# DR. PRIYA THAKUR

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# R & D PROFESSIONAL - CHEMISTRY

*Seeking a challenging and rewarding opportunity in the field of Chemical, coatings, formulation & development, Nanomaterials and Nanotechnology, Oil & gas, Materials Research, Petrochemical Industries and others*

## PROFILE

- Qualified Ph.D. Chemistry from University of Pune (BARC-UoP Collaborative Research Programme) accented with the latest trends and techniques of the field, having an inborn quantitative aptitude, determined to carve a successful career in the industry.
- Completed thesis on Surface Modification Studies of CdS nanoparticles using cysteine, Ag, ZnO, and $TiO_2$. Professional with various publications to accredit and possess diverse research background providing a broad range of experience in the same.
- **Skilled in** development of water based formulations for coating applications, development of organic-inorganic hybrid coatings and Inorganic coatings. Familiar with different additive packages, intercoat adhesion, and mechanical testing of coatings. In a position to visualize ideas, carry out research independently, proficiency in scientific literature search, scientific writing and ability to work in a team
- **Expertise** in material synthesis using different methods, their functionalization, characterization with experience in various spectroscopic techniques. Well acquainted with polymer-nanocomposites, oxide, sulphide, composite materials, and the concept of catalysis, sol gel synthesis. Capable to deliver organic, inorganic, polymer, surfactant, catalytic related solutions using different material characterization tools and separation techniques.
- Measuring material properties using a variety of advance analytical techniques and highly competent with interpretational aspects of multiple characterization techniques.
- Awarded Junior Research Fellowship and Senior Research Fellowship through BARC, India and Postdoctoral Fellowship through CSIR.
- **Self-motivated, hard working and goal-oriented** with a high degree of flexibility, creativity, resourcefulness, commitment and optimism. Conceptually strong with an innovative and analytical approach to the work with an **eye for detail**.

## Employment Details:

**Henkel Adhesive Technologies India Pvt Ltd (March 2013-till date)**

**Designation: Research Chemist (March 2013-October 2014)**
**Designation: Research Scientist (November 2014-till date)**

**Responsibilities**

- Responsible for development of formulations and testing for coating applications till commercialization
- Identify customer needs & process and develop products to fulfil customer requirement in timely manner
- Develop project plan, conducts own experiments, maintain and interpret lab results, conclusion and way forward
- Interacts with commercial team and global partners
- Effectively interacts with operations team for technology transfer and scale up of products
- Provide and understand scientific insights to new or existing products
- Share technical knowledge with local and global team
- Proactively communicates with purchase team and raw material suppliers
- Offer innovative and cost effective improvements
- Participate in lab set up activities

**Designation: Innovation Project Manager (October 2014 – April 2015)**

- Responsible for project execution including planning, resourcing
- Communicate effectively with all stakeholders for timely delivery
- Balance technical understanding for effective execution
- Provide regular status reports to the technology and leadership teams

**Achievements**

- Two invention disclosures filed
- Award Winning Excellence (AWE) award-2015
- Award for Best Support Team-2016
- Award for Best NPI-2017

**National Chemical Laboratory, Pune**
***Research Associate***

- Polymer-Nanocomposites for Coating Applications
- Thermoelectric Materials for Thermoelectric Applications

## EDUCATIONAL CREDENTIALS

**Ph.D. Chemistry, 2011**
**Thesis: Surface Modification Studies of CdS nanoparticles using cysteine, Ag, ZnO, and $TiO_2$.**
University of Pune (BARC-UoP Collaborative Research Programme)

**M. Sc. Analytical Chemistry, 2004**
Department of Chemistry, University of Pune; Grade A

**Additional Qualifications**
P.G. Diploma in Patents Law (2014)
Nalsar University of Law, Hyderabad

**Equipment Competency**

UV-Visble Spectroscopy, Fluorescene spectroscopy, X-ray Diffraction, X-ray Fluorescence, Infrared Spectroscopy, X-ray photoelectron spectroscopy, Scanning and transmission electron microscopy, Thermogravimetric Analysis, Particle size analyser

