

DR HAREKRUSHNA SUTAR

Assistant Professor



1. **RESEARCH INTEREST:**

- ✓ Tribology.
- ✓ Thin film and surface Coating.
- ✓ Composite materials.
- ✓ Fluidization, Water treatment.
- ✓ Polymer Technology
- ✓ Polymer Blends
- ✓ Bio-Polymer

2. **PERSONAL INFORMATION:**

Date of Birth: 02/07/1982.

Sex: Male

Nationality: Indian

Religion: Hinduism.

Marital Status: Married (one Child)

3. **CONTACT INFORMATION:**

OFFICE:

Assistant Professor

Chemical Engineering Department,

Indira Gandhi Institute of Technology, Sarang, District-Dhenkanal, Odisha, India,

Pin-759146. **(Fully Autonomous College, Govt. of Odisha)**

(Affiliated to Biju Patnaik University of Technology, Rourkela, India)

RESIDENCE:

Dalimba Bhawan, In front of Gadatala Regional College, Bipini Colony, District-Angul,
Odisha, India, Pin-759101

E-mail ID: h.k.sutar@gmail.com , harekrushna.sutar@igitsarang.ac.in

Mobile: +91-8594845698

4. **EDUCATIONAL QUALIFICATION:**

- *PhD (Engineering): Jadavpur University*, Kolkata, India, 2019.
Thesis Title: Study of Tribological Behavior of Plasma Sprayed Red Mud Composite Coatings on mild steel.
- *M.E (Chemical): Jadavpur University*, Kolkata, India, 2009
Thesis Title: Effect of Distributor-Orifice on Drying Kinetics of Mustard Seed in a Fluidized Bed Drier
- *B.E (Chemical): Indira Gandhi Institute of Technology, Sarang*, India, 2005
- *Diploma (Chemical):*
Utkalmani Gopabandhu Institute of Engineering, Rourkela, 2001.
(SCTE and VT, Odisha)

5. **OVERVIEW OF PHD RESEARCH WORK CONDUCTED:**

In my PhD work I was associated in the project entitled: **Study of tribological behaviour of plasma sprayed red mud composite coatings on mild steel**. I was engaged in doing research and publishing journal papers. The research work was to develop a ceramic coating like pure red mud on mild steel by plasma spraying technology. Red mud is compounded with varying weight % of fly ash, aluminium and carbon separately to form its composite and plasma sprayed at different spraying power namely 6, 9, 12 and 15 kW. The investigation has focused to determine the coating feasibility towards dry sliding wear using pin on disc tribometer. Different mechanical properties like hardness, coating porosity, deposition efficiency, adhesion strength is evaluated. Micro-structural characteristics of these coatings; such as surface morphology and coating thickness are investigated by using SEM and FESEM. Occurrence of phase transformations during spraying is examined by XRD and elemental analysis. Thermal behaviour of the coatings

is determined by performing DSC and TGA experiments at elevated temperatures. The compatibility of these coatings towards high temperature up to 1000°C is checked by evaluating their adhesion strengths. In order to understand the effect of heat treatment on the surface topography of the coatings, SEM and FESEM tests are employed after exposing coatings to high temperature atmosphere. Morphology of the coatings by means of SEM and FESEM is observed after sliding wear tests at different sliding times to evaluate the sliding mechanisms from the analysis of wear morphologies. Finally experimental results are optimized by Taguchi Optimization technique to identify the significant factors or interactions that influence the wear rate.

6. CURRENT RESEARCH STATEMENT :

My Current Research focusing particularly to **thermoplastic polymers** and for the last three years I am working on it. I have completed a research project by blending high density polyethylene (**HDPE**) and polypropylene (**PP**) by extrusion and injection moulding methods and verified the non-compatibility of the polymers. Different mechanical, thermo mechanical, dynamic mechanical, thermal, electrical and crystallisation characteristics of the composite are studied. Investigations are also done to study the effect of strain rate on tensile properties of the HDPE/PP composite. At present I am working to study the engineering applications of **PP/Graphene Nano Platelets (GnPs)/Copper nano-composite** and **PP-Multi walled carbon Nano tube (MWCNTs)** composites. Simultaneously I am associated with research on Sulfonated Polyether Ether Ketone (SPEEK) polymer membrane for **fuel cell application**.

