** (2021) 264.
117. *On the Electron Impact Integral Cross-Sections for Butanol and Pentanol Isomers*. Nafees Uddin, Paresh Modak, Bobby Antony. *Atoms* **9** (2021) 43.
116. *Electron impact scattering from pentane molecules and effect of isomerism on cross section*. Himani Tomer, Paresh Modak, Nidhi Sinha, Bobby Antony. *Chem. Phys. Impact* **3** (2021) 100032.
115. *Mean Free Paths and Cross Sections for Electron Scattering from Liquid Water*. Nidhi Sinha and Bobby Antony. *J. Phys. Chem. B* **125** (2021) 5479-5488.
114. *Electron scattering from HNCO*. Paresh Modak and Bobby Antony. *Euro. Phys. J. D* **75** (2021) 54.

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113. *Rydberg transitions and photoionisation cross section of NH3*. Paresh Modak and Bobby Antony. *J. Phys. B: At. Mol. Opt. Phys.* **54** (2020) 15204.
112. *A decade with VAMDC: results and ambitions*. Damien Albert, Bobby Antony, et. al.. *Atoms* **8** (2020) 76.
111. *Electron scattering studies of BF and BF2*. Dhanoj Gupta, Heechol Choi, Mi-Young Song, Suvam Singh, Bobby Antony, Kalyan Chakrabarti, Jung-Sik Yoon and Jonathan Tennyson. *J. Phys. B: At. Mol. Opt. Phys.* **53** (2020) 225203.
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105. *Ionisation cross sections for plasma relevant molecules*. Nidhi Sinha, Vraj Patel and Bobby Antony. *J. Phys. B: At. Mol. Opt. Phys.* **53** (2020) 145101.
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102. *Inelastic cross sections for pentane isomers by positron impact*. Nidhi Sinha and Bobby Antony. *Mol. Phys.* **117** (2019) 2527-2534.
101. *Electron impact ionisation cross sections for complex molecules*. Nidhi Sinha, Dhanoj Gupta and Bobby Antony. *J. Phys. B: At. Mol. Opt. Phys.* **52** (2019) 145202.
100. *Positron scattering: total elastic and grand total cross sections for molecules of astrophysical importance*. Nidhi Sinha, Durgesini Patel and Bobby Antony. *Chemistry Select* **4** (2019) 4575-4581.
99. *Electron scattering from FO*. Paresh Modak and Bobby Antony. *J. Phys. B: At. Mol. Opt. Phys.* **52** (2019) 95202.
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93. *Electron impact total ionization cross section for C4 and C5 isomeric alcohols*. Nafees Uddin, Pankaj Verma, Mohammad Jane Alam, Shabbir Ahmad and Bobby Antony. *Int. J. Mass Spectrom.* **431** (2018) 37-42.
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91. *Positron induced scattering cross sections for hydrocarbons relevant to plasma*. Suvam Singh and Bobby Antony. *Phys. of Plasmas* **25** (2018) 53503.
90. *Positron scattering calculations of elastic, total and momentum transfer cross section for alkaline earth atoms*. Suvam Singh, Anamika Sen and Bobby Antony. *Int. J. Mass Spectrom.* **428** (2018) 22-28.
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88. *Electron-induced scattering dynamics of Boron, Aluminium and Gallium trihalides in the intermediate energy domain*. Pankaj Verma, Mohammad Jane Alam, Shabbir Ahmad and Bobby Antony. *Mol. Phys.* **116** (2018) 1208-1217.
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82. *Elastic scattering of electrons by silicon, germanium and tin tetrahalides*. Pankaj Verma and Bobby Antony. *J. Electron Spec. Rel. Phenom.* **222** (2018) 51-56.

