

Dr. Arindam Basu

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Teaching Experience:

Over 15 years

Research Interests :

Atomic Physics/Atomic Collision Theory

Projects Undertaken :

- Minor Research Project funded by UGC: "Many Electron and Many Positron Systems."
- Major Research project funded by DST under Fast Track Scheme for Young Scientists: "Electron-Atom Collisions in Debye Plasma Environments."

List of Publications :

- "Feshbach resonances in electron--positronium continuum and the close-coupling model" by A. Basu and A.S.Ghosh, Europhys. Lett.: 60, 46 (2002).
- "Anti-Atom--Atom Scattering with the close coupling model" by S. Chakraborty, A. Basu, P. Chaudhuri, P. K. Sinha and A.S. Ghosh, Nucl. Inst. and Mat.B; 221, 12 (2004).
- "Scattring of Positronium Atoms" by S. Chakraborty, A. Basu and A. S. Ghosh, Nucl. Inst. and Mat.B; 221, 112 (2004).
- "Positronium-Alkali Atoms scattrng using close coupling model" by A. Chakraborty, A. Basu, N.K.Sarkar and P. K. Sinha, J Phys. B; 37, 1709 (2004).
- "Doubly excited resonant states of positronium negative ion" by A.Basu and A.S.Ghosh, Phys. rev. A; 72, 062507 (2005).
- "Antiatom-atom scattrng with the close-coupling model", S. Chakraborty, A. Basu, P. chaudhuri, P. K. Sinha, A. S. Ghosh; Nuclear Instruments and Methods in Physics Research section B: beam Interactions with Materials and Atoms 221 (2004) 12-20.
- "Scattering of Positronium Atoms", S. Chakraborty, A. Basu, A. S. Ghosh; Nuclear Instruments and Methods in Physics Research Section B: Beam Interactions with materials and Atoms 221 (2004) 112-118.
- "Positronium Alkali AtomScattring at Medium Energies" A. Chakraborty, A. Basu, N. K. Sarkar, P. K. Sinha; Jourlal of Physics B: Atomic, Molecular and Optical Physics 37 (2004) 1709.

- "Doubly Excited Resonant States of Positronium Negative ion", A. Basu and A.S.Ghosh; Physical Review A 72 (2005) 62507.
- "Electron Positronium Scattering in Debye Plasma Environment", A. Basu and A.S.Ghosh; Nuclear Instruments and Methods in Physics Research Section B: Beam Interactions with Materials and Atoms 266 (2008) 522-525.
- " $2s^2\ ^1S^e$ resonance of H^- in a Debye Plasma" A. Basu; 88 (2009) 53001.
- "p-wave Auto Detaching resonance of H^- Below the $n=2$ threshold in a Debye plasma Medium", A. Basu; j. Phys. B: At. Mol. Opt. Phys. 43 (2010) 115202.
- "Lowest Lying $^1D^e$ resonance of H^- in Debye Plasma", A. Basu; THE EUROPEAN PHYSICAL JOURNAL D 65 (2011) 405.

Books Published:

- Electron positronium scattering and the Doubly Excited Auto-Detaching States of positronium Negative ion by A. S. Ghosh and Arindam Basu in "Current development in Atomic, Molecular and Chemical Physics with Applications" Man Mohan, ed., (Kluwer Academic Publishers, The Netherlands, 2002).