7. **EXPERIENCE :**

- A. **Worked** as Technical Assistant at National Institute of Technology, Rourkela, India for **one** year. 2006-2007
- B. **Worked** as Scientific Officer-C at Bhabha Atomic Research Centre, Bombay, India for **three** years. 2009-2012
- C. **Worked** as research Fellow at National Institute of Technology, Rourkela, India for **two** years. 2012-2014.
- D. **Working** as Assistant Professor at Indira Gandhi Institute of Technology, Sarang, India from the last **nine** years. 8TH August 2014-Till date

8. **MEMBER OF PROFESSIONAL BODIES :**

- Life Member of Institution of Engineers (India), MIE (I), Membership Number: **M-147475-2.**
- Life Member of International Association of Engineers (IAENG), USA, Membership Number: **118128.**
- Life Member of International Association of Computer science and information Technology, Membership Number: **80342622**, (IACSIT), Singapore
- Life Member of Indian Institute of Chemical Engineers, IChE.

9. **PUBLICATIONS**

No of Journal Publications in Web of Science / Scopus: 22

No of Journal Publications in only Google Scholar: 31

No of Book Published: 01

No of Book Chapter Published: 05

No of Conference Proceedings: 01

Total No of Publications: 60

9.1 Year Wise Publication List:

✓ In the Year 2024

- [1] Badgujar, S., Asthana, S., Kanawade, R., Suthar, K., Solanki, A., Nagaraj, K., Bilkhu, M.S., **Sutar, H.** and Panda, S.R.* (2024) Blown Film Extrusion Process for Polybags: Technical Overview and Applications. **Advances in Chemical Engineering and Science**, 14, 188-201. <https://doi.org/10.4236/aces.2024.144012>
- [2] Dharai, R.; **Sutar, H.***; Murmu, R.; Roy, D. Micrographite (μG) and Polypropylene (PP) Composites: Preparation and Influence of Filler Content on Property Modifications. **Journal of Composites Science**. 2024, 8, 298. **IF:3.3** <https://doi.org/10.3390/jcs8080298>
- [3] Sahoo, S., Senapati, P*., Mantry, S., **Sutar, H.** (2024). Characterization of Ni-Based Composite Coating HVOF Process. In: Sahoo, S., Yedla, N. (eds) Recent Advances in Mechanical Engineering. ICRAMERD 2023. **Lecture Notes in Mechanical Engineering**. Springer, Singapore. **IF: 0.9 (Scopus CiteScore)**, https://doi.org/10.1007/978-981-97-1080-5_38
- [4] Kanungo D K, Murmu R, **Sutar H***; A Unique Modelling Strategy to Dynamically Simulate the Performance of a Lobe Pump for Industrial Applications, **Advances in Chemical Engineering and Science**, 14 (2), 2024. **IF: Not Available**.
- [5] Sahoo B, Sahoo A, **Sutar H***, Senapati P; Variation of Reaction Kinetics with the Process Parameters in a FBR System: Mathematical Modeling by MATLAB, In: Sahoo, S., Yedla, N. (eds) Recent Advances in Mechanical Engineering. **Lecture Notes in Mechanical Engineering**. Springer, Singapore. **2024. IF: 0.9 (Scopus CiteScore)**, https://doi.org/10.1007/978-981-97-1080-5_61

✓ In the Year 2023

- [1] Murmu R, Roy D, **Sutar H**; Mathematical Modelling and Simulations of Active Direct Methanol Fuel Cell, **Journal of Polymer Materials**, 40 (3-4), 125-139, 2023. <https://doi.org/10.32381/JPM.2023.40.3-4.1> , **IF: 0.7 (Web of Science)**

