Curriculum Vitae

Dr. Partha Pratim Das

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Google Scholar Link: https://scholar.google.co.kr/citations?user=WlAWa_sAAAAJ&hl=en

Present Position(s)

Post-Doctoral researcher (**Since September, 2021**) in the Center for Novel States of Complex Materials Research, Seoul National University, South Korea (QS Global World Ranking: 36) (Project: Lead project of National Research Foundation of Korea [NRF] funded by Govt. of Republic of Korea).
Supervisor: Prof. Kee Hoon Kim, Department of Physics and Astronomy, Seoul National University.
Research Area: Synthesis, structural and opto-electronic behaviors study of complex materials under extreme conditions for energy and environmental applications.

Visiting Professor (**Since September, 2021**) in the School of Energy Materials and International & Inter University Center for Nanoscience & Nanotechnology, Mahatma Gandhi University, Kerala, India.

Previous Post-Doctoral Research Experiences

I. Post-Doctoral researcher (**April, 2018-August, 2021**) in the Institute of High-Pressure Mineral Physics and Chemistry, Yonsei University, South Korea (QS Global World Ranking: 79) (Project: Lead project of National Research Foundation of Korea [NRF] funded by Govt. of Republic of Korea).
Supervisor: Prof. Yongjae Lee, Department of Earth System Sciences, Yonsei University.

II. Post-Doctoral researcher (**October, 2016-March, 2018**) in the Department of Earth System Sciences, Yonsei University; South Korea (Project: Brain Korea [BK-21] funded by Govt. of Republic of Korea).

III. Project Associate (**July-September, 2016**) and **Technical Expert** (**January-April, 2016**) at CSIR-CGCRI, Kolkata, India (Project: GAP-0339; Development of Next Generation Solar Cells; TAPSUN program; funded by Ministry of New and Renewable Energy; Govt. of India).

Born and Nationality	9th June, 1987 in West Bengal, India
Parents	Mr. Vibek Kumar Das (Father), Mrs. Shyamali Das (Mother)

Academic Qualifications

Examination/Degree	Year of Passing	Board/University	Marks Obtained (%)
Secondary (10th Standard)	2002	West Bengal Board of Secondary Education, India	88.13% (1st Division)
Higher Secondary (12th Standard)	2004	West Bengal Council of Higher Secondary Education, India	75.20% (1st Division)
Bachelor of Science (Hons. In Chemistry)	2008	University of Calcutta, India	61.00% (1st Class)
Master of Science (Chemistry)	2010	University of Calcutta, India	65.10% (1st Class)
Doctor of Philosophy (Science)	2016	Jadavpur University, India	Awarded

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- **Awarded Ph. D (Science)** from Jadavpur University, Kolkata, India.
  Title of the Thesis: "**Studies on New Series of Semiconducting Oxides Based on ZnO-SnO_2 for Dye Sensitized Solar Cells"**.
  Supervisor: Dr. P. Sujatha Devi, HOD, Sensor & Actuator Division, CSIR-CGCRI, Kolkata, India.
  Research Laboratories during Ph. D: CSIR-Central Glass and Ceramic Research Institute, Kolkata and CSIR-National Chemical Laboratory, Pune, India (**January, 2011-January 2016**).

Area of Research

- Processing of nano-micro structured materials, 1D-3D materials, composites, quantum dots, carbon based materials, MOFs etc. Studies of growth and properties of materials on films surface.
- Synthesis of new and unusual compounds (superhydrides, intermetallic compounds etc.) applying extreme conditions, namely, in-situ high temperature and high pressure etc.
- Interdisciplinary area. Nanotechnology, spectroscopy, crystallography. Structure, microstructure, optical, electronic and magnetic properties study of complex materials.
- Understanding the structure-property relationships of various materials under extreme conditions (high pressure, high temperature, cryogenic temperature, high magnetic field etc.). Next-generation high pressure, high temperature techniques.
- Energy and environmental applications. Properties and performance studies of the next generation photovoltaic devices such as Dye Sensitized Solar Cells, Quantum Dot Solar Cells and Perovskite Solar Cells etc. and sustainable solar fuels generation.