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Proceedings

Publications in peer-reviewed conference proceedings *ffff*

11. *Electron and positron scattering from pyridine*. Nidhi Sinha, A.K. Sahoo and Bobby Antony. *J. Phys.: Conf. Ser.* 1412 (2020) 222009.
10. *Electron induced excitation of Furfural (C5H4O2)*. Paresh Modak, A Singh and Bobby Antony. *J. Phys.: Conf. Ser.* 1412 (2020) 142024.
9. *Positron collision dynamics for C2-C3 hydrocarbons*, in Quantum Collisions and Confinement of Atomic and Molecular Species, and Photons, Eds. P. C. Deshmukh et al. Nidhi Sinha and Bobby Antony. *Springer Proceedings in Physics* (2020) 230.
8. *Theoretical and experimental analysis of barrier distribution in nearly ideal Schottky diodes*. A. Bobby, N. Shiwakoti and B. K. Antony. *AIP Conf. Proc.* **1665** (2015) 110001.
7. *Calculation of electron impact total ionization cross sections for the atoms Ga, Ge, As, Se, Br and Kr*. Rahla Naghma, Minaxi Vinodkumar and Bobby Antony. *J. Phys.: Conf. Ser.* **388** (2012) 042041.
6. *Electron impact total ionization cross sections for simple bio-molecules (H2CO, HCOOH and CH3COOH) using ICSP-ic method*. Harshad Bhutadia, Minaxi Vinodkumar and Bobby Antony. *J. Phys.: Conf. Ser.* **388** (2012) 052071.
5. *Rotationally elastic total cross sections for NH3 on electron impact over a wide energy range*, in 64th Annual Gaseous Electronics Conference. Minaxi Vinodkumar, Chetan Limbachiya, Bobby Antony. *Bulletin of the American Physical Society* **56** (2011) QRP1.00029.
4. *Half-widths and Line Shifts of Water Vapor for Atmospheric Applications: Measurement and Theory*, in Remote Sensing of the Atmosphere for Environmental Security. Eds. Perrin Agnès et al. Robert R. Gamache and Bobby K. Antony. *NATO Sciences Series, Springer* (2006) 203-220.
3. *The roles of the S1 and S2 scattering matrix terms on half-widths and their temperature dependence for the water vapor - nitrogen system*, in Spectral Line Shapes. Eds. E Oks and M Pindzola. Robert R. Gamache, Bobby K. Antony, Peter R. Gamache and Jean-Michel Hartmann. *AIP Conf. Proc.* **874** (2006) 351-353.
2. *Maximum ionization contribution to TCS of e-atom/molecule collisions: dependence on* $[\alpha/I]^{1/2}$. KN Joshipura, V Minaxi, CG Limbachiya, BK Antony. *Europhys. Conf. Abstracts* **26** (2012).
1. *Complex Scattering Potential approach to calculations of e-atom/molecule total ionization cross-sections*. KN Joshipura, NJ Mason, MV Kumar, BK Antony. *Europhys. Conf. Abstracts* **26** (2012).

Books and Monographs

Publications in books and monographs

6. *Total scattering cross section of S2 by electron impact*, in Electron Collision Processes in Atomic and Molecular Physics, Eds. M. Vinodkumar. Rahla Naghma and Bobby Antony. *Narosa Publishing House, New Delhi, India; ISBN: 978-81-8487-343-6* (2013).
5. *Electron impact total cross section for F2O over a wide range of impact energies (0.1-2000 ev)*, in Electron Collision Processes in Atomic and Molecular Physics, Eds. M. Vinodkumar. Dhanoj Gupta and Bobby Antony. *Narosa Publishing House, New Delhi, India; ISBN: 978-81-8487-343-6* (2013).
4. *Scattering studies of Cl2O by electron impact*, in Electron Collision Processes in Atomic and Molecular Physics, Eds. M. Vinodkumar. Biplab Goswami and Bobby Antony. *Narosa Publishing House, New Delhi, India; ISBN: 978-81-8487-343-6* (2013).
3. *Electron collisions and ionization of atoms and molecules*. Bobby Antony. *LAMBERT Academic Publishing, Germany; ISBN: 978-81-8487-343-6* (2010).
2. *Total and ionization cross sections for well-known and exotic hydrocarbon molecules upon electron impact*, in Atomic structure and collision processes, Eds. Man Mohan. Minaxi Vinodkumar, K. N. Joshipura, C. G. Limbachiya and B. K. Antony. *Narosa Publishing House, New Delhi, India; ISBN: 978-81-7319-811-3* (2010).
1. *Electron impact cross sections with O atom,* O_2 *and* O_2 *molecules - a theoretical survey*, in Current Developments in Atomic, Molecular, and Chemical Physics with Applications, Eds. Man Mohan. K N Joshipura, B K Antony and V Minaxi. *Springer, Boston, MA; ISBN: 978-81-7319-811-3* (2002).

