

Curriculum Vitae

Sagar Pal, PhD

Professor and Head, Department of Chemistry & Chemical Biology

Tata Steel Chair Professor

IIT(ISM), Dhanbad

Jharkhand, India-826004.

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Personal Details

Date of Birth: 10th June 1977
Mother's name: Renuka Panda Pal.
Father's Name: Late Shyamapada Pal.
Permanent Address: Vill+P.O. – Bahurupa, Dist. – Paschim Medinipur, West Bengal, India - 721437.
Official address: Sagar Pal, PhD
Professor, Department of Chemistry & Chemical Biology
IIT(ISM) Dhanbad
Jharkhand, India– 826004
Nationality: Indian
Religion: Hinduism
Sex: Male
Family Status: Married, with two sons.
Language Known: English, Hindi and Bengali.

Educational Qualification:

• Secondary	WBBSE	1993	73.55 %
• Higher Secondary	WBCHSE	1995	67.8 %
• BSc Chem (Hons)	Midnapore College (VU)	1998	62.25 %
• MSc (Organic Chem)	Vidyasagar University	2000	76.1 %
• PhD	IIT Kharagpur	2006	--

Title of PhD Thesis

Synthesis, characterization, flocculation and rheological characteristics of cationic polysaccharides.

Professional Career:

• Professor	IIT(ISM) Dhanbad	12.04.2021 to date
• Associate Professor	IIT(ISM) Dhanbad	12.08.2012 - 11.04.2021
• Assistant Professor	IIT(ISM) Dhanbad	12.08.2009 - 11.08.2012
• Lecturer	BIT Mesra, Ranchi	01.11.2006 - 11.08.2009
• Scientist (R&D)	Hindustan Gum & Chemicals Ltd. Bhiwani, Haryana.	17.11.2004 - 30.09.2006

Awards & Honours

- **Erasmus+ Fellow**, University of Coimbra, Portugal (November **2025**).
- **Tata Steel Chair Professor**, 1st May **2025** to date
- **Visiting Professor**, Dept. of Chemistry & Biology, University of Siegen, Germany (May, **2025**).
- **MRSI Medal**, 2023.
- **Professor R. D. Desai 80th Birthday Commemoration Award-2021**, Indian Chemical Society, Kolkata.
- **Fellow, The Royal Society of Chemistry (FRSC)**.
- **Council Member**, International Council on Materials Education (ICME), USA.
- **Visiting Scientist**, National Centre for Nanostructured Materials, Council for Scientific and Industrial Research (CSIR), Pretoria, South Africa (June, **2017**).
- **DAAD Fellow**, University of Siegen, Germany, **2012**.
- **Young Scientist** (under DST FAST-TRACK Scheme), Department of Science & Technology, New Delhi, Govt. of India, **2010**.
- **Fellow**, Indian Chemical Society, **2009**.

Administrative Responsibilities

- **Head**, Dept. of Chemistry and Chemical Biology, IIT(ISM) Dhanbad. 15th May 2026 to date
- **Dean (Research & Development)**, IIT(ISM) Dhanbad. 16th August 2022 to 15th August 2025.
- **Associate Dean: R&D-Research Infrastructure**, IIT(ISM) Dhanbad. 1st April 2020 to 18th October 2023.
- **Head**, Central Research Facility, IIT(ISM) Dhanbad. 6th September 2018 to 15th August 2022.
- **Faculty-in-Charge**, Central Research Facility, IIT(ISM) Dhanbad. 1st July 2014 – 5th September 2018.
- **Faculty Coordinator**, Concetto-2017, IIT(ISM) Dhanbad.
- **Faculty Co-coordinator**, Concetto-2016, IIT(ISM) Dhanbad.
- **Faculty Coordinator - PhD**, Department of Chemistry, IIT(ISM) Dhanbad. 1st July 2018 to 30th June 2021.

Membership of Professional Bodies

- **Life Member**, The Society for Polymer Science, India.
- **Life Member**, Materials Research Society of India.
- **Life Member**, Chemical Research Society of India.
- **Life Member**, Indian Chemical Society

Research Interest

- Design and synthesis of stimuli responsive polymeric self-assembly.
- Physically/chemically crosslinked gels.
- Polymeric flocculant.
- Polymeric photocatalyst.