Specific Skills

- Sol-Gel, Sonochemical, Solvothermal, Solid State, Combusion, Electrospun etc. techniques for multifunctional materials processing.
- Various coating techniques such as spin/dip coating, doctor blading, screen printing, SHILAR, CBD etc. for controlled growth of materials on different film surfaces.
- WAXS and SAXS (Synchrotron and Lab), XRF, TGA-DSC, FESEM, TEM, AFM analysis.
- Various spectroscopic measurements such as XPS, XAFS, EPR, Raman, FTIR, UV-Vis-NIR, DR, Photoluminescence, Photoconductivity, Lifetime, Quantum Yield.
- Miscellaneous measurements like VSM, PPMS, DLS, BET Surface Area-Particle Size, Zeta Potential, Contact Angle of solid surface, Microscopic Fluorescence Imaging.
- In-situ laser heating technique and handling of various diamond-anvil cells (DAC), large volume pressure cells (LVP) for new materials synthesis and performing experiments under extreme conditions (high pressure, high temperature, cryogenic temperature, high magnetic field etc.).
- In-situ XRD, XAFS, FTIR, Raman, UV-VIS, Photoluminescence, Transport, Conductivity, Magnetic property measurements of materials under extreme conditions.
- Fabrication, I-V, CV, Impedance and efficiency measurements of DSSC, QDSC and PSC devices. Fabrication and performance studies of Photocatalytic devices under light source of various spectral ranges.
- Using of CMPR, GSAS EXPGUI, GSAS-II, TOPAS, Crystal maker, Crystal diffract, MATCH, Origin, Fit 2D, Dioptas, Photoshop etc. softwares for various data analysis.

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List of Publications *(Best five publications are marked with red color front)*

1. **Partha Pratim Das**, Shruti A. Agarkar, Soumita Mukhopadhyay, Unnikrishnan Manju, Satishchandra B. Ogale and P. Sujatha Devi*, 'Defects in Chemically Synthesized and Thermally Processed ZnO Nanorods: Implications for Active Layer Properties in Dye-Sensitized Solar Cells'; **Inorganic Chemistry**, 2014, 53(8), 3961-3972. **(Impact Factor: 5.165, Citations: 53)**

2. Arpita Jana, **Partha Pratim Das**, Shruti A. Agarkar and P. Sujatha Devi*, 'A comparative study on the dye sensitized solar cell performance of solution processed ZnO'; **Solar Energy**, 2014, 102, 143-151. **(Impact Factor: 5.742, Citations: 35)**

3. **Partha Pratim Das** and Parukuttyamma Sujatha Devi*, 'Formation of Self-Assembled Defect-Free Zn_2SnO_4 Nanostructures from Binary Oxides without the Kirkendall Effect'; **Inorganic Chemistry**, 2014, 53(20), 10797-10799. **(Impact Factor: 5.165, Citations: 25)**

4. Soumita Mukhopadhyay, **Partha Pratim Das**, Suvendu Maity, Prasanta Ghosh, P. Sujatha Devi*, 'Solution grown ZnO rods: Synthesis, characterization and defect mediated photocatalytic activity'; **Applied Catalysis B: Environmental**, 2015, 165, 128-138. **(Impact Factor: 19.503, Citations: 98)**

5. **Partha Pratim Das**, Soumita Mukhpadhyaya, Shruti Agarkar, Arpita Jana, P. Sujatha Devi*, 'Photochemical performance of ZnO nanostructurs in dye sensitized solar cells'; **Solid State Sciences**, 2015, 48, 237-243. **(Impact Factor: 3.059, Citations: 21)**

6. **Partha Pratim Das**, Anurag Roy, Sumita Das, P. Sujatha Devi*, 'Enhanced Stability of Zn_2SnO_4 with N719, N3 and EosinY Dye Molecules for DSSC Application'; **Physical Chemistry Chemical Physics**, 2016, 18, 1429-1438. **(Impact Factor: 3.676, Citations: 43)**