Other Journals

Publications in non-SCI Journals

6. *Low energy electron impact calculation for* N_2O *scattering*. Mayuri Y Barot, Minaxi Vinodkumar and Bobby Antony. *J. Pure and Appl. Sci. – Prajna* **20** (2012) 100-104.
5. *Computation of electron impact cross sections from molecules of astrophysical importance*. Bobby Antony. *J. Modern Phys.* **2** (2011) 1088-1092.
4. *Electron impact total cross sections for ethylene oxide*. Avani Y Barot, Minaxi Vinodkumar and Bobby Antony. *J. Pure and Appl. Sci. – Prajna* **19** (2011) 71-74.
3. *Screening-corrected electron impact total and ionization cross sections for* $N(CH_3)_3$ *and* $P(CH_3)_3$. Harshad Bhutadia, Kirti Korot, Bobby Antony and Minaxi Vinodkumar. *J. Pure and Appl. Sci. – Prajna* **18** (2010) 140-144.
2. *Electorn impact total ionization cross sections for boron chlorides (BClx, x=1-3); threshold - 2kev*. Kirti M. Korot, Bobby K. Antony and Minaxi Vinodkumar. *J. Pure and Appl. Sci. – Prajna* **16** (2008) 110-120.
1. *Relative contributions of various electron collision processes on He and* H_2 *targets*. Minaxi Vinodkumar, B. K. Antony, C. G. Limbachiya and K. N. Joshipura. *J. Pure and Appl. Sci. – Prajna* **12** (2003) 89-98.

Reports

Publications in technical/scientific reports

3. Report on: *Total cross sections*, in Evaluation of data for collisions of electrons with nitrogen molecule and nitrogen molecular ion. IAEA Vienna, Austria. D. Field, G. Garcia and B. Antony. *Summary Report of an IAEA Consultants Meeting* **45**, 16 (2014) Ref. No. 45042239.
2. Report on: *Momentum transfer*, in Evaluation of data for collisions of electrons with nitrogen molecule and nitrogen molecular ion. IAEA Vienna, Austria. L. Alves, J. Tennyson and B. Antony. *Summary Report of an IAEA Consultants Meeting* **45**, 16 (2014) Ref. No. 45042241.
1. Report on: *Ionization*, in Evaluation of data for collisions of electrons with nitrogen molecule and nitrogen molecular ion. IAEA Vienna, Austria. B Antony, NJ Mason, L Alves. *Summary Report of an IAEA Consultants Meeting* **45**, 16 (2014) Ref. No. 45042243.

Invited Talks

Invited talks at conferences, symposia, seminars, workshops and schools

20. *Progress, challenges, and prospects in lepton collisions and photoionization of molecules* *Weekly Seminar to the Schools of Physics and Chemistry*, University of Kent, UK. (12 June, 2024).
19. *Electron and positron scattering from molecules* *23th National Conference on Atomic and Molecular Physics (NCAMP-23)*, IIST, India. (20-23 Feb, 2023).
18. *Theory of Quantum Scattering* *Department Seminar*, University of Kent, UK. (18-22 Jul, 2022).
17. *Electron impact scattering from beryllium and tungsten* *2nd meeting of the Global Network for the Atomic and Molecular Physics of Plasmas (GNAMPP)*, IAEA, Vienna, Austria. (6-10 Dec, 2021).
16. *Electron and positron scattering from molecules - progress, problems, possibilities* *PRL Colloquium*, Physical Research Laboratory (online). (28 Oct, 2020).
15. *Theory of Quantum Collision* *10th Vidyasagar Satyendra Nath Bose National Workshop on Expanding Horizon in Physics (EHP- 2019)*, Vidyasagar University Campus, Midnapore. (16–22 Jan, 2019).
14. *Positron interactions with hydrocarbon molecules* *International Conference on Atomic, Molecular, Optical and Nano Physics with Applications (CAMNP 2019)*, DTU Delhi. (18-20 Dec, 2019).
13. *Positron Interactions with Hydrocarbon Molecules* *XX International Workshop on Low-Energy Positron and Positronium Physics and XXI International Symposium on Electron-Molecule Collisions and Swarms*, Belgrade, Serbia. (18 - 20 Jul 2019).
12. *Total ionization cross section data* *Technical meeting on uncertainty assessment and benchmark experiments for atomic and molecular data for fusion applications*, IAEA, Vienna, Austria. (9-21 Dec, 2016).
11. *Cross section data for electron/positron scattering: a theoretical approach* *International Conference on Atomic and Molecular Data and Their Applications (ICAMDATA 2016)*, NFRI, Gunasn, Republic of Korea. (25-29 Sep, 2016).
10. *Electron scattering from cyanoacetylene* *International Workshop on Dissociative Electron Attachment, 2nd DEA Club meeting*, TIFR, Mumbai, India. (18-20 Nov, 2015).
9. *Electron scattering by Carbonyl Fluoride* *4th International Conference on Current Developments in Atomic, Molecular, Optical and Nano Physics with Applications (CDAMOP-2015)*, Delhi University, New Delhi, India. (11-14 Mar, 2015).
8. *Electron induced chemistry* *20th National Conference on Atomic and Molecular Physics (NCAMP-XX)*, IIST TVM, India. (9-12 Dec, 2014).
7. *Electron impact scattering from molecules: A theoretical study* *3rd International conference on Current developments in Atomic, Molecular, Optical and Nano Physics*, Delhi University, New Delhi, India. (14-16 Dec, 2011).
6. *Electron impact total ionization cross sections for atoms (Z=50-54)* *2nd DAE-BRNS Symposium on Atomic, Molecular and Optical Physics*, Karnataka University, Dharwad, India. (22-25 Feb, 2011).
5. *Dissociative electron attachment: theoretical study* *Joint ICTP/IAEA Workshop on Atomic and Molecular Data for Fusion*, ICTP, Trieste, Italy. (20-30 Apr, 2009).
4. *Collision broadened half-width and pressure induced line shifts for atmospheric applications* *Topical Conference on Atomic and Molecular Physics*, Sardar Patel University, Gujarat, India. (3-5 Jan, 2008).
3. *Calculation of line shape parameters for self-broadening of water vapor transitions via complex Robert-Bonamy theory* *61st International Symposium on Molecular Spectroscopy*, The Ohio State University, Ohio, USA. (19-23 Jun, 2006).
2. *Theoretical study of electron collisions and ionization of atoms, molecules and clusters* *XV National Conference on Atomic and Molecular Physics (NCAMP)*, PRL, Ahmedabad, India. (20-24 Dec, 2004).
1. *Calculation of ionization cross-sections of free radicals* *2nd Electron Positron induced Chemistry*, Prague, Czech Republic. (30 Jul-2 Aug, 2003).

