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DOB: 10/12/1990

SAYANTANI BHATTACHARYA

Flat No. 8/12 MIG(U) Birati Housing Estate. Nimta M. B. Road. Kolkata 700049

To obtain a Faculty Position in Chemistry in a reputed educational Institution

SKILLS

TECHNICAL SKILLS

•Material Synthesis:
Trained in carrying out device fabrication using Electrodeposition, Chemical bath deposition, Chemical vapour deposition, Spin coating, Drop casting.

•Characterization Techniques:
Trained in handling semiconductor parameter analyser (e.g: Autolab 204, 302N, CHI 601, 650E) operated with probe station (Suss MicroTec), Source meter, Impedance analyser, FESEM, EDX, XRD, spectrophotometer etc.

OTHER SKILLS

Hands-on experience and understanding of theory and practical of chemistry. Thorough knowledge to develop, implement and analyze student assessments. Immense ability to establish and maintain high academic standards. Amazing ability to work collaboratively with administration

EXPERIENCE

Google Scholar Citations: 58 **h index:** 5 **i10 index: 3**

EDUCATION

IIEST, SHIBPUR **2022, submitted**
PhD (New generation solar cell)
Collaboration with
Heritage Institute of Technology, Kolkata

IIEST, SHIBPUR
M.SC (Chemistry with Physical Chemistry specialization) Grades : **78.35%** **2014**

UNIVERSITY OF CALCUTTA **2012**
B.SC (Chemistry Hons) Grades :
First Class, 66.5%

AISSCE CBSE (10+2) **2009**
Higher Secondary Grades : **85.8%**

AISSE CBSE (10) **2007**
Secondary Grades : **86.6%**

HONORS AND AWARDS

- Qualified in **CSIR-UGC National Eligibility Test (NET) - 2014**. **UGC-JRF** in Chemical Science.
- **Best Poster Presentation Award** in **National Symposium on Renewable Energy for Sustainable Future: Materials and Technology Development, February 27-28, 2020** Organized by IIChE – HITK Students Chapter, Dept. of Chemical Engineering and Dept of Chemistry and Environment.
- **S.R. Palit Award in Physical Chemistry Special** in Fiftyfourth Annual Convention Of Chemists, December 23-25, 2017.
- **Second position** in oral presentation at **research scholars colloquium, IIEST Shibpur.**
- **Young scientist award** at National Symposium on Recent Advances in Chemistry and Industry, **Indian Chemical Society, Calcutta University, 2015.**
- **Second position** for best poster presentation in **international conference on advanced materials and energy technology symposium, IIEST Shibpur.**

ACTIVITIES

TEACHING EXPERIENCE:

- Guest Faculty in department of Chemistry, Heritage Institute of Technology, Kolkata.
- Conducting practical classes at B. Tech UG level at IIEST Shibpur

PROFESSIONAL ACTIVITIES:

- Organizing committee student member, Research Scholar Colloquium 2016, 22-23rd Aug, 2016, Indian Institute of Engineering Science and Technology (IIEST), Shibpur, West Bengal, India.
- Technical programme committee student member, National symposium on recent advances in chemistry industry, 21-22nd Aug, 2017, Indian Institute of Engineering Science and Technology (IIEST), Shibpur, West Bengal, India.

EXTRA CURRICULAR ACTIVITIES:

- Taking part in different singing competitions and achieved various awards, watching cricket, gardening and travelling and exploring places

LANGUAGE

English, Hindi and Bengali (All read and write)

LIST OF PUBLICATIONS:

(1) **Sayantani Bhattacharya**, Gourab Ghosh, Mihir Acharya, Jayati Datta, Sequential layer deposition of Au/Ag NPs on TiO_2 matrix in dye sensitized solar cell delivering remarkable energy efficiency, Electrochim. Acta (communicated, **2022**).