7. D. Ghosh, K. Biswas, L. Balaji, **Partha Pratim Das**, P. Sujatha Devi and K. Annapurna, 'A rivisit on solar cell: generation of electricity by harvesting sunlight'; **Science and Culture**, 2015, 81(11-12), 337-347. (**Citation: 1)**

8. **Partha Pratim Das***, Anurag Roy, P. Sujatha Devi*, 'Zn_2SnO_4, an alternative photoanode for Dye sensitized solar cells: Current status and future scope'; **Transaction of Indian Ceramic Society**, 75, 3(1-8), 147-154, 2016. **(Impact Factor: 1.729, Citations: 16)**

9. **Partha Pratim Das**, Anurag Roy, Mukta Tathavadekar, P. Sujatha Devi*, 'Photovoltaic and photocatalytic performance of electrospun Zn_2SnO_4 hollow fibers'; **Applied Catalysis B: Environmental**, 203, 692-703, 2017. **(Impact Factor: 19.503, Citations: 62)**

10. Anurag Roy, **Partha Pratim Das**, Mukta Tathavadekar, Sumita Das, P. Sujatha Devi*, 'Performance of colloidal CdS sensitized solar cells with ZnO nanorods/nanoparticles'; **Beilstein Journal of Nanotechnology,** 8, 210-221, 2017. **(Impact Factor: 2.612, Citations: 17)**

11. Sumita Das, Srikrishna Pramanik, Sabyasachi Chatterjee, **Partha Pratim Das**, P. Sujatha Devi*, G. Suresh Kumar, 'Selective Binding of Genomic Escherichia coli DNA with ZnO Leads to White Light Emission: A New Aspect of Nano-Bio Interaction and Interface'; **ACS Applied Materials & Interfaces,** 9(1), 644-657, 2017. **(Impact Factor: 9.229, Citations: 14)**

12. Pratanu Nag, **Partha Pratim Das**, Anrag Roy, P. Sujatha Devi*, 'Iron Antimonate Quantum Dots Exhibiting Tunable Visible Light Emission'; **New Journal of Chemistry,** 41, 1436-1446, 2017. **(Impact Factor: 3.591, Citations: 6)**

13. **Partha Pratim Das**, Anurag Roy, Shruti Agarkar, P. Sujatha Devi*, 'Hydrothermally Synthesized Fluorescent Zn_2SnO_4 Nanoparticles in Dye Sensitized Solar Cells'; **Dyes and Pigments,** 154, 303-314, 2018. **(Impact Factor: 4.889, Citations: 9)**

14. Anurag Roy, **Partha Pratim Das**, Prabhakaran Selvaraj, Senthilarasu Sundaram*, Parukuttyamma Sujatha Devi*, 'Perforated $BaSnO_3$ Nanorods Exhibiting Enhanced Efficiency in Dye Sensitized Solar Cells'; **ACS Sustainable Chemistry & Engineering,** 6(3), 3299-3310, 2018. **(Impact Factor: 8.198, Citations: 36)**

15. **Partha Pratim Das**, Sabyasachi Chaterjee, Srikrishna Pramanik, Anurag Roy, Arindam Saha, G. Suresh Kumar, P. Sujatha Devi*, 'Multiband Fluorescent Graphitic Carbon Nanoparticles from Queen of Oils', **ACS Sustainable Chemistry & Engineering,** 6(8), 10127-10139, 2018. **(Impact Factor: 8.198, Citations: 10)**

16. **Partha Pratim Das**, Sudeshna Samanta, Lin Wang, Jaeyong Kim, Thomas Vogt, P. Sujatha Devi, Yongjae Lee*, 'Redistribution of Native Defects and Photoconductivity in ZnO under Pressure'; **RSC Advances**, 9, 4303-4313, 2019. **(Impact Factor: 3.361, Citations: 6)**