Abstracts

Publications in book of abstracts

2025

24th National Conference on Atomic and Molecular Physics, IIT(ISM) Dhanbad *8-11 Jan, 2025*

115. *Calculations of electron scattering cross sections from tungsten precursors used in FEBID*. Meenu Pandey and Bobby Antony.
114. *Electron Scattering from Oxygen- and Sulfur-Based Four-Atom Heterocycles and Isomers*. Sudhanshu Arya and Bobby Antony.

2023

23rd National Conference on Atomic and Molecular Physics, IIST Thiruvananthapuram *20-23 Feb, 2023*

113. *Theoretical study of low-energy electron scattering from pyrrole and its isomers using R-matrix method*. Himani Tomer and Bobby Antony.
112. *Positron scattering from HCP and CCP*. I. Chakraborty, N. Uddin and B. Antony.
111. *Theoretical investigation of leptonic collisions with H2PO4 and H2SO4*. Sapna Mahla and Bobby Antony.

2022

International Conference on Atomic and Molecular Data and Their Applications (12th ICAMDATA), Mola di Bari, Italy *25-29 Sep, 2022*

110. *Electron Collision Study of Isoprene-C_5H_8 and its Isomers: Relevant to Aerosol formation*. Sapna Mahala and Bobby Antony.
109. *Electron impact ionization cross section of few prebiotic interstellar molecules*. I. Chakraborty, N. Sinha and B. K. Antony.
108. *Electron impact ionization of sulfur clusters, S_n (n= 2-8)*. H. Tomer and B. K. Antony.

2019

The International Conference on Atomic, Molecular, Optical and Nano Physics with Applications (CAMNP 2019), DTU Delhi *18-20 Dec, 2019*

107. *Electron collision study from liquid water*. N. Sinha, I. Chakraborty and B. Antony.
106. *Electron scattering cross-sections for pentane and its isomers*. H. Tomer, N. Sinha and B. Antony.

31st International Conference on Photonic, Electronic and Atomic Collisions (ICPEAC XXXI), Caen and Deauville, France *23-30 Jul 2019*

105. *Electron and positron scattering from pyridine*. Nidhi Sinha, Aloka Kumar Sahoo and Bobby Antony.
105. *Electron scattering cross sections for complex benzene derivatives*. S Singh, P Modak, D Gupta, N Uddin and B Antony.
104. *Electron induced excitation of Furfural (C5H4O2)*. P Modak, A Singh and B Antony.

XX International Workshop on Low-Energy Positron and Positronium Physics & XXI International Symposium on Electron-Molecule Collisions and Swarms, Belgrade, Serbia *18-20 Jul 2019*

103. *Excitation cross-section for e-N2H scattering*. Paresh Modak, Abhisek Singh and Bobby Antony.