Research Records & Citations

[ORCHID ID: 0000-0002-3425-7010](https://orcid.org/0000-0002-3425-7010)

h-index: 52; i10-index: 107; Citations: >8200 ([google Scholar](#))

Articles/Communications: 120; Patents: 14; Book Chapters: 5.

Coordinator/PIC in the Externally Funded CoEs

- **Coordinator & Head**, "Wadhvani Innovation Network-Centre of Excellence (WIN CoE)", IIT(ISM) Dhanbad. 12th February 2025 to 11th February 2030 (**Sanctioned budget: ₹ 42.77 Crores**).
- **Professor-in-Charge**, "Tata Steel Innovation Centre on Mining and Mineral Research", IIT(ISM) Dhanbad. 2nd March 2023 to 1st March 2028 (**Sanctioned budget: ₹ 23.15 Crores**).

Externally Sponsored Projects as Principal Investigator



R&D Projects as Principal Investigator

Recommended for financial support w.e.f. 01/08/2026

- **Title:** Development of carbon dots embedded biopolymeric nanocomposite hydrogel as transdermal drug carrier.
CSIR, New Delhi, Govt. of India.
Recommended amount: Rs. 3170400/-; Duration: 1st August 2026 to 31st July 2029.

Ongoing: 02

- (2) **Title:** Next generation copolymeric reagent for cost-efficient beneficiation of low-grade iron ore.
Ministry of Mines, Govt. of India.
Sanctioned amount: Rs. 5305232/-; Duration: 18th November 2025 to 17th November 2027.
- (1) **Title:** Recovery of high-grade Iron ore from low grade Goethitic ore by Innovative Exfoliation Technique.
Tata Steel Ltd., Jamshedpur
Sanctioned amount: Rs. 3110244/-; Duration: 11th August 2025 to 10th February 2028.

Completed: 20

- (20) **Title:** Polysaccharide based copolymeric hydrogels for biomedical applications.
SERB, DST, New Delhi.
Sanctioned amount: Rs. 2622400/-; Duration: 9th May 2023 to 8th May 2026.
- (19) **Title:** Development of novel high-performance polymeric admixture for concrete and thereof.
JSW Cement Limited, Mumbai.
Sanctioned amount: Rs. 1575300/-; Duration: 1st September 2024 to 31st March 2026.
- (18) **Title:** Effective utilization and life enhancement of tailing pond at West Bokaro.
Tata Steel Ltd., Jamshedpur
Sanctioned amount: Rs. 2726484/-; Duration: 2nd June 2024 to 1st September 2025.
- (17) **Title:** AI-driven synthesis of green flocculant and its application towards the treatment of mine process effluent.
TEXMiN Foundation, IIT(ISM) Dhanbad
Sanctioned amount: Rs. 1994000/-; Duration: 24th April 2024 to 23rd April 2025.
- (16) **Title:** STUTI IIT(ISM) Dhanbad - 2021.
DST, New Delhi.
Sanctioned amount: Rs. 22447000/-; Duration: 9th Feb 2022 to 31st August 2023.
- (15) **Title:** Novel polymeric flocculants towards selective removal of iron ore particles with enhanced efficiency.
Tata Steel Ltd., Jamshedpur.
Sanctioned amount: Rs. 944000/-; Duration: 19th Oct 2020 to 31st March 2023.
- (14) **Title:** Modification of polysaccharides for various commercial applications.
Hindustan Gum & Chemicals Ltd., Bhiwani, Haryana.
Sanctioned amount: Rs. 1080000/-; Duration: 26th Nov 2019 to 25th Nov 2022.
- (13) **Title:** Novel Organic Binder Synthesis and Characterization for Iron Ore Palletization.
Tata Steel Ltd., Jamshedpur.
Sanctioned amount: Rs. 885000/-; Duration: 19th Oct 2020 to 18th Oct 2022.
- (12) **Title:** Rational design of amphiphilic self-assembled graft copolymers as drug carriers: experimental and theoretical approach.
SERB, DST, New Delhi.
Sanctioned amount: Rs. 2787400/-; Duration: 12th March 2019 to 11th March 2022.
- (11) **Title:** Studies on different flocculants for solid-liquid separation processes of coal preparation plant Tailings.
Tata Steel Ltd., Jamshedpur.
Sanctioned amount – Rs. 1150000/-; Duration: Aug 2018 to March 2021.
- (10) **Title:** Titanate nanosheet/cationically modified dextrin through in-situ exfoliation: Development and application towards enhanced dye adsorption and photodegradation property.
CSIR, New Delhi.
Sanctioned amount – Rs. 1100000/-; Duration: 15th July 2017 to 14th July 2020.
- (9) **Title:** Development of ternary nanocomposite hydrogel derived from functionalized biopolymer amylose/TiO₂-AgNPs and its potential application towards treatment of wastewater.
DST, New Delhi (Under Water Technology Initiative).
Sanctioned amount – Rs. 2390520/-; Duration: 18th March 2017 to 30th June 2020.
- (8) **Title:** Selection, detailed characterization and optimization of commercial flocculants towards the treatment of major water consuming unit of steel plant.