17. Anurag Roy, **Partha Pratim Das**, Prabhakaran Selvaraj, Senthilarasu Sundaram*, Parukuttyamma Sujatha Devi*, 'Template free synthesis of $CdSnO_3$ micro-cuboids for dye sensitized solar cells'; **Journal of Photochemistry and Photobiology A: Chemistry**, 380, 11824, 2019. **(Impact Factor: 4.291, Citation: 6)**

18. **Partha Pratim Das**, P. Sujatha Devi, Doglous A. Blom, Thomas Vogt, Yongjae Lee*, 'High Pressure Phase transitions of Morphologically-Distinct Zn_2SnO_4 nanostructures'; **ACS Omega**, 2019, 4, 10539-10547. **(Impact Factor: 3.512, Citations: 4)**

19. **Partha Pratim Das**, Sudeshna Samanta, Doglous A. Blom, Srikrishna Pramanik, P. Sujatha Devi, Thomas Vogt, Yongjae Lee*, 'Pressure-induced Assemblies and Structures of Graphitic-Carbon Sheet Encapsulated Au Nanoparticles'; **Nanoscale**, 2020, 12, 17462-17469. **(Impact Factor: 7.790, Citations: 2)**

20. Sangita Das*, **Partha Pratim Das**, James W. Walton, Kakali Ghoshal, Lakshman Patra, Maitree Bhattacharyya, 'FRET based ratiometric switch for selective sensing of Al^{3+} with bio-imaging in human peripheral blood mononuclear cells PBMCs'; **New Journal of Chemistry**, 2021, 45, 1853-1862. **(Impact Factor: 3.591, Citation: 1)**

21. **Partha Pratim Das**, Anurag Roy, Parukuttyamma Sujatha Devi, Yongjae Lee*, 'Solution processed Al-doped ZnO and its performance in dye sensitized solar cells'; **Current Applied Physics**, 2021, doi.org/10.1016/j.cap.2021.05.009. **(Impact Factor: 2.48, Citation: 1)**

22. Sangita Das*, **Partha Pratim Das**, James W. Walton, Kakali Ghoshal, Lakshman Patra, Maitree Bhattacharyya, Sabu Thomas, 'Human peripheral blood mononuclear cells targeted multi-dimensional nano-molar switch for selective detection of HSO_3^- anion'; **Dyes and Pigments**, 2022, 98, 109966. **(Impact Factor: 4.889, Citation: 1)**.

23. **Partha Pratim Das**, Sudeshna Samanta, Sangita Das, Thomas Vogt, Yongjae Lee*, 'Pressure-dependent colossal resistivity and anomalous optical signatures in $FeSbO_4$'; **The Journal of Physical Chemistry C**, 2022, 126, 7630-7637. **(Impact Factor: 4.126)**.

24. Sangita Das*, **Partha Pratim Das**, James W. Walton, Kakali Ghoshal, Lakshman Patra, Maitree Bhattacharyya, 'ESIPT induced phosphate ion targeted ratiometric fluorescent switch to monitor phosphate ion in human PBMCs'; **Dalton Transactions**, In Press, DOI: 10.1039/d2dt00581f, 2002. **(Impact Factor: 4.39)**.

25. **Partha Pratim Das*** and Sangita Das, 'Photovoltaic and photocatalytic performance of electrospun tripod-like Zn_2SnO_4 microstructures, (Manuscript under communication).

26. **Partha Pratim Das***, Sangita Das, Mangesh Diware, Sushanta Bera, Yongjae Lee, Kee Hoon Kim, 'Pressure-induced Non-*fcc* Structures of Graphitic-Carbon Sheet Embedded Ag Nanoparticles for Oxygen Reduction Reaction'; (Manuscript under preparation).

Curriculum Vitae

Book Chapters

1. Sangita Das (Author, Editor), Sabu Thomas (Author, Editor), **Partha Pratim Das (Author, Editor)**, 'Novel Platforms for Drug Delivery Applications', Publisher: **Elsevier Science**, ISBN-13: 9780323913768, Publication date: 15. 08. 2022, Series: Woodhead Publishing Series in Biomaterials, Pages: 665.

