Deepak Verma

Department of Chemistry
University of Southern California
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Nationality: Indian

Education

2014 - 2019 | **Doctorate of Philosophy**
University of Southern California, Los Angeles
Thesis:*Infrared Spectroscopy in Helium Nanodroplets*
Supervisor: Prof. Andrey Vilesov

2009 - 2014 | **Dual Bachelor and Master of Science**
Indian Institute of Science Education and Research Mohali, India
Major: Chemistry
GPA: 8.9/10
Thesis:*Matrix Isolation Spectroscopy of Chloroform and Phenylacetylene and ab-initio Calculations*
Supervisor: Prof. K.S Viswanathan

2007 - 2009 | **CBSE (10th - 12th)**
Maharishi Vidya Mandir, Chennai, India

Skills

Operating Systems | Unix/Linux, Microsoft Windows, Mac OS X

Programming languages | Python (beginners), C++ (beginners), LaTeX

Softwares | MATLAB, Origin, EndNote, AutoCAD, LabView (Basic), Mendeley

Experience

Teaching | Teaching assistant for CHEM 105a & 105b (General Chemistry)
Teaching assistant for CHEM 430a (Thermodynamics and Kinetics)
Teaching assistant for CHEM 430b (Quantum Chemistry)

Other | Mentored a high school student at USC
Guitar lessons (2 Semesters) at Thornton School of Music

Conferences & Workshops

Conference Talks

- Poster Presentation at Quantum Fluid Clusters (QFC) Conference, Austria (2017)
  Title: *Large Helium Droplets from Pulsed Source*

- Poster presentation at Stauffer Lecture, USC (2016)
  Title: *Formation of Large Nitric Oxide Clusters inside Superfluid Helium Droplets*

- Project talk at Indian Institute of Science (IISc), Bangalore, India (2012)
  Title: *Electronic Energy levels of Transition Metal ions*

- Project talk at Indira Gandhi Center for Advanced Research (IGCAR), Kalpakkam, India (2011)
  Title: *Study of Nanomaterials and their Potential Application in CNT based Gas Sensors*

Workshops & Schools

- Ultrafast X-Ray Summer School organized by SLAC and DESY, Hamburg, Germany (2017)

- Indo-German Conference on "Modeling Chemical and Biological (Re)activity (MCBR) - 3, Mohali (2013)

- VIJYOSHI Science Camp organized by Kishore Vaigyanik Protsahan Yojana (KVPY), JNCASR, New Delhi, India (2009)

Awards & Recognitions

2017 | USC Department travel award for Quantum Fluid Cluster (QFC) conference in Austria

2017 | Travel award for Ultrafast X-ray Summer School (UXSS), Hamburg, Germany

2016 | Accepted National Science Foundation (NSF) research grant

2013 | Inlakhs Sivdasani Scholarship for summer internship at University of St. Andrews, Scotland, UK

2013 | Award for Academic Excellence in Chemistry, IISER Mohali, India

2009 | Kishore Vaigyanik Protsahan Yojana (KVPY) fellow

Proposals & Publications

1. **Verma, D.**, Tanyag, R. M. P., O'Connell, S. M. O., Vilesov, A. F., 2018, Advances in Physics X, submitted, *Infrared Spectroscopy of Superfluid Helium droplets*
2. Bacellar, C., Chatterley, A. S., Lackner, F., Pemmaraju, C. D., Tanyag, R. M. P., **Verma, D.**, Bernando, C., O'Connell, S. M. O., Bucher, M., Ferguson, K. R, Gorkhover, T., Coffee, R. N., Coslovich, G., Ray, D., Osipov, T., Neumark, D. M., Bostedt, C., Vilesov, A. F., Gessner, O., 2018, Submitted, *Anisotropic Surface Softening and Core Depletion During the Expansion of a Strong-field Induced Nanoplasma*
3. **Verma, D.**, Vilesov, A. F., 2018, Chemical Physics Letters, Vol. 694, p129-134, *Pulsed Helium Droplet Beams*
4. Tanyag, R. M. P., Jones, C. F., Bernando, C., O'Connell, S. M. O., **Verma, D.**, Vilesov, A. F., 2018, *Cold Chemistry: Molecular Scattering and Reactivity Near Absolute Zero*, Royal Society of Chemistry, Cambridge

5. Hoshina, H., Slipchencko, M., Prozument, K., **Verma, D.**, Vilesov, A. F., 2016, Journal of Physical Chemistry A, Vol. 120, p527-534 *Infrared Spectroscopy and Structure of $(NO)_n$ Clusters*

6. Linear Coherent Light Source (LCLS) proposal at X-Ray synchrotron facility at SLAC, LJ54, 2015
Title:*Imaging the Growth of Impurity-Induced Nanoplasmas*

7. Linear Coherent Light Source (LCLS) proposal at X-Ray synchrotron facility at SLAC, LP05, 2017
Title:*Superfluid Far from Equillibrium*

8. Linear Coherent Light Source (LCLS) proposal at X-Ray synchrotron facility at SLAC, LU46, 2018 (Primary Author)
Title:*Molecular Self-assembly Close to Zero Kelvin*

References

Andrey Vilesov | **Professor of Physics and Chemistry**
University of Southern California, Los Angeles, USA
Phone: +1(626)535-3510
Email: vilesov@usc.edu

Curt Wittig | **Paul A. Miller Professor of Letters, Arts and Sciences**,
University of Southern California, Los Angeles, USA
Email: wittig@usc.edu

Armand R. Tanguay, Jr. | **Professor of Electrical Engineering-Electrophysics, Chemical Engineering and Materials Science, Biomedical Engineering, Physics and Astronomy, and Ophthalmology**,
University of Southern California, Los Angeles, USA
Email: atanguay@usc.edu