



SILDA CHANDRASEKHAR COLLEGE

CURRICULUM VITAE

Name : **Dr. PASENJIT BHUNIA**

Designation with Department : Assistant Professor in Chemistry

Contact Number : 7602458116

E-mail Id : prasenjit.b27@gmail.com

Date of Joining : 17-08-2020

Address : Vill – Rajnagar, P.O – Jalpai, P. S – Nandakumar, Dist
– Purba Medinipur, Pin – 721652, West Bengal.

Educational Qualification :

Degree	Institution	Year of Passing/Award
BSc(Hons)	Vidyasagar University (Mahishadal Raj College)	2001
MSc	Jadavpur University	2003
NET	CSIR-UGC	2004
GATE	IIT	2004
PhD	Jadavpur University	2009

Area of Specialization : Inorganic Chemistry

Area of Teaching :

Teaching Experience :

Designation	Institution	Duration	
		From	To
Faculty (on contract)	National Institute of Technology Puducherry	27-07-2012	25-01-2013
Post Doctoral Fellow	Indian Institute of Technology Kharagpur	14-03-2018	13-09-2018
Assistant Professor	Silda Chandrasekhar College	17-08-2020	Present



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Participation in Administrative/Academic Activities : Nil

Conference/Seminar/Workshop organised : Nil

Research Experience:

Institution	Designation	Duration		Responsibility
		From	To	
Department of Chemical Engineering, Indian Institute of Technology Kharagpur	Post Doctoral Fellow	14-03-2016	13-03-2019	Research and Teaching
Department of Chemistry, Indian Institute of Technology Kharagpur	Research Associate	08-08-2013	31-01-2015	Research
Department of Chemistry, Sungkyunkwan University, Suwon, South Korea	Post Doctoral Fellow	21-04-2010	25-07-2012	Research and Teaching
Department of Chemistry, National Taiwan University, Taiwan	Post Doctoral Fellow	10-09-2009	23-02-2010	Research

Research Interest : Coordination Chemistry, Material Science, Graphene/ Graphene Oxide Chemistry, Photochemistry, Photoelectrochemistry, Electrochemistry, Nanotechnology.

List of Patents:

Sl. No.	Inventors	Title	Patent Application No.
1	Prasenjit Bhunia, Amitava Pramanik and Srinivas Gopalon Raman	Sunscreen Composition.	US 2008/0050323A1 February 28, 2008



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List of Patents:

Sl. No.	Inventors	Title	Patent Application No.
2	Prasenjit Bhunia and Hyoyoung Lee	Composite Containing Iron Component Supported on Graphene, Preparing Method of the same, and Uses of the same.	US 2013/0105400 A1 May 2, 2013
3	Prasenjit Bhunia, Monish Kumar and Sirshendu De	Efficient and industrial scale purification of Graphene Oxide by diafiltration.	201731033688 October, 2017
4	Pinakpani Biswas, Supriya Sarkar, Priyanka Saha, Prasenjit Bhunia, Sirshendu De	A new integrated process for removal of total and free cyanide from coke plant wastewater. <ul style="list-style-type: none"> ➤ Completion of pilot plant trial in TATA Steel Ltd., Jamshedpur. ➤ Full scale plant under process in TATA Steel_BSL, Angul and expected to inaugurate in Nov' 2020. ➤ Full scale plant TATA Steel_ Kolanganagar, Odisha going to start shortly. 	201931002637 July, 2019
5	Pinakpani Biswas, Prasenjit Bhunia, Priyanka Saha, Supriya Sarkar, Saroj Banerjee	A process for decomposing metal cyanide complex from an effluent of steel industry. (a part of patent 4)	20203101956 March, 2020



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List of research publications in national/international journals (Selected):