2. Sangita Das (Author, Editor), Sabu Thomas (Author, Editor), **Partha Pratim Das (Author, Editor)**, 'Sensing of Deadly Toxic Chemical Warfare Agents, Nerve Agent Simulants and their Toxicological Aspects', Publisher: **Elsevier Science**, ISBN-13: 9780323905534, Publication date: 15. 08. 2022, Pages: 610.

3. Sangita Das (Author, Editor), Sabu Thomas (Author, Editor), **Partha Pratim Das (Author, Editor)**, 'Organic and Inorganic Materials Based Sensors', Publisher: **Wiley-Vch Verlag Gmbh**, ISBN: 9783527349555, Publication date: 21. 06. 2023.

4. **Partha Pratim Das (Author)**, Mangesh Diware (Author), 'Perovskites as bifunctional electrocatalysts for metal-air batteries', **CRC Book**: Metal-Air Batteries: Principles, Progresses and Perspective (Under Preparation).

Achievements and Awards

Award(s)	Year	Awarding Authority/Agency
National Eligibility Test (NET)	Both June & December, 2011	CSIR-UGC, India
Best oral award in the Research Scholars Day	2014	CSIR-CGCRI, Kolkata, India
Best poster award at the Second International conference on Nanotechnology, Indo-US Joint Symposium held at Haldia Institute of Technology	2015	Haldia Regional Centre IIChE & Department of Chemical Engineering, Haldia Institute of Technology, India
MRSI Prize for the Best Poster Paper at 27th Annual general Meeting of Materials Research society of India jointly organized by CSIR-NEIST, Jorhat, IIT Guwahati and Tezpur University	2016	Materials Research Society of India
Best poster presentation at the International Conference on Ceramics, Glass and Refractories-Emerging Innovations, (CGREI-2016), IICT, Hyderabad, Telangana, India	2016	Indian Ceramic Society, Hyderabad and Visakhapatnam Chapter
P. P. Das et. al.; **New Journal of Chemistry,** 41, 1436-1446, has been selected for the themed collection: Celebrating Excellence in Research: 100 Women of Chemistry	2017	Royal Society of Chemistry

Oral Presentations

- Presentation on **'Development of ZnO-SnO_2 Based Photoanodes for Dye Sensitized Solar Cells'**; 3rd Research Scholars Day, 20th August 2014 at CSIR-CGCRI.

- Presentation on **'Performance of Al doped ZnO for Dye Sensitized Solar Cells'**; 1st International Conference on "ALUMINA AND OTHER FUNCTIONAL CERAMICS (AOFC-2015)" during March

11-13, 2015 at CSIR-CGCRI, Kolkata on the topic entitled 'Performance of Al doped ZnO rods for Dye Sensitized Solar Cells.

- Presentation on **'Zn_2SnO_4: An Alternative Photoanode for Dye Sensitized Solar Cells'**; the International Conference on Nanomaterials and Nanotechnology at KSR College of Technology, Tiruchengode, Tamilnadu, during December 7-10, 2015.

- Contributory presentation on **'Effect of Native Defects on the Pressure-Induced reversibility in Structural Transformations of ZnO rods and flowers'** at 2nd international conference on "ALUMINA AND OTHER FUNCTIONAL CERAMICS (AOFC-2017)" during February 15-17, 2017 at CSIR-CGCRI, Kolkata.

- Contributory presentation on **'Influence of native defects of ZnO rods and flowers on the pressure-induced structural transformations and phase evolution'** at the 26th International Conference on High Pressure and Technology (AIRAPT 26) joint with the 8th Asian Conference on High Pressure Research (ACHPR 8) and the 19th China High Pressure Conference (CHPC 19) during August 18-23, 2017 at Beijing, China.

- Contributory presentation on **'Redistribution of Native Defects and Photoconductivity in ZnO under Pressure'** at the 2018 Spring Conference of the Korean Institute of Metals and Materials during 25-27th April, 2018 at International Convention Center, Jeju, South Korea.