(2) Binitendra Naath Mongal, **Sayantani Bhattacharya**, Tarun Kanti Mandal, Jayati Datta & Subhendu Naskar, Synthesis, characterization and photovoltaic studies of 2,2′;6′,2"-terpyridine-based ruthenium complexes with phenylamino, anthranyl and furfuryl substitutions at the 4′-position, *Journal of Coordination Chemistry*, 74, **2021**, 1382-1398.

(3) **Sayantani Bhattacharya** and Jayati Datta, Wide-low energy coupled semi-conductor layers of TiO_2 – CdX boosting the performance of DSSC, *Solar Energy*, 208, **2020**, Pages 674-687.

(4) **Sayantani Bhattacharya** and Jayati Datta, CdTe nanoparticles decorated titania for dye sensitized solar cell: a novel co-sensitizer approach towards highly efficient energy conversion, *New J. Chem.*, 41, **2017**, 8663-8672.

(5) Arunava Pal, Atanu Jana, **Sayantani Bhattacharya**, Jayati Datta, SPR effect of AgNPs decorated TiO_2 in DSSC using TPMPI in the electrolyte: Approach towards low light trapping, *Electrochimica Acta*, 243, **2017**, 33-43.

(6) Binitendra N. Mongal, Sumita Naskar, Arunava Pal, **Sayantani Bhattacharya**, Tarun K. Mandal, Jayati Datta, Subhendu Naskar, Ruthenium Complexes of Substituted Terpyridine and Pyridyl–quinoline Based Ligands with Ancillary Ligands: Synthesis, Characterization, Electrochemical Study and DFT Calculation, *CHEMISTRY SELECT*, 1, **2016**, 3276-3287.

(7) **Sayantani Bhattacharya,** Arunava Pal, Atanu Jana, Jayati Datta, Synthesis and characterization of CdS nanoparticles decorated TiO_2 matrix for an efficient N3 based dye sensitized solar cell (DSSC), *Journal of Materials Science: Materials in Electronics*, 27, **2016**, 12438-12445.

Conference Papers

(1) **Sayantani Bhattacharya,** Atanu Jana, Jayati Datta, Enhancement of DSSC properties by the incorporation of CdTe onto TiO_2 matrix, National Symposium on Recent Advances in Chemistry and Industry (2015), July 31st and Aug 01, 2015, Indian Chem Society, Calcutta University.

(2) **Sayantani Bhattacharya,** Arunava Pal, Jayati Datta, Synthesis and characterization of CdS NPs decorated TiO_2 matrix for an efficient N3 based Dye Sensitized Solar Cell, International Photovoltaic Solar Energy Conference (Solar Asia-2015), 30th July-1st Aug 2015, Savitribai Phule Pune University, India.

(3) **Sayantani Bhattacharya,** Jayati Datta, CdS nanoparticles as cosensitizer for an efficient TiO_2 - N3 based Dye Sensitized Solar Cell, Research Scholars' Colloquium 2016, Aug 22-23, IIEST Shibpur.

(4) **Sayantani Bhattacharya,** Gourab Ghosh, Binitendra Naath Mongal, Subhendu Naskar, Jayati Datta, Appreciable performance of Dye Sensitized Solar Cell with new Ruthenium based photo-sensitizer comprising of Phenyl-Terpyridine Ligand, UGC Sponsored National Seminar On "Recent Trends In Chemical Research, 29th September and 1st October 2016, Sarojini Naidu college for women, Kolkata.

(5) **Sayantani Bhattacharya** and Jayati Datta, High level functional properties of Dye Sensitized Solar Cell with Ag doped Titania, International Conference on Functional Nano-Materials (IC-FNM 2016), 28-29September, 2016, IIEST Shibpur.

(6) **Sayantani Bhattacharya** and Jayati Datta, Attractive functional behaviour of Ag doped Titania in Dye Sensitized Solar Cell, Fiftythird Annual Convention Of Chemists 2016, December 27-29, 2016, Indian Chem. Society, Gitam University, Vizag.

REFERENCES

- **Prof. Shyamal Kumar Chattopadhyay**

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Indian Institute of Engineering Science andTechnology, Shibpur
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- **Prof. Subhash Chandra Bhattacharya**

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