**Academic Accolades**

- 2004-2006 – Award of Junior Research Fellowship through BARC, India
- 2006-2009 – Award of Senior Research Fellowship through BARC, India
- 2012-2013 – Award of Postdoctoral Fellowship through CSIR, India

**Workshops/Conferences Attended**

- Participation in "National Workshop on Advanced Techniques for characterization of Nanomaterials", Department of Physics, University of Pune, Pune, 2005.
- Participation in "Workshop on Radiation and Photochemistry" TSRP, Mumbai, 2006.
- Participation in "Workshop on Radiation and Photochemistry", Department of Chemistry, University of Pune, Pune, January, 2006.
- Participation in "Orientation programme in catalysis for research scholars" at National Centre for Catalysis Research, IIT, Chennai, 2006.
- Participation in "8th Asian Academic Network for Environmental Safety and Waste Management" Chennai, December, 2006.

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**PUBLICATIONS**

*Refereed Journals*

- Structural Phase Behavior and Vibrational Spectroscopic Studies of Biofunctionalized CdS Nanoparticles. **Priya Thakur,** S.S. Joshi, S. Kapoor, T.Mukherjee, ***Langmuir***, 2009, 25 (11), 6334–6340
- Fluorescence Behavior of Cysteine Mediated Ag@CdS Nanocolloids. **Priya Thakur**, S.S. Joshi, S. Kapoor, T.Mukherjee, ***Langmuir***, 2009, 25 (11), 6377–6384
- Investigations of CdS and Ag-CdS Nanoparticles by X-ray Photoelectron Spectroscopy **Priya Thakur**, S.S. Joshi, K.R. Patil, ***Appl. Surfc. Sci***, 2010, 257 (5), 1390-1394
- Synthesis and characterization of CdS doped $TiO_2$ nanocrystalline powder: A Spectroscopic Study. **Priya Thakur**, Ridhima Chadha, Nandita Biswas, Sisir K. Sarkar, Tulsi Mukherjee, Satyawati S. Joshi, Sudhir Kapoor - ***Materials Research Bulletin***, 2012, 47 (7) 1719-1724
- Effect of alcohol and alcohol/water mixtures on crystalline structure of CdS nanoparticleS. **Priya Thakur**, S.S. Joshi, ***J. Expt. Nanosci***., 2012, 7 (5), 547-558

*Conferences*

- Attended International exhibition conference Paint India 2014.
- Structural and Morphological Studies of CdS-ZnO Nanocomposite. **Priya Thakur,** S.S. Joshi, International Symposium on Advanced Materials and Polymers for Aerospace and Defence Applications, December -2008
- Luminescence Properties of CdS nanoparticles. **Priya Thakur**, S.S. Joshi, S.Kapoor, T.Mukherjee, Trombay symposium on Radiation and Photochemistry, January- 2008.
- Synthesis and Characterization of Ag@CdS Core-Shell Quantum dots. **Priya Thakur**, S.S. Joshi, S. Kapoor, T.Mukherjee, XXIX National Conference on Electron Microscopy –EMSI, December 2007.
- XRD and IR Studies of L-Cysteine capped CdS nanoparticles at different pH. **Priya Thakur**, S.S. Joshi, S. Kapoor, T.Mukherjee, International Conference on Advanced Materials and Applications, ICAMA, Kolhapur, November-2007
- Synthesis and Characterization of L-Cysteine capped CdS Nanoparticles. **Priya Thakur**, Satyawati S. Joshi, International Seminar on Recent Trends in Chemistry, Department of Chemistry, University of Pune, 2007.
- Gamma Radiolytic Studies of CdS Nanoparticles. **Priya Thakur**, S.S. Joshi, S. Kapoor, T.Mukherjee, Trombay symposium on Radiation and Photochemistry, Mumbai, January-2006
- Development of RoHS compliant Functional Coatings. **Priya Thakur**, Jagadeesh Kompala, Vinay Gandhi, Girdhari Kumar. 5th GCP GOA, April-2017

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**Language Known**: English, Hindi, and Marathi
**References:** Available on Request