22nd National Conference on Atomic and Molecular Physics, IIT Kanpur *25-28 Mar, 2019*

102. *Excitation of HO2 by electron impact*. P. Modak, A. Singh, S. Singh, H. Tomer and B. Antony.
101. *Electron impact ionisation cross section for amino acids and benzene derivatives*. N. Sinha, D. Gupta, A. Sahoo and B. Antony.
100. *Electron scattering tcs of H2CCCC: A cumulene carbene detected in interstellar medium*. N. Uddin, P. Verma and B. Antony.

2018

7th TC-ISAMP, Quantum Collisions and Confinement of Atomic and Molecular Species and Photons, IISER Tirupati *6-8 Jan, 2018*

99. *Positron collision dynamics for C2-C3 hydrocarbons*. Suvam Singh, Pankaj Verma, Vishwanath Singh and Bobby Antony.
98. *Positron Scattering Cross Sections for Methyl Halides*. Nidhi Sinha, Durgesini Patel and Bobby Antony.
97. *Ionization Cross Section of Small Water Clusters ((H2O)n, n=1-4)*. Paresh Modak, Vraj Patel and Bobby Antony.

2017

30th International Conference on Photonic, Electronic and Atomic Collisions (ICPEAC XXX) Cairns, Tropical Queensland, Australia *26 Jul-1 Aug, 2017*

96. *Quantum-Mechanical Calculations of Cross Sections for Positron Scattering with Inert Gases*. Suvam Singh, Jaspreet Kaur, Nidhi Sinha and Bobby Antony.
95. *Absolute cross sections for silver clusters (Agn, n=1-4) by electron impact*. Paresh Modak and Bobby Antony.

2017 Joint ICTP-IAEA School on Atomic Processes in Plasmas, ICTP Miramare, Trieste, Italy. *27 Feb-3 Mar 2017*

94. *Quantum-mechanical calculations of cross sections for positron scattering with noble gases*. Suvam Singh, Jaspreet Kaur and Bobby Antony.
93. *Isotopic effect in electron-methane interaction*. Paresh Modak and Bobby Antony.
92. *Electron-Germane scattering cross section for plasma assisted processes*. Pankaj Verma and Bobby Antony.
91. *Electron Impact Inelastic Ionization of Edge Plasma molecule Propane*. Jaspreet Kaur and Bobby Antony.

21st National Conference on Atomic and Molecular Physics (NCAMP-XXI), PRL, Ahmedabad, India. *3-6 Jan, 2017*

90. *A novel approach to study positron scattering from simple molecules.* Suvam Singh, Nidhi Sinha, Anamika Sen, Jaspreet Kaur and Bobby Antony.
89. *Cross section for Beryllium Tungsten clusters by electron impact.* Paresh Modak, Sunayan Maiti, Jaspreet Kaur and Bobby Antony.
88. *Electron induced ionization of Boron, Aluminum and Gallium trihalides.* N. Uddin, Pankaj Verma, Vikrant Singh Bais, Vraj Patel and Bobby Antony.
87. *Electron impact ionization cross section of butanol, pentanol and their isomers.* Nafees Uddin and Bobby Antony.

2016

Technical Meeting on Uncertainty Assessment and Benchmark Experiments for Atomic and Molecular Data for Fusion Applications, IAEA Headquarters, Vienna, Austria. *19-21 Dec, 2016*

86. *Electron interactions with plasma reactive carbon tetrachloride molecule: an extensive cross section study.* J Kaur, P Verma, S Singh, P Modak and Bobby Antony.
85. *Electron scattering by Silane.* Pankaj Verma, Suvam Singh, Paresh Modak, Jaspreet Kaur and Bobby Antony.
84. *Positron scattering cross sections for plasma relevant hydrocarbons.* Suvam Singh, Jaspreet Kaur and Bobby Antony.

International Conference on Atomic and Molecular Data and Their Applications (ICAMDATA 2016), Gunsan, Republic of South Korea. *25-29 Sep 2016*

83. *Positron scattering cross section for simple molecules.* Suvam Singh, Rahla Naghma, Jaspreeet Kaur and Bobby Antony.
82. *Electron impact cross sections for C2-C8 symmetric ether molecules.* Paresh Modak, Suvam Singh, Pankaj Verma, Jaspreeet Kaur and Bobby Antony.