Tata Steel Ltd., Jamshedpur.

Sanctioned amount – Rs. 1265000/-; Duration: April 2017 to Dec 2018.

- (7) **Title:** Novel modified biopolymer-based hydrogels and nanogels: synthesis, characterization and application.
SERB, DST, New Delhi (Under EMR scheme).
Sanctioned amount – Rs. 3526000/-; Duration: 22nd June 2015 to 21st June 2018.
- (6) **Title:** Detailed Characterization and Analysis of Commercial Flocculants for Flocculation of Iron Ore.
Tata Steel Ltd., Jamshedpur.
Sanctioned amount – Rs. 800000/-; Duration: May 2016 to March 2017.
- (5) **Title:** High performance multifunctional guar gum for wastewater and industrial effluent treatment.
DST, New Delhi (Under WTI Scheme).
Sanctioned amount – Rs. 2847600/-; Duration: 20th June 2013 to 19th June 2016.
- (4) **Title:** Polyacrylamide grafted hydroxypropyl methyl cellulose (HPMC-g-PAM): Development and application as an efficient polymeric flocculant and viscosifier.
DST, New Delhi (Under Young Scientist Scheme).
Sanctioned amount – Rs. 1775000/-; Duration: 21st Sept 2010 to 20th March 2014.
- (2) **Title:** Amphoteric xanthan gum (AXG): Synthesis, characterization and application as a novel polymeric flocculant for the treatment of industrial wastewater.
DST, New Delhi (Under TSD PROGRAMME).
Sanctioned amount – Rs. 1545360/-; Duration: Oct 2010 to 31st Mar 2014.
- (2) **Title:** Synthesis and application of a novel polymeric biomaterial based on polyacrylamide grafted carboxymethyl guar gum (CMG-g-PAM).
UGC, New Delhi (Major Research Project).
Sanctioned amount – Rs. 226000/-; Duration: May 09 to April 2012.
- (1) **Title:** Development and applications of hydrolyzed and unhydrolyzed polyacrylamide grafted tamarind kernel powder (TKP) as flocculants for wastewater treatment.
DST, New Delhi (Under TECHNOLOGY SYSTEM GROUP).
Sanctioned amount – Rs. 810120/-; Duration: 30th April 2008 to 11th August 2009.

Consultancy Projects as CI and Co-CI

Ongoing: 01 (as CI)

- (1) **Title:** Integrated support for reagent synthesis, material characterization, and data interpretation.
Tata Steel Ltd., Jamshedpur.
Sanctioned amount: 47,20,000/-. Duration: 5th Feb 2026 to 4th August 2029

Ongoing: 01 (as Co-CI)

- (1) **Title:** Adequacy assessment of zero liquid discharge (ZLS) at Tata Steel Jamshedpur Works.
Tata Steel Ltd., Jamshedpur.
Sanctioned amount: 33,04,000/-. Duration: 4th May 2026 to 31st December 2026.

Completed: 02

- (2) **Title:** Synthesis of Graphene Quantum Dot from Coal Tar using Microwave Irradiation.
Tata Steel Ltd., Jamshedpur.
Sanctioned amount: 22,71,500/-. Duration: November 2023-December 2025.
- (1) **Title:** Detailed analysis and in-depth interpretation of various polymeric and inorganic materials.
Tata Steel Ltd., Jamshedpur.
Sanctioned amount: 590000/-. Duration: October 2023-September 2024.