- [2] Sahoo B, Sahoo A, **Sutar H**, Sahu P.S, Senapati P; Study of hydrodynamics in FBG using cold model unit: Modelling by MATLAB, **Materials Today: Proceedings**, 2023, <https://doi.org/10.1016/j.matpr.2023.12.029>, **IF: 3.2 (Scopus CiteScore)**
- [3] Mohanty, S.K.; Biswal, D.R.; Mohapatra, B.G.; Beriha, B.; Pradhan, R.; **Sutar, H.** Strength and Stiffness Evaluation of a Fiber-Reinforced Cement-Stabilized Fly Ash Stone Dust Aggregate Mixture. **Journal of Composites Science**, 7, 459, 2023. <https://doi.org/10.3390/jcs7110459>, **IF: 3.3 (Web of Science)**
- [4] Kanungo D.K, Senapati P, **Sutar H**; Capturing Pseudocritical Property change of Steam in a Spiral Steam Pipe of a Boiler Through Numerical Technique, **European Chemical Bulletin**, 12 (10), 11726-11734, 2023. **IF: Not Available**
- [5] Kanungo D.K, Mocherla N, Murmu R, Sahoo B, **Sutar H**; An Appropriate Numerical Model to Capture Pseudocritical Property Change of Steam Flowing Inside Straight Tube, **European Chemical Bulletin**, 12 (10), 11437-11446, 2023. **IF: Not Available**
- [6] Dash N.R, Murmu. R, **Sutar. H**; Effect of zinc oxide on the mechanical, thermal and physiochemical properties of chitosan-based hybrid membrane for DMFC application, **Materials Today: Proceedings**, 2023, **IF: 3.2 (Scopus CiteScore)**
- [7] Patra SC, Swain S, Senapati P, Sahu H, Murmu R, **Sutar H**; Polypropylene and Graphene Nanocomposites: Effects of Selected 2D-Nanofiller's Plate Sizes on Fundamental Physicochemical Properties. **Inventions**; 8(1):8. 2023, **IF: 3.4 (Web of Science)**
- [8] Senapati, P., **Sutar, H.**, Murmu, R., Gupta, S; Slurry Erosion Behaviour of HVOF-Sprayed NiAl Composite Coating. In: Pradhan, P., Pattanayak, B., Das, H.C., Mahanta, P. (eds) Recent Advances in Mechanical Engineering. **Lecture Notes in Mechanical Engineering**. Springer, Singapore. 2023. **IF: 0.9 (Scopus CiteScore)**
- [9] Murmu R, Roy D, **Sutar H**, Senapati P & Patra S.C; Development of the highly performed chitosan based thin film towards the sustainability of direct methanol fuel cell, **Polymer-Plastics Technology and Materials**, 62(6), 732-755, 2023. **IF: 2.7 (Web of Science)**
- [10] Murmu, R., Roy, D., Jena, S., **Sutar, H.**, Development of chitosan-based hybrid membrane modified with ionic-liquid and carbon nanotubes for direct methanol fuel cell operating at moderate temperature. **Polymer Bulletin**, 80, 3949-3980, 2023. **IF: 3.2 (Web of Science)**

✓ **In the Year 2022**

- [1] Murmu R, Roy D, **Sutar H**, Senapati P, Mohapatra S. A; Effect of Sulfuric Acid on the Physiochemical Properties of Chitosan-PVA Blend for Direct Methanol Fuel Cell; *Journal of Polymer Materials*, 39 (1-2), 89-109. **2022. IF: 0.7 (Web of Science)**
- [2] Sahoo. S, **Sutar. H**, Senapati. P, Mohanto. B.S, Dhal. P. R, Baral. S.K (2022); Experimental investigation and optimization of the FDM process using PLA, *Materials Today: Proceedings*, 74(4), 843-847, **2022. IF: 3.2 (Scopus CiteScore)**
- [3] Rautaray S, Senapati P, **Sutar H**, Murmu R; The mechanical and thermal behaviour of unsaturated polyester matrix (UPM) composite filled with pistachio shell particles (PSP), *Materials Today: Proceedings*, 74 (4), 581-586, **2022. IF: 3.2 (Scopus CiteScore)**
- [4] Murmu, R., Roy, D., Patra S.C., **Sutar H.**, Choudhary, B; Preparation and characterization of Red Mud modified Chitosan-PVA composite membrane for direct methanol fuel cell. *Journal of Electrochemical Energy Conversion and Storage* **20(3), 2022. IF: 2.5 (Web of Science)**
- [5] Murmu, R., Roy, D., Patra, S.C., **Sutar. H.**, Senapati, Pragyan. Preparation and characterization of the SPEEK/PVA/Silica hybrid membrane for direct methanol fuel cell (DMFC). *Polymer Bulletin*. 79, 2061-2087, **2022. IF: 3.2 (Web of Science)**