- Invited presentation on '**Advanced Functional Materials for Energy and Environmental Applications**' as a '**Resource Person**' in the International Webinar organized by the Department of Chemistry, Gour Mohan Sachin Mandal Mahavidyalaya, Kolkata, India in association with the Internal Quality Assurance Cell on 19th September, 2020.

Conference Proceedings

- Arpita Jana, **Partha Pratim Das**, P. Sujatha Devi, and N. R. Bandyopadhyay, 'Solution processed ZnO Rods & Cubes: Candidate for Dye-Sensitized Solar Cell'; International Symposium on Opportunities and Challenges (ISEM-2011) held at CSIR-CGCRI, India during March 01-02, 2011.

- **Partha Pratim Das**, Debtanu Maiti, and P. Sujatha Devi, 'Solution processed Al doped ZnO Rods'; International Conference on Nano Science and Technology (ICONSAT-2012) held in Hyderabad, India during January 20-23, 2012.

- **Partha Pratim Das**, Soumita Mukhopadhyay and P. Sujatha Devi, 'Synthesis and Characterization of ZnO Rods for Dye-Sensitized Solar Cells'; International Conference on Science and Technology of Renewable and Clean Energy Sources (3rd EICOON SCHOOL-2012) held in Kolkata, India during April 30-May 01, 2012.

- **Partha Pratim Das**, Soumita Mukhopadhyay and P. Sujatha Devi, 'Sonochemical Synthesis of ZnO Rods for Dye Sensitized Solar Cells'; International Conference on Electron Microscopy (EMSI-2012) held in IISC, Bangalore, India during July 2-4, 2012.

- **Partha Pratim Das,** 'Performance of a Dye sensitized solar cell using solution processed ZnO rods'; Annual workshop on 1st Research Scholars' Day, 2012, held at CSIR-CGCRI, Kolkata, India on 18th July, 2012.

- **Partha Pratim Das**, Santanu Maiti, P. Sujatha Devi and M. K. Sanyal, 'Unusual growth of (100) oriented ZnO films exhibiting tunable optical properties from randomly oriented ZnO rods: X-ray- Scattering and Optical Study'; FIRST USERS' MEETING OF IB AT PHOTON FACTORY, KEK, JAPAN, held at SINP, Kolkata, India on 6th October, 2013.

- **Partha Pratim Das**, Shruti A. Agarkar, Soumita Mukhopadhyay, Unnikrishnan Manju, Satishchandra B. Ogale and P. Sujatha Devi, 'Performance of Solution Processed ZnO Rods in Dye Sensitized Solar cells: Implications of Defects on Active Layer Performance'; 2nd TAPSUN Conference held at CSIR - Central Leather Research Institute, Adyar, Chennai, India during September 13-14, 2013.

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- **Partha Pratim Das**, 'Defects in chemically synthesized ZnO nanorods: Implications for active layer properties in dye Sensitized solar cells'; 2nd Annual workshop on Research Scholars' Day, 2013, held at CSIR-CGCRI, Kolkata, India on 20th August, 2013.

- Anurag Roy, **Partha Pratim Das**, Sumita Das, Mukta Tathavadekar and P. Sujatha Devi, 'Performance of N719 and CdS Sensitized ZnO Based Solar Cells'; Workshop on Indian Innovations in Materials Research: A new Materials and Process jointly organized by Indian Associations for Productivity, Quality and Reliability, Kolkata and CSIR-CGCRI during June 25-27, 2015 at CSIR-CGCRI, Kolkata, India.

- Anurag Roy, **Partha Pratim Das**, Shruti A. Agarkar, P. Sujatha Devi, 'Performance of ZnO rod in DSSC and QDSC'; 26th Annual general Meeting of Materials Research society of India jointly organized by Materials Research Society of India and Dept. of Physics, University of Rajasthan during February 9-11, 2015 at University of Rajasthan, Jaipur, India.