PhD Guidance: ongoing - 8

- **Mr. Suman Bera**, JRF, Project Fellow
MSc (Chemistry): Vidyasagar University, India.
Joining: January 2026.
- **Mr. Nikhil Bera**, JRF, Institute Fellow
MSc (Chemistry): IIT(ISM) Dhanbad, India.
Joining: July 2025.
- **Mr. Suvamay Maity**, JRF, Institute Fellow
MSc (Chemistry): Vidyasagar University, India.
Joining: December 2024.
- **Mr. Sourav Batabyal**, JRF, Institute Fellow
MSc (Chemistry): Burdwan University, India.
Joining: July 2024
- **Mr. Subha Samanta**, JRF, Institute Fellow
MSc (Chemistry): IIT(ISM) Dhanbad, India.
Joining: January 2024.
- **Mr. Sanjib Ghosh**, JRF, Project Fellow
MSc (Chemistry): Vidyasagar University, India.
Joining: May 2023.
- **Mr. Padmapani Pradhan**, JRF, Institute Fellow
MSc (Chemistry): Vidyasagar University, India.
Joining: August 2022.
- **Mr. Argha Oja**, SRF, Institute Fellow (Joint Supervisor)
MSc (Chemistry): IIT(ISM) Dhanbad, India.
Joining: August 2022.

PhD Guidance: Completed - 17

17. **Dr. Shaon Dey (2019-2025)**
Thesis title: Tailored design of polymeric materials and nanocomposites for sustainable environmental remediation.
Degree received: November 2025.
Present Status: Research Associate, IIT(ISM) Dhanbad.
16. **Dr. Kalipada Manna (2019-2025)**
Thesis title: Rational design and application of stimuli-responsive amphiphilic self-assembled copolymers.
Degree received: September 2025.
Present Status: Research Associate, IIT(ISM) Dhanbad.
15. **Dr. Kaushik Singha (2017-2024)**
Thesis title: Rational design of polymeric materials for wastewater remediation in a sustainable manner.
Degree received: November 2024.

14. **Dr. Abanindra Nath Sarkar (2017-2023)**
Thesis title: β -Cyclodextrin based biocompatible hydrogels/nanogels and their application in controlled/targeted drug delivery.
Degree received: June 2023
Present Status: Assistant Manager (R&D), Black Rose Industries Ltd., India.
13. **Dr. Arpita Roy (2016-2022)**
Thesis title: β -Cyclodextrin based biocompatible hydrogels/nanogels and their application in controlled/targeted drug delivery.
Degree received: July 2022
Present Status: Post-Doctoral Research Fellow, University of Michigan, USA.
12. **Dr. Puja Das Karmakar (2016-2022)**
Thesis title: Synthesis of amphiphilic graft and graft-block copolymers and their potential applications.
Degree received: February 2022.
Present status: JSPS fellow at Kyoto University, Japan.
11. **Dr. Priyapratim Patra (2014-2020)**
Thesis title: Novel modified biopolymer-based hydrogels and nanogels: synthesis, characterization and application
Degree received: August 2020
Present status: Manager (R&D), JSW Cement Ltd., Vijaynagar Works, Karnataka.
10. **Dr. Lipi Midya (2014-2019)**
Thesis title: Polymeric Nanocomposites derived from functionalized chitosan: Development and Application
Degree received: December 2019.
Present status: Registering Authority (FSSAI) & Food Safety Officer, West Bengal General Service, Govt of West Bengal, India.
9. **Dr. Barun Mandal (2014-2018)**
Thesis title: Nanofillers incorporated crosslinked carboxymethyl cellulose: Development and application in sustained transdermal drug delivery.
Degree received: March 2018.
Present status: Post Doc Fellow, Presidency University, Kolkata, India.
8. **Dr. Abhay Shankar Patra (2013-2018)**
Thesis title: Multifunctional guar gum derivatives/SiO₂ hybrid nanocomposites: Synthesis, characterization and application as flocculants as well as adsorbents.
Degree received: February 2018.
Present status: Principal Researcher, Raw Materials Research group, Research & development, Tata Steel Ltd.
7. **Dr. Amrita Biswas (2013-2018) (Joint Supervisor)**
Thesis title: Studies on some grafted or modified natural polymers as corrosion inhibitor for mild steel in acidic medium.
Degree received: August 2018.
Present status: Assistant Professor, Manipal University Jaipur, India.
6. **Dr. Aniruddha Pal (2013-2018)**
Thesis title: Development and applications of graft and block copolymers using ATRP/RAFT techniques.
Degree received: January 2018.
Present status: Assistant Professor, Dayananda Sagar University, Bangalore.