✓ **In the Year 2021**

- [1] Sahu, D.; **Sutar, H.**; Senapati, P.; Murmu, R.; Roy, D. Graphene, Graphene-Derivatives and Composites: Fundamentals, Synthesis Approaches to Applications. *Journal of Composites Science.*, 5, 181. **2021. IF: 3.3 (Web of Science)**
- [2] Sau, D.C, Banerjee, A., Chakravarty, S., Senapati, P., Murmu, R. and **Sutar, H.**; Thermal Decomposition Behavior and Kinetic Study of Jamadoba Coal and Its Density Separated Macerals: A Non-Isothermal Approach. *Advances in Chemical Engineering and Science*, **11**, 203-227, **2021. IF: Not Available**

- [3] Senapati, P.; **Sutar, H.**; Murmu, R.; Bajpai, S. Experimental Design of Solid Particle Wear Behavior of Ni-Based Composite Coatings. *Journal of Composites Science*, 5, 133, 2021. IF: 3.3 (Web of Science)
- [4] Senapati P., **Sutar H.**, Pal M.R., Slurry Erosion Behaviour of AISI 304 Stainless Steel Under Laboratory Conditions. In: Acharya S.K., Mishra D.P. (eds) **Current Advances in Mechanical Engineering**. Lecture Notes in Mechanical Engineering. Springer, Singapore, 2021. IF: 0.9 (Scopus CiteScore)
- [5] Sau, D. , Murmu, R. , Senapati, P. and **Sutar, H.**; Optimization of Raceway Parameters in Iron Making Blast Furnace for Maximizing the Pulverized Coal Injection (PCI) Rate. *Advances in Chemical Engineering and Science*, 11, 141-153, 2021. IF: Not Available
- [6] **H. Sutar**, B. Mishra, P. Senapati, R. Murmu and D. Sahu; Mechanical, Thermal, and Morphological Properties of Graphene Nanoplatelet-Reinforced Polypropylene Nanocomposites: Effects of Nanofiller Thickness; *Journal of Composites Science*, 5 (1), 24, 2021. IF: 3.3 (Web of Science)

✓ **In the Year 2020**

- [1] P. Senapati, **H. Sutar**; Surface erosion behaviour over NiCrBSi-Al₂O₃ composite coatings; *Materials Research Express*, 7 (7), 076512, 2020. IF: 2.3 (Web of Science)
- [2] P. Senapati, **H. Sutar**, A Review on the Dominant Factors Affecting Silt Erosion in Hydro Turbines; *International Journal on Emerging Technology*, 11(4), 263-268, 2020. IF: Not Available

✓ **In the Year 2019**

- [1] Rout, P. Senapati, **H. Sutar**, D.C. Sau and R. Murmu; Graphene Oxide (GO) Supported Palladium (Pd) Nanocomposites for Enhanced Hydrogenation; *Graphene*, 8(3), 33-51, 2019. IF: Not Available
- [2] Wettability, Thermal and Sliding Behavior of Thermally Sprayed Fly Ash Premixed Red Mud Coatings on Mild Steel, **H. Sutar**, B. Mishra, R. Murmu, S. Patra, S.C. Patra, S.C. Mishra, D. Roy; *Materials Sciences and Applications*, 11(1), 12-26, 2019. IF: Not Available