- **Partha Pratim Das**, P. Sujatha Devi, 'Zn2SnO4 Nanostructures as Photoanode for Dye Sensitized Solar Cells', the Second International conference on Nanotechnology, Indo-US Joint Symposium (ICNT-2015) organized by Haldia Regional Centre IIChE and Department of Chemical Engineering, Haldia Institute of Technology during February 19-22, 2015 at Haldia Institute of Technology, India.

- Anurag Roy, **Partha Pratim Das**, Mukta Tathavadekar and P. Sujatha Devi, 'Electrospun Zn_2SnO_4 Photoanodes for Dye Sensitized Solar Cells'; 27th Annual general Meeting of Materials Research society of India jointly organized by CSIR-NEIST, Jorhat, IIT Guwahati and Tezpur University during February 18-20, 2016 at CSIR-NEIST, Jorhat, India.

- Sumita Das, **Partha Pratim Das**, Santanu Maiti and P. Sujatha Devi, 'Thickness, Orientation and Defect Dependant Surface Wettability of ZnO Films'; 27th Annual general Meeting of Materials Research society of India jointly organized by CSIR-NEIST, Jorhat, IIT Guwahati and Tezpur University during February 18-20, 2016 at CSIR-NEIST, Jorhat, India.

- Anurag Roy, **Partha Pratim Das**, Sumita Das, and P. Sujatha Devi, 'Enhanced stability of Zn2SnO4 ceramics as a photoanode in dye sensitized solar cells', International Conference on Ceramics, Glass and Refractories- Emerging Innovations, (CGREI-2016) organized by Indian Ceramic Society, Hyderabad and Visakhapatnam Chapter during December 13-15, 2016 at IICT, Hyderabad, Telangana, India.

- Anurag Roy, **Partha Pratim Das** and P. Sujatha Devi, "Perovskite $BaSnO_3$ Photoanode in Dye Sensitized Solar Cell" on 2nd International Conference and Workshop on "Alumina and Other Functional Ceramics-AOFC 2017", organized by Indian Ceramic Society and CSIR-CGCRI (Kolkata), 15-17th February, 2017 at CSIR-CGCRI, Kolkata.

- **Partha Pratim Das**, Sudeshna Samanta, Yongjae Lee, 'Pressure-induced structural transformation and photo-response behavior in ZnO rods and flowers: Unraveling the effect of crystal shape and native defects'; The 29th Synchrotron Radiations Users' Workshop and KOSUA Meeting during November 23-24, 2017 at POSCO Int'l Center, POSTECH, Pohang, South Korea.

- Anurag Roy, **Partha Pratim Das**, P. Sujatha Devi and S. Sundaram "Performance of Chemically Synthesized Porous Nanostructured $BaSnO_3$ in Photovoltaic Applications" on Clean and Renewable Energy Technologies via Chemical Route organized by The International Institute for Complex Adaptive Matter (I2CAM) at University of California, Davis & Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR), Bangalore at JNCASR Campus, Bengaluru, 27th November- 2nd December, 2017.

Courses and Conferences Attended

- A short-term course on 'Scanning Electron Microscopy for Beginners' organised by School of Materials Science & Engineering, Indian Institute of Engineering Science and Technology, Shibpur, India from February 7-11, 2011.

- An international conference on "Biomaterials and Implants: Prospects and Possibilities in the New Millennium" organized by CSIR-CGCRI, Kolkata, India during July 21-23, 2011.

- The 'Advanced School on High Resolution X-Ray Techniques, Atomic Force Microscopy and their applications' during December 14-15, 2011 organized jointly by S N Bose National Centre for Basic Sciences & Bruker AXS Analytical Instruments Pvt. Ltd Kolkata, held at S. N. Bose National Centre for Basic Sciences, Kolkata, India.

- Workshop on XAFS at Indian Beamline, RRCAT, Indore, India during September 27-29, 2012.

- The RSC- India Road Show, held at IACS, Kolkata, India on February 5, 2013.

- The Seminar on Films of Soft Materials organized by Surface Physics and Materials Science Division, SINP, Kolkata on 2nd December, 2013 at SINP, Kolkata, India.

- The Technical seminar & Hands-On Workshop organized by Agilent in Kolkata, India on July 26, 2013.