International Topical Conference on Charged Particle Collisions and Electronic Processes in Atom, Molecules and Materials (q-PaCE-2016), Dhanbad, India. *9-11 Jan, 2016*

81. *Positron Impact Total Cross Sections for Noble Gases from Ionization Threshold to 5000 eV.* Suvam Singh, Sangita Dutta, Rahla Naghma and Bobby Antony.
80. *Electron Scattering Cross Sections for Heavy Water.* Paresh Modak, Jaspreet Kaur and Bobby Antony.
79. *Electron Induced Scattering Cross Sections for CF3X and CF2X2 (where X=H, Cl, Br and I) molecules.* Pankaj Verma, Rahla Naghma, Dhanoj Gupta and Bobby Antony.
78. *Effect of Swift Heavy Ion Irradiation on the Capacitance and Conductance Properties of Ni/N-Gap Schottky Diode.* N Shiwakoti, A Bobby, K Asokan and Bobby Antony.
77. *Computation of Electron Impact Total Ionization Cross Section for Alcohols.* Nafees Uddin, Rahla Naghma and Bobby Antony.
76. *Electron Impact Ionization Cross Sections for Organoplatin Compounds: Cisplatin, Carboplatin and Oxaliplatin.* Dibyendu Mahato, Rahla Nagma and Bobby Antony.
75. *Photoionization Cross Section of Carbon Monoxide.* Deb Kumar Rana, Jaspreet Kaur and Bobby Antony.
74. *In-Situ Capacitance and Dielectric Studies of SHI Irradiated Ni/N-Gaas Schottky Diode.* A Bobby, N Shiwakoti, P. M. Sarun, S Verma, K Asokan and Bobby Antony.

2015

4th International Conference on Current Developments in Atomic, Molecular, Optical and Nano Physics with Applications (CDAMOP-2015), Delhi, India. *11-14 Mar, 2015*

73. *Electron impact ionization of C2 to C6 methanoates.* Jaspreet Kaur, Biplab Goswami, Pankaj Verma and Bobby Antony.
72. *Cross sections for electron scattering from carbon disulfide.* Rahla Naghma, Dhanoj Gupta, Paresh Modak and Bobby Antony.

2014

20th National Conference on Atomic and Molecular Physics (NCAMP-XX), Thiruvananthapuram, India. *9-12 Dec, 2014*

71. *Electron impact ionization of C3 to C7 ethanoates.* J. Kaur, R. Naghma and Bobby Antony.
70. *1-5000 ev electron impact cross sections with germanium tetrafluoride.* B. Goswami, J. Kaur, R. Naghma, D. Gupta, P. Verma and Bobby Antony.

2013

National Conference on Electron Collision Processes in Atomic and Molecular Physics, VP & RPTP Science College, Gujarat. *7-9 Mar, 2013*

69. *Scattering Studies of Cl2O by Electron Impact.* Biplab Goswami and Bobby Antony.
68. *Total cross section for Nitrogen dioxide by electron scattering from meV to keV.* Dhanoj Gupta and Bobby Antony.
67. *Electron impact total cross section for F2O over a wide range of impact energies (0.1-2000 ev).* Dhanoj Gupta and Bobby Antony.
66. *Total scattering cross section of s2 by electron impact.* Rahla Naghma and Bobby Antony.

2012

DAE-BRNS Symposium on Atomic, Molecular and Optical Physics, IISER-Kolkata. *14-17 Dec, 2012*

65. *Total and differential cross-sections of electron scattering from allene (C3H4).* D. Gupta, A. Barot, M. Vinodkumar and B. Antony.
64. *Total scattering cross section of C2 and C3 by electron impact.* R. Naghma, B. Goswamy and B. Antony.
63. *Calculations of electron impact total cross sections of N2O.* Minaxi Vinodkumar, Bobby Antony and Mayuri Barot.

National Conference on Advances in Laser and Spectroscopy, ISM Dhanbad. *1-3 Nov, 2012*

62. *Total ionization cross section of plasma wall coating elements upon electron impact*. Biplab Goswami, Rahla Naghma, Dhanoj Gupta and Bobby Antony.
61. *On the electron impact scattering by SF6 molecule*. Biplab Goswami and Bobby Antony.
60. *Electron impact ionization cross sections of Cycloalkanes, Methylcyclohexane and Ethylcyclohexane*. Dhanoj Gupta and Bobby Antony.
59. *Influence of organic interlayer on Au/n-GaAs Schottky barrier characteristics*. N Shiwakoti, A Bobby and B K Antony.

Workshop on highly charged ions and atomic collisions, TIFR, Mumbai. *28-31 Mar, 2012*

58. *Electron impact ionization studies of Silicon Carbon Clusters*. Rahla Naghma, Dhanoj Gupta, Biplab Goswami and Bobby Antony.