- [3] **H. Sutar**, H. S Maharana, C. Dutta, R. Murmu and S. Patra; Strain Rate Effects on Tensile Properties of HDPE-PP Composite Prepared by Extrusion and Injection Moulding Method; *Materials Sciences and Applications*, **10(3)**, 205-215, 2019. **IF: Not Available**
- [4] **H. Sutar**, R. Murmu, C. Dutta; High Density Polyethylene (HDPE) and Polypropylene (PP) Polyblend: An Experimental Approach; *New Advances in Materials Science and Engineering*, **Vol-1, Chapter-4**, 40-65, 2019(BOOK CHAPTER). **IF: Not Available**
- [5] Plasma Sprayed Red Mud-Fly Ash Composite Coatings on Mild Steel: A Comprehensive Outline; **H. Sutar**, R. Murmu, D. Roy, S.C Mishra; *Advances and Trends in Physical Science Research*, **Vol-2, Chapter-13**, 154-177, 2019. (BOOK CHAPTER). **IF: Not Available**
- [6] Study of Sliding Wear Behavior of Plasma Sprayed Red Mud Composite Coatings on Mild Steel, **H. Sutar**, D. Roy, S.C Mishra, R. Murmu; **FIRST EDITION 2019, ISBN 978-93-89816-04-4 (Print), ISBN 978-93-89816-05-1 (eBook), DOI: 10.9734/bpi/mono/978-93-89816-04-4**, BOOK Publisher International. (**FULL BOOK**), **IF: Not Available**

✓ **In the Year 2018**

- [1] **H. Sutar**, PC Sahoo, PS Sahu, S Sahoo, R Murmu, S Swain, SC Mishra; Mechanical, Thermal and Crystallization Properties of Polypropylene (PP) Reinforced Composites with High Density Polyethylene (HDPE) as Matrix; *Materials Sciences and Applications*, **9(5)**, 502-515, 2018. **IF: Not Available**
- [2] P. Sahoo, R. Murmu, S. Patra, C. Dutta and **H. Sutar**; Electrical Behaviour and Spherulites Morphology of HDPE/PP Polyblends with HDPE as Base Material; *Materials Sciences and Applications*, **9(10)**, 837-843, 2018. **IF: Not Available**
- [3] R Murmu, **H. Sutar**; A Novel SPEEK-PVA-TiO₂ Proton Conducting Composite Membrane for PEMFC Operations at Elevated Temperature; *Journal of Polymer Materials*, **35(4)**, 409-431, 2018. **IF: 0.7 (Web of Science)**
- [4] R Murmu, **H. Sutar**; Steady State Analysis of Water Transport through Sulfonated Polyether Ether Ketone (SPEEK) Membrane for Fuel Cell Application; *Journal of Polymer Materials*, **35(1)**, 103-118, 2018. **IF: 0.7 (Web of Science)**

- [5] Thermal and Dry Sliding Wear Behavior of Plasma Sprayed Red Mud-Fly Ash Coatings on Mild Steel; **H. Sutar**, D. Roy, S.C Mishra, S. Patra, R. Murmu; *Tribology in Industry*, **40(1)**, 117-128, 2018. IF: 2.6 (Scopus CiteScore)
- [6] A.R Patil, N.H. Bhatt, L. Das, S. Teja, S. Nayak, A. Kumar, A. Sahoo, B. Munshi, A. Behera, **H. Sutar**, S.S Mohapatra.; The Discrepancy in the Prediction of Surface Temperatures by Inverse Heat Conduction Models for Different Quenching Processes from Very High Initial Surface Temperature; *Inverse Problems in Science and Engineering*, **27(6)**, 808-835, 2018. IF: 1.3 (Web of Science)

✓ **In the Year 2017**

- [1] R. Murmu, **H. Sutar**, S. Patra; Experimental Investigation and Process Optimization of Biodiesel Production from Kusum Oil Using Taguchi Method;; *Advances in Chemical Engineering and Science*, **7(4)**, 464-476, 2017. IF: Not Available
- [2] J.K Sahoo, S.K Sahoo, **H. Sutar**, B. Sarangi.; Wear behavior of Al-Si alloy-based metal matrix composite reinforced with TiB₂;; *IOP Conference Series: Materials Science and Engineering*, **178(1)**, 012025, 2017. IF: 1.1 (Scopus CiteScore)