1. **Prasenjit Bhunia**, Pinakpani Biswas, Priyanka Saha, Supriya Sarkar, Harse Chandel and Sirshendu De, “In situ photodecyanation of steel industry waste water in a pilot scale” *Environmental Science and Pollution Research*, 2020, **27**, 33226. (I. F. 3.00)
2. **Prasenjit Bhunia**, Monish Kumar, Sirshendu De, “Rapid and efficient removal of ionic impurities from graphene oxide through hollow fiber diafiltration” *Separation and Purification Technology*, 2019, **209**, 103. (I. F. 5.77)
3. Raka Mukherjee, **Prasenjit Bhunia**, Sirshendu De, “Nanofiltration range desalination by high flux graphene oxide impregnated ultra filtration hollow fiber mixed matrix membrane”, *Journal of Cleaner Production*, 2019, **213**, 393. (I.F. 7.24)
4. Raka Mukherjee, **Prasenjit Bhunia** and Sirshendu De, “Long term filtration modeling and scaling up of mixed matrix ultra filtration hollow fiber membrane: a case study of chromium (VI) removal” *Journal of Membrane Science*, 2018, **570**, 204. (I. F. 7.18)
5. **Prasenjit Bhunia**, Somak Chatterjee, Pritam Rudra, Sishendu De, “Chelating polyacrylonitrile beads for removal of lead and cadmium from waste water” *Separation and Purification Technology*, 2018, **193**, 202. (I. F. 5.77)
6. Raka Mukherjee, **Prasenjit Bhunia**, Sirshendu De, “Impact of graphene oxide on removal of heavy metals using mixed matrix membrane” *Chemical Engineering Journal*, 2016, 292, 284. (I. F. 10.65)
7. Sourav Bag, Arpan Samanta, **Prasenjit Bhunia**, C Retna Raj, “Rational functionalization of reduced graphene oxide with imidazolium-based ionic liquid for supercapacitor application” *International Journal of Hydrogen Energy*, 2016, **41**, 22134. (I.F. 4.49)
8. Raj Kumar Bera, **Prasenjit Bhunia**, Sukanta Chakrabarty, and C. Retna Raj, “Visible Light-Driven Production of Poly(a-terthiophene)–Au Nanoparticle Functional Hybrid Material” *ChemNanoMat*, 2015, **1**, 586. (I. F. 3.38)



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9. **Prasenjit Bhunia**, Giyoun Kim, Chul Baik, Hyoyoung Lee, “A strategically designed porous iron/iron oxide matrix on graphene for heavy metal ion adsorption”, *Chemical Communication.*, 2012, **48**, 9888. (I. F. 6.290)
10. **Prasenjit Bhunia**, Eunhee Hwang, Yeoheung Yoon, Eunkyo Lee, Sohyeon Seo, Hyoyoung Lee, “Synthesis of Highly n-Type Graphene Using Ionic Liquid”, *Chemistry A European Journal*, 2012, 18, 12207. (I. F. 5.91)
11. Surajit Some, **Prasenjit Bhunia**, Eunhee Hwang, Keunsik Lee, Yeoheung Yoon, Sohyeon Seo, Hyoyoung Lee, “Can Widely Used Hydrazine Produce n-Type Graphene?” *Chemistry A European Journal*, 2012, 18, 7665. (I. F. 5.91)
12. **Prasenjit Bhunia**, Eunhee Hwang, Misook Min, Junghyun Lee, Sohyeon Seo, Surajit Some, Hyoyoung Lee, “A Non-Volatile Memory Device Consisting of Graphene Oxide Covalently Functionalized with Ionic Liquid”, *Chemical Communication*, 2012, 48, 913. (I. F. 6.290)
13. **P. Bhunia**, D. Banerjee, P. Dutta, A. M. Z. Slawin, P. Raghavaiah, J. Ribas, C. Sinha, “Copper-Azide-Thioaryloimidazoles – Structure, Spectra, Redox Properties, Magnetism and Theoretical Interpretation”, *European Journal of Inorganic Chemistry*, 2010, 311. (I. F. 3.04)
14. Prasun Bandyopadhyay, **Prasenjit Bhunia**, “Synthesis and characterization of hexa-tailed cryptand based amphiphiles: Spontaneous formation of giant vesicular microcapsule with efficient and long-term dye encapsulation”, *Colloids and Surfaces B: Biointerfaces*, 2007, 58, 14. (I. F. 4.04)
15. **P. Bhunia**, U. S. Ray, J. Cheng T. –H. Lu, C. Sinha, “Nickel(II)-Azido/Thiocyanato complexes of 1-alkyl-2-(naphthylazo)imidazole”, *Polyhedron*, 2008, 27, 3191. (I. F. 2.06)