- The Technical seminar on using 'High Score Plus' for Rietveld Analysis organized by PAN alytical at CGCRI, Kolkata, India during March 10-11, 2014.

- 'Summer School High Pressure Experiment', the workshop based on high pressure and temperature research with diamond anvil cell organized by HYU-HPSTAR-CIS High Pressure Research Center at Hanyang University and Seoul National University, South Korea during 31st July-2nd August, 2017.
- Virtual Conference of the Joint Symposium, 'The 1st Workshop on Quantum Materials under Extreme Conditions' and 'The 4th HYU-HPSTAR-CIS and Korea-China Symposium on High Pressure' on November 27, 2020.

- Virtual presentation on the topic entitled 'Superconductivity: A Hundred Years to Reach Room Temperature' by Prof. Warren Pickett on October 29, 2021.

- 10th Asian Conference on High Pressure Research combined with HPSP-19/WHS-3 during November 21-25, 2021, Virtual Korea.

- 12th APCTP-IACS-KIAS Joint Conference on Emergent Phenomena in Novel Oxide Materials and Low Dimensional Systems during November 29-30, 2021.

Experiences and Activities

- Previous **member** of the project entitled 'Quality checking of drinking water in rural areas to detect the presence of endocrine disrupters, a new step for rural sector interventions' under **CSIR 800 program by Govt. of India** at CSIR-CGCRI, Kolkata.

- X-ray diffraction measurements at '**BL-18B**' Beamline-Multipurpose monochromatic hard X-ray station at **Photon Factory (PF), KEK**, **Japan**.

- In-situ high pressure, high temperature X-ray diffraction, XAFS and FTIR, high resolution powder X-ray diffraction measurements at **'3D'**-X-ray Scattering Beamline**, '5A'**-Material Science X-ray Scattering Beamline, **'6D'**-Crystallography and Scattering Beamline, **'7C'**-X-ray Nano Imaging Beamline, **'9A'**-Ultra Small Angle X-ray Scattering Beamline, **'9B'**-High Resolution Powder X-ray Diffraction Beamline, **'10C'**-Wide Energy X-ray Absorption Fine Structure Beamline, **'12D'**-Infrared Spectroscopy Beamline at **PLS-II, Pohang Accelerator Laboratory (PAL), South Korea.**

- **XFEL** experiments at Femtosecond X-ray Scattering (FXS) station at **Pohang Accelerator Laboratory (PAL), South Korea.**

- **Research Internship** at the **'Center for High Pressure Science and Technology Advanced Research' (HPSTAR)** at Pudong, Sanghai 201203, P. R. China

- Research on the project entitled **'Preparation and characterization of some Cu(II) and Ni(II) complexes with N, O donor Schiff base ligands'**. **Advisor: Dr. Gurucharan Mukhopadhyay**, Professor, Department of Chemistry and Biochemistry, Presidency College, Calcutta University, Kolkata, India.

Editor and Reviewer of the SCI Journals

- Editor of the special issue entitled 'New Energy and Sustainable Materials' of the journal Sustainability, MDPI.
- Reviewer, Molecular Pharmaceutics of American Chemical Society.
- Reviewer, Transactions of the Indian Ceramic Society of Taylor and Francis.
- Reviewer, Journal of Fundamental and Applied Sciences of African Journals Online.
- Reviewer, Minerals, Journal of Composites Science, Sustainability, MDPI.

Memberships

- Lifetime member, Materials Research Society of India (MRSI).
- Lifetime member, DNA society of India.
- Member, International Association for the Advancement of High Pressure Science and Technology.

Research Collaborations

- NanoCenter & Department of Chemical Engineering, University of South Carolina, Columbia, SC 29208, USA.
- NanoCenter & Departments of Chemistry & Biochemistry and Chemical Engineering, University of South Carolina, Columbia, SC 29208, USA.
- Center for High Pressure Science and Technology Advanced Research, Shanghai, China.
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Declaration

I hereby declare that the above facts are true to the best of my knowledge and belief.

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