✓ **In the Year 2016**

- [1] **H. Sutar**, R. Murmu, D. Roy, S.C Mishra and A. Mishra; Effect of Red Mud (RM) Reinforcement on Physio-Chemical Characteristics of Ordinary Portland Slag Cement (OPSC) Mortar; *Advances in Materials Physics and Chemistry*, **6(8)**, 231-238, 2016. IF: Not Available
- [2] Sliding Wear Performance Evaluation of Red Mud (RM), RM + Fly Ash (FA) and RM + FA + Al Coatings on Mild Steel; **H. Sutar**, D. Roy, S.C Mishra, R. Murmu; *Materials Sciences and Applications*, **7(3)**, 171-179, 2016. IF: Not Available

✓ **In the Year 2015**

- [1] S.K Barik, **H. Sutar**, S.C Mishra; Synthesis and Characterisation of PVA/PVOH Based Super Porous Hydrogel; *American Chemical Science Journal*, **10(3)**, 1-7, 2015. IF: Not Available

- [2] **H. Sutar**, K. Barik, A.K Bairagi and R Murmu; Hydrodynamic Behaviour of Common Salt Water (NaCl Solution) in a Glass-beads Packed Cylindrical Fluidized Bed; *American Chemical Science Journal*, **9(2)**, 1-6, 2015. IF: Not Available
- [3] Effect of fly ash and carbon reinforcement on dry sliding wear behaviour of red mud; **H. Sutar**, D. Roy and S.C Mishra; *Indian Journal of Materials Science*, 2015, 1-7, 2015. IF: Not Available

✓ **In the Year 2014**

- [1] Progress of Red Mud Utilization: An Overview, **H. Sutar**, S.C. Mishra, S.K. Sahoo, A. Chakraverty and H. Maharana, *American Chemical Science Journal*, **4(3)**, 255-279, 2014. IF: Not Available
- [2] Tribological Aspects of Thermally Sprayed Red Mud-Fly Ash and Red Mud-Al Coatings on Mild Steel: **H. Sutar**, S. C Mishra, S. K Sahoo, H. S Maharana and A. P Chakraverty, *American Chemical Science Journal*, **4(6)**, 1014-1031, 2014. IF: Not Available
- [3] Friction and Wear Behaviour of Plasma Sprayed Fly Ash Added Red Mud Coatings: **H. Sutar**, D. Roy, S. C. Mishra, A. P. Chakraverty and H. Maharana; *Physical Science International Journal*, **5(1)**, 61-73, 2014. IF: Not Available

✓ **In the Year 2013**

- [1] N. Prasad, **H. Sutar**, S. C Mishra, S. K Sahoo, S. K Acharya.; Dry Sliding Wear Behavior of Aluminium Matrix Composite Using Red Mud an Industrial Waste; *International Research Journal of Pure and Applied Chemistry*, **3(1)**, 59-74, 2013. IF: Not Available
- [2] Characterization of Plasma Sprayed Pure Red Mud Coatings: An Analysis; A. Satapathy, **H. Sutar**, S.C Mishra and S.K Sahoo; *American Chemical Science Journal*, **3(2)**, 151-163, 2013. IF: Not Available

✓ **In the Year 2012**

- [1] **H. Sutar** and C.K Das.; Mixing and Segregation Characteristics of Binary Granular Material in Tapered Fluidized Bed: A CFD Study; **Engineering**, **4(4)**, 215-227, 2012. IF: Not Available
- [2] Morphology and solid particle erosion wear behavior of red mud composite coatings. **H. Sutar**, SC Mishra, S.K Sahoo, A Satapathy and V Kumar. **Natural Science**, **4(11)**, 832-838, 2012. IF: Not Available
- [3] C.K Das and **H. Sutar.**; Bio-Detoxification Treatment of Waste Water Containing Cadmium: **IACSIT International Journal of Engineering and Technology**, **4(1)**, 72-75, 2012. IF: Not Available
- [4] **H. Sutar** and V Kumar.; The effect of distributor design on hydrodynamics of conical fluidized bed dryer; **International Journal of Current Research**, **4(9)**, 168-172, 2012. IF: Not Available
- [5] **H. Sutar** and C K Das.; A Review on: Bioremediation, **International Journal of Research in Chemistry and Environment**, **2(1)**, 13-21, 2012. IF: Not Available