List of Book Chapters:

1. **Book Title:** Progress and Recent Trends in Microbial Fuel Cells

Publisher: Elsevier



Chapter 16 (Invited) – Biochemistry and Electrochemistry at the Electrodes of Microbial Fuel Cells (2018), **Prasenjit Bhunia**, Kingshuk Dutta, pp 327 – 345.

doi.org/10.1016/B978-0-444-64017-8.00016-6

2. Book Title: Progress and Recent Trends in Microbial Fuel Cells

Publisher: Elsevier

Chapter 6 – Bipolar Membranes for Microbial Fuel Cells (2018), Kingshuk Dutta, Patit Paban Kundu, **Prasenjit Bhunia**, pp 87 – 94.

doi.org/10.1016/B978-0-444-64017-8.00006-3

3. Book Title: Green Photocatalysts for Energy and Environment Process

Publisher: Springer Nature

Chapter 2 – Photocatalysts and photoelectrocatalysts in fuel cells and photofuel cells (2019), **Prasenjit Bhunia**, Dr. Kingshuk Dutta, pp 19 – 55.

4. Book Title: New Technologies for Electrochemical Applications.

Publisher: CRC Press

Chapter 9 – Electrocatalysts for Wastewater Treatment (2020), **Prasenjit Bhunia**, Kingshuk Dutta, Abdul Kader, Sanjay K. Nayak, pp 153 – 168.

5. Book Title: Direct Methanol Fuel Cell Technology

Publisher: Elsevier

Chapter 15 – Electrochemistry, Reaction Mechanisms and Reaction Kinetics in Direct Methanol Fuel Cells (2020), **Prasenjit Bhunia**, Kingshuk Dutta, M. Abdul Kader, pp 443 – 494.

6. Book Title: Encyclopedia in Electrochemistry. Section Fuel Cells.

Publisher: Wiley

Chapter XX – Electrochemistry in Direct Methanol Fuel Cells (2020), **Prasenjit Bhunia**, Kingshuk Dutta, pp XX (Submitted)



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Presentation of research papers in seminars/conferences:

1. **2011 International Forum on Functional Materials. The Second Symposium on Advances in Functional Materials (July 28 – 31, 2011), Jeju, Republic of Korea. Abstract Book, page 146**

Abstract Title: Covalently functionalized Graphene Oxide (GO) with Ionic Liquid for Memory devices. **Prasenjit Bhunia**, Eunhee Hwang, Misook Min, Eunkyo Lee, Surajit Some, Hyoyoung Lee, (**oral presentation**)

2. **International Conference on Emerging Materials: Characterization and Applications (EMCA-2014) December 4 – 6, 2014, Central Glass and Ceramics Research Institute, Kolkata, India, Abstract Book, page 21**

Abstract Title: An Efficient Photoelectrochemical NADH Sensor Based on Ionic Liquid Functionalized Graphene.

Prasenjit Bhunia and C. Retna Raj (oral presentation)

3. **4th International Conference of World Science Congress, December 16 – 18, 2014, Jadavpur University Kolkata, India, Abstract Book, page 13**

Abstract Title: Ionic Liquid Functionalized Graphene for Multifunctional Applications.

Prasenjit Bhunia, (Best Oral Presentation)

Other activities (if any):

- (i) Short listing of Research Scholars in the Department of Chemical Engineering, IIT Kharagpur
- (ii) Coordinator of Research Scholar Day '2018 in the Department of Chemical Engineering, IIT Kharagpur

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h-index: 11, RG Score: 24.45