Diptesh Dey

Department of Chemical Sciences
Indian Institute of Science Education
and Research Kolkata
Mohanpur - 741 246, India

Birth: November 26, 1988
Nationality: Indian
Marital status : Single
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Research Interests

Gas phase quantum dynamics, Atom-molecule reactive scattering, Coupled electron-nuclear dynamics, Laser induced control, Fermionic molecular dynamics

Education

Indian Institute of Science Education and Research Kolkata
Ph.D. in Theoretical Chemistry, January 2017 (Expected)
Thesis Topic: *Quantum and classical dynamics for elementary gas-phase reactions*
Advisor: Ashwani K. Tiwari, Ph.D

Jadavpur University
M.Sc. in Physical Chemistry, May 2011
Dissertation: *Influence of Additives (Polymers, Salts and Ionic Liquid) on the clouding behavior of Surfactant (TritonX 100) and Triblock Coploymers (Pluronic 10R5 and Pluronic L44)*
Advisor: Prof. Satya Priya Moulik, D.Sc, Ph.D

St. Xavier's College, Kolkata
B.Sc.(Honours) in Chemistry, May 2009

Honors and Awards

International Travel Grants (SERB-DST & IISER Kolkata)
Reaction Rate Theory: Faraday Discussion; Cambridge — September 2016
13^{th} International Workshop on Quantum Reactive Scattering; Salamanca — July 2015

Best Poster Award (DCS Department Day) — January 2016, December 2014
Chemical Sciences

Senior Research Fellowship — July 2014
CSIR-UGC-NET
Human Resource Development Group, Govt. of India

Junior Research Fellowship — December 2011
CSIR-UGC-NET
Human Resource Development Group, Govt. of India

Graduate Aptitude Test in Engineering (GATE) — February 2011
Chemical Sciences

Published Articles

Coupled electron-nuclear dynamics on H_2^+ within time-dependent Born-Oppenheimer approximation, D. Dey and A. K. Tiwari, *J. Phys. Chem. A*, **120**, 8259, 2016.

Effect of vibrational pre-excitation on the dissociation dynamics of HOD^{2+}, D. Dey and A. K. Tiwari, *J. Phys. Chem. A*, **120**, 2629, 2016.

Selective breaking of bonds in water with intense, 2-cycle, infrared laser pulses, D. Mathur, K. Dota, D. Dey, A. K. Tiwari, J. A. Dharmadhikari, A. K. Dharmadhikari, S. De, and P. Vasa, *J. Chem. Phys.*, 143 , 244310, 2015.

Quantum dynamics on $S(^1D) + H_2$ reaction: Effect of orientation and rotation, D. Dey and A. K. Tiwari, *Eur. Phys. J. D*, 68 , 169, 2014.

Laser-pulse-shape control of photofragmentation in the weak-field limit, A. K. Tiwari, D. Dey and N. E. Henriksen, *Phys. Rev. A*, **89**, 023417, 2014.

Papers in Preparation

Many-electron response of carbon atom to intense, few-cycle laser pulses, D. Dey and A. K. Tiwari.

Posters and Presentations

Invited Talks

Quantum dynamics on time-independent and time-dependent PES's
Discussion with Prof. Graham Worth, UCL — September 2016

Poster Presentations

Quantum dynamics on time-independent and time-dependent PES's
Reaction Rate Theory: Faraday Discussion; Cambridge — September 2016
DCS Department Day; IISER Kolkata — January 2016

Quantum dynamics on $S(^1D) + H_2$ reaction: Effect of orientation and rotation
13^{th} International Workshop on Quantum Reactive Scattering; Salamanca — July 2015
Current Developments in Atomic, Molecular and Optical Physics; Delhi — March 2015
Spectroscopy and Dynamics of Molecules and Clusters; Nainital — February 2015
Theoretical Chemistry Symposium; Pune — December 2014
DCS Department Day; IISER Kolkata — December 2014

Teaching Experience

Teaching Assistant: CH3103 Quantum Chemistry II — Fall 2015, 2013
IISER Kolkata

Conferences and Workshops: Attended/Attending

Reaction Rate Theory: Faraday Discussion; Cambridge	September 2016
13^{th} International Workshop on Quantum Reactive Scattering; Salamanca	July 2015
Current Developments in Atomic, Molecular and Optical Physics; Delhi	March 2015
Spectroscopy and Dynamics of Molecules and Clusters; Nainital	February 2015
Theoretical Chemistry Symposium; Pune	December 2014
Electronic Structure and Dynamics of Molecules and Clusters; Kolkata	February 2013
Theoretical Chemistry Symposium; Guwahati	December 2012
Atomic, Molecular and Optical Physics; Kolkata	December 2012

Computer Skills

Operating Systems: Unix/Linux, Windows, AIX (basic)
Programming: FORTRAN, MATLAB, MATHEMATICA
Software: MOLPRO
Applications: Gnuplot, LaTeX, HTML, CorelDRAW, Inkscape, Dia

Languages

English, Hindi, Bengali (mother tongue), Spanish (basic)

Hobbies

Badminton, Swimming, Harmonica, Cinema

References

Dr. Ashwani K. Tiwari — Thesis Advisor

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