✓ **In the Year 2011**

- [1] **H. Sutar** and A. Sahoo.; Effect of Distributor-Orifice on Drying Kinetics in a Fluidized Bed Drier (EDODKFBD), **International Journal of Chemical Engineering and Applications**, **2(5)**, 346-351, 2011. IF: Not Available
- [2] **H. Sutar** and A Sahoo.; Unsteady State Heat Transfer in Externally Heated Magnesio Thermic Reduction Reactor: An overview; **International Conference on Chemistry and Chemical Process**, 210-214, 2011. IACSIT Press, Singapore. IF: Not Available
- [3] **H. Sutar** and A. Sahoo.; Computational Simulation of Unsteady State Heat Transfer in Externally Heated Magnesio Thermic Reduction Reactor: An overview (CSUHEMTRR); **International Journal of Chemical Engineering and Applications**, **2(3)**, 212-215, 2011. IF: Not Available

10. REVIEWER OF FOLLOWING JOURNALS :

- [1] ACS Applied Electronic Materials (ACS)
- [2] Desalination and Water Treatment (Elsevier)
- [3] Lubricants (MDPI)
- [4] Advanced Science (Wiley)
- [5] Coatings (MDPI)
- [6] Tribology in Industry.
- [7] Materials Research Express (IOP Science)
- [8] *Journal of the Taiwan Institute of Chemical Engineers (Elsevier)*
- [9] Results in Engineering (Elsevier)
- [10] Express Polymer Letters
- [11] Materials (MDPI)
- [12] Buildings (MDPI)
- [13] Journal of Marine Science Engineering (MDPI)
- [14] Polymers (MDPI)
- [15] Processes (MDPI)
- [16] Aerospace (MDPI)
- [17] Sustainability (MDPI)
- [18] Applied Sciences (MDPI)
- [19] Nuclear Engineering and Technology (Elsevier)
- [20] Materials Today: Proceedings (Elsevier)
- [21] Science of the Total Environment (Elsevier)
- [22] Chemical Engineering Journal (Elsevier)
- [23] SN Applied Sciences (Springer)
- [24] Surface Innovations (ICE)
- [25] Polymers and Polymer Composites (SAGE)
- [26] Surface Topography: Metrology and Properties (IOP Science)
- [27] Chemical Science International Journal (SDI).
- [28] Physical Science International Journal (SDI)
- [29] Current Journal of Applied Science and Technology (SDI).
- [30] Journal of Scientific Research and Reports (SDI).
- [31] Asian Journal of Biotechnology and Bio-resource Technology (SDI).

- [32] Advances in Research (SDI).
- [33] Advances in Chemical Engineering and Science (Scirp)
- [34] Journal of Basic and Applied Research International (IKP).
- [35] Natural Science (Scirp).
- [36] Materials Sciences and Applications (Scirp).
- [37] Environmental Engineering and Management Journal.
- [38] Asian Journal of Chemical Sciences (SDI)
- [39] Annual Research and Review in Biology (SDI)
- [40] Journal of Materials Science Research and reviews (SDI)
- [41] Journal of Engineering Research and Reports (SDI)

11. **EDITORIAL BOARD MEMBER:**

Journals

- [1] Scientific Reports (A Nature Portfolio Journal)
- [2] Materials Sciences and Applications
- [3] Journal of Engineering Research and Reports
- [4] Chemical Science International Journal

Books Edited:

1. Current Perspectives on Chemical Sciences, Vol-02.
2. Current Research and Development in Chemistry, Vol-01.
3. Current Perspectives on Chemical Sciences, Vol-04
4. Current Advances in Chemistry and Biochemistry, Vol-06
5. Challenges and Advances in Chemical Science, Vol.2
6. Recent Trends in Chemical and Material Sciences Vol.2
7. New Innovations in Chemistry and Biochemistry Vol.2
8. Challenges and Advances in Chemical Science, Vol-6
9. Recent Trends in Chemical and Material Sciences Vol-5
10. Challenges and Advances in Chemical Science Vol.9.