2011

3rd International conference on Current developments in Atomic, Molecular, Optical and Nano Physics, 2011, Delhi University, New Delhi. *14-16 Dec, 2011*

57. *Electron impact scattering from molecules: A theoretical study*. Bobby Antony and Minaxi Vinodkumar.
56. *Calculation of total ionization cross section of SiC2, Si2C and Si2C2 by electron impact*. Rahla Naghma, Biplab Goswami and Bobby Antony.
55. *Total ionization cross sections for Y, Ru, Pd and Ag atoms by electron impact*. Dhanoj Gupta, Rahla Naghma and Bobby Antony.

XVII International Symposium on Electron Molecule Collisions and Swarms, National University of Ireland, Maynooth, Ireland. *22-25 Jul, 2011*

54. *Total and ionization cross sections for halogen hydrides by electron impact.* Bobby Antony and Minaxi Vinodkumar.
53. *Calculation of total ionization cross section for C2 by electron impact*. Rahla Naghma, Dhanoj Gupta and Bobby Antony.

2nd DAE-BRNS Symposium on Atomic, Molecular and Optical Physics; Karnatak University, Dharward. *22-25 Feb, 2011*

52. *Theoretical calculations of total cross sections for H2CO and HCOOH from 0.01 eV to 2 keV on electron impact*. M. Vinodkumar, H. Bhutadia and B. K. Antony.
51. *Electron impact total ionization cross sections for atoms (Z=50-54).* R. Naghma, B. N. Mahato, M. Vinodkumar and B. K. Antony.

2010

9th Asian International Seminar on Atomic and Molecular Physics; Seol, Korea. *4-8 Oct, 2010*

50. *Electron impact cross sections from molecules of astrophysical importance*. Bobby K. Antony and Minaxi Vinodkumar.

10th European Conference on Atoms Molecules and Photons, Salamnca, Spain. *4-9 July, 2010*

49. *Ionization cross sectional study by electron impact for atoms and molecules of applied interest in plasma physics*. Minaxi Vinodkumar, Rucha Dave, Harshad Bhutadia and Bobby Antony.

2nd International Conference on Applied Physics and Mathematics, Kuala Lumpur, Malasia. *7-10 May, 2010*

48. *Computation of electron impact cross sections from molecules of astrophysical importance*. Minaxi Vinodkumar and Bobby K. Antony.

2009

XXIII Gujarat Science Congress, Gujarat. *23 Dec, 2009*

47. *Screening corrections in calculations of various total cross sections for halogen containing molecules*. Minaxi Vinodkumar, Kirti Korot, Chetan Limbachiya and Bobby Antony.

National seminar on recent trends in emerging frontiers of physical sciences; BIT Sindri, Dhanbad. *2-3 Nov, 2009*

46. *Theoretical studies on electron scattering from astrophysical molecules*. Bobby Antony.
45. *Investigations on the Stability and Phase Related Changes of Barrier height and Ideality factor of Ga-pWSe2 Schottky diode*. Achamma Bobby and Bobby Antony.

XXVI ICPEAC 2009, Kalamazoo, Michigan, USA. *22-28 Jul, 2009*

44. *Electron impact scattering from astrophysical molecules*. Rahla Nagma, Minaxi Vinodkumar and Bobby Antony.
43. *Electron impact various total cross sections for compounds containing C and H*. Chetan Limbachiya, Minaxi Vinodkumar and Bobby Antony.
42. *Calculations of electron impact cross sections of environmentally sensitive molecules*. Minaxi Vinodkumar, Kirti Korot and Bobby Antony.
41. *Calculations of various total cross section using screening corrections on electron impact for halogen containing molecules*. Minaxi Vinodkumar, Kirti Korot, Chetan Limbachiya and Bobby Antony.

Joint ICTP/IAEA Workshop on Atomic and Molecular Data for Fusion, ICTP, Trieste, Italy. *20-30 Apr, 2009*

40. *Dissociative electron attachment: theoretical study*. Bobby Antony.

XVII National Conference on Atomic and Molecular Physics, Inter-University Accelerator Centre, New Delhi, India. *10-13 Feb, 2009*

39. *Investigation on electron induced collision and ionization of some atmospheric gases*. Bobby Antony and Minaxi Vinodkumar.
38. *Screening corrections in calculations of total and ionization cross sections for molecules of applied interest in plasma*. Minaxi Vinodkumar, Kirti Korot, Chetan Limbachiya and Bobby Antony.

2008

10th Biennial HITRAN Database Conference, Harvard-Smithsonian Center for Astrophysics, USA. *22-24 Jun, 2008*

37. *Half-widths and Line Shifts for Transitions in the ν_3 Band of Methane in the 2726-3200 cm-1 Spectral Region for Atmospheric Applications*. Robert R. Gamache, Bobby Antony, Danielle L. Niles, Sarah B. Wroblewski, Caitlin M. Humphrey, Tony Gabard.

19th International Conference on Spectral Line Shapes, Valladolid, Spain. *15-20 Jun, 2008*

36. *Line Shape Parameters for ν_3 Transitions of $^{12}CH_4$*. Robert R. Gamache, Bobby Antony, Danielle L. Niles, Sarah B. Wroblewski, Caitlin M. Humphrey, Tony Gabard.

11th Annual Student Research Symposium, The University of Massachusetts Lowell, USA. *29 Apr, 2008*

35. *N2-, O2- and Air-broadened Half-widths and Line Shifts for Transitions in the ν_3 Band of Methane in the 2726-3200 cm-1 Spectral Region*. Caitlin M. Humphrey, Robert R. Gamache, Bobby Antony, Danielle L. Niles, Sarah B. Wroblewski, Tony Gabard.

Topical Conference on Atomic and Molecular Physics, Sardar Patel Univ, Gujarat. *3-5 Jan, 2008*

34. *Collision broadened half-width and pressure induced line shifts for atmospheric applications*. Bobby Antony.

2006

The 19th International Conference on High Resolution Molecular Spectroscopy, Prague, Czech Republic. *29 Aug-2 Sep, 2006*

33. *Non-linear least-squares adjustment of the intermolecular potential parameter for the H2O-N2 system*. Robert Gamache, Peter Gamache and Bobby Antony.

9th Biennial HITRAN Conference, Harvard-Smithsonian Center for Astrophysics, MA, USA. *26-28 Jun, 2006*

32. *Temperature dependence of N2-, O2-, and air-broadened half-widths of water vapor transitions: insight from theory and comparison with measurement*. R R Gamache, B K Antony and P R Gamache.
31. *A semi-empirical adjustment of the vibrational dependence of the polarizability of Ozone for use in line shift calculations*. Carlos Szembek, Bobby Antony and Robert Gamache.

61st International Symposium on Molecular Spectroscopy, 61st Meeting, The Ohio State University, Columbus, OH, USA. *19-23 Jun, 2006*

30. *Calculation of line shape parameters for self-broadening of water vapor transitions via complex Robert-Bonamy theory*. Robert Gamache and Bobby Antony.
29. *Temperature dependence of N2-, O2-, and air-broadened half-widths of water vapor transitions*. R. R. Gamache, B. K. Antony and P. R. Gamache.

18th International Conference on Spectral Line Shapes, Auburn University, Auburn, USA. *4-9 Jun, 2006*

28. *The roles of the S1 and S2 scattering matrix terms on half-widths and their temperature dependence for the water vapor-nitrogen system*. Bobby Antony, Peter Gamache, Robert R. Gamache, and Jean-Michel Hartmann.

2005

19th Colloquium on High Resolution Molecular Spectroscopy, Salamanca, Spain. *11-16 Sep, 2005*

27. *Modified complex Robert-Bonamy formalism calculations for strong to weak interacting systems*. Bobby Antony, Peter Gamache, Carlos Szembek, Danielle Niles, and Robert R. Gamache.

Atmospheric Spectroscopy Applications workshop, Université Reims Champagne-Ardenne, Reims, France. *6-7 Sep, 2005*

26. *Self-broadening of water vapor transitions via the modified complex Robert-Bonamy theory*. Bobby Antony, Steven Neshyba and Robert R. Gamache.

XXIV ICPEAC, Rosario, Argentina. *20-26 Jul, 2005*

25. *Electron collisions and ionization of H2O in ice: the cracking pattern*. K. N. Joshipura, A. Bhardwaj, S. P. Khare and B. K. Antony.
24. *Electron impact ionization cross sections of atoms (O, Al, Cu) and metal oxides: SCOP formalism*. B G Vaishnav, C G Limbachiya, B K Antony and K N Joshipura.

2004

XV National Conference on Atomic and Molecular Physics (NCAMP), Physical Research Laboratory, Ahmedabad. *20-24 Dec, 2004*

23. *Theoretical study of electron collisions and ionization of atoms, molecules and clusters*. K N Joshipura and B K Antony.
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