12. **MASTER'S THESIS SUPERVISION:**

- [1] *Prakash Chandra Sahoo*, Mechanical Strength of HDPE/PP Polyblends with HDPE as Matrix, **2018**.
- [2] *Surajabala Sahoo*, Surface Morphology, Crystallization Behavior and Electrical Properties of PP Reinforced HDPE Composite, **2018**.
- [3] *Prateekshya Suman Sahu*, Thermal and Phase Analysis of HDPE and PP Polyblend, **2018**.
- [4] *Sarat Chandra Patra*, Development and Characterization of Novel Chitosan-PVA-Red Mud Composite Membrane for PEMFC Applications at Low Temperature. **2020**
- [5] *Dibyani Sahu*, A Review on the Synthesis of Graphene and effect of GNP Thickness on Mechanical, Thermal and Morphological Properties of Graphene Nanoplatelet Reinforced Polypropylene. **2021**.
- [6] *Sibhangi Rath*, A review on Enhancement of Microbial Activity (*Aspergillus*) for Polyethylene Degradation, **2022**

13. **PHD THESIS SUPERVISION:**

1. *Rabiranjana Mumru*, Experimental Studies and Modelling of Chitosan based Proton Exchange Fuel Cell. Status: Awarded, 2024.
Role: Co-Supervisor at Jadavpur University
2. *Rabindra Dharai*, Status: Ongoing and registered in 2022.
Role: Co-Supervisor at Jadavpur University.

14. **FUNDED PROJECT:**

1. How is the graphene/polypropylene Nanocomposites overall performance affected by Nanofiller thickness?
Funded by: TEQIP-III, Amount: 1.05 Lakh.
2. Study of Physicochemical Properties of MWCNT/Bio-Plastic Nanocomposites.
Funded by: TEQIP-III, Amount: 3 Lakh

15. **SUBJECTS TEACH :**

1. Mass Transfer-I
2. Mass Transfer-II
3. Fluid mechanics
4. Advanced Mass Transfer
5. Mechanical Operation
6. Chemical Reaction Engineering
7. Heat Transfer

16. **ACHIEVEMENTS :**

1. Qualified GATE 2007, **All India RANK-675**, Chemical Engineering.
2. Selected as Assistant Engineer, HAL, Engine Division, Odisha, 2005.
3. Selected as Trainee Scientific Officer, NPCIL, 2007.
4. Among top 5 in UG at IGIT Sarang, 2005.
5. Topper in diploma engineering study at UGIE, Rourkela, 2001.

17. **GOOGLE SCHOLAR :**

ID: 5aT1HesAAAAJ

<https://scholar.google.co.in/citations?user=5aT1HesAAAAJ&hl=en>

Total citations: 942, h-index-14, i10- index-23

18. **WEB OF SCIENCE :**

Web of Science ResearcherID: **H-9046-2019**

Total Manuscripts Reviewed – Above 120

Manuscript Handled as Editor- Above 25

ORCID : <http://orcid.org/0000-0002-9835-4469>

References :

1. Prof. Debashis Roy

HOD, Chemical Engineering Department

Jadavpur University, Kolkata, India.

Email: deebie_roy@yahoo.com

2. Prof (Dr) Abanti Sahoo

Professor and Head

Chemical Engineering Department

NIT Rourkela, Odisha

Email: abantisahoo@gmail.com

3. Dr Subash Chandra Mishra

Retired Professor-HAG

Metallurgical and Materials Engineering Department

National Institute of Technology Rourkela, India

Email ID: purimishra@rediffmail.com