5. **Dr. Dipankar Das (2012-2016)**
Thesis title: Development and applications of functionalized dextrin-based hydrogels/nanogels towards controlled/targeted drug delivery.
Degree received: August 2016.
Present status: Assistant Professor, NIPER, Mohali, India.
4. **Dr. Amit Kumar Sarkar (2012-2016)**
Thesis title: Polymeric nanocomposites derived from functionalized amylopectin and layered titanate/nano TiO₂: Development and application.
Degree received: July 2016.
Present status: Senior Scientist, PACT, Cambridge, UK.
3. **Dr. Raghunath Das (2011-2015)**
Thesis title: Hydroxypropyl methyl cellulose based graft copolymers/nanocomposite: Development and application in the field of controlled drug release.
Degree received: April 2015.
Present status: Assistant Manager (R&D), Oriental Carbon & Chemicals Limited, Rewari (Haryana), India.
2. **Dr. Soumitra Ghorai (2010-2015)**
Thesis Title: Modified xanthan gum/silica hybrid nanocomposite: Synthesis, characterization and application.
Degree received: March 2015.
Present status: Principal Researcher (R&D), Tata Steel Ltd., Jamshedpur.
1. **Dr. Gautam Sen (2006-2010)**
Thesis title: Synthesis and characterization of hydrolysed and unhydrolyzed polyacrylamide grafted carboxymethyl starch (CMS-g-PAM) and their applications.
Degree received: August 2010.
Present status: Assistant Professor, Birla Institute of Technology Mesra, Ranchi, India.

Post-doc guidance: 04 (ongoing); 04 (Completed)

MPhil project guidance: 02

MTech (Pharmaceutical Science Engg.) project guidance: 05

MSc project guidance: 49

Reviewer of Journals

Advanced Materials; Advanced Functional Materials; ACS Applied Bio Materials; ACS Applied Polymeric Materials; ACS Applied Materials & Interfaces; ACS Applied Energy Materials; ACS Applied Electronic Materials; ACS Omega; ACS Sustainable Chemistry & Engineering; Acta Biomaterialia; Biomacromolecules; Bioresource Technology; Carbohydrate Polymers; Carbon; Cellulose; Chemical Communications; ChemCatChem; Chemical Engineering Journal; Chemical Society Review; Chemosphere; Colloids and Surfaces A: Physicochemical and Engineering Aspects; Industrial & Engineering Chemistry Research; International Journal of Biological Macromolecules; Journal of Applied Polymer Science; Journal of Hazardous Materials; Journal of Materials Chemistry A; Journal of Materials Chemistry B; Journal of Molecular Liquids; Journal of Physical Chemistry; Langmuir; Macromolecular Symposia; Materials Science and Engineering B; New Journal of Chemistry; Polymer Bulletin; Polymer Chemistry; Polymer Engineering and Science; RSC Advances; Scientific Reports; Starch; Water Research.

Invited Lectures/Guest Lectures/Technical Talks/ Session chair

- Invited Lecture: “*Functional Polymers: Designing Materials for Industrial Applications*”, CRVSB – 2026, Salt Lake Guest House, IISER Kolkata, 03-04 July, 2026 (Delivered on 4th July **2026**).
- Invited Lecture: “*Recent Advances in Functional Polysaccharide-Based Materials for Biomedical Applications*”, ICFM-2026, IIT Kharagpur, 5–7 January 2026 (Delivered on 5th January **2026**).
- Invited Lecture: “*Tailored Biopolymeric Materials: From Molecular Design to Biomedical Use*”, SPSI MACRO-2025, IIT Kharagpur Research Park, Kolkata, 15–18 December 2025 (Delivered on 15th December **2025**).
- CERES Talk “*Biopolymer Derived Gels and Micellar Systems for Biomedical Applications*”, at University of Coimbra, Portugal (Delivered on 5th November **2025**).
- Invited Talk: “*Smart Polysaccharide Gels and Micelles: From Molecular Design to Applications*”, POLY-CHAR 2025, University of Mauritius, 1–5 September 2025 (Delivered online on 2nd September **2025**).
- Special Physical Chemistry and C_μ colloquium Talk “*Advancements in Natural Polymer Modification for Biomedical and Environmental Applications*”, at University of Siegen, Germany (Delivered on 27th May **2025**).
- Invited talk: “*A comprehensive review towards development and applications of polymeric hydrogels and micelles*”, in 3rd International Conference on Energy, Functional Materials/Molecules and Nanotechnology (ICEFN), Kumaun University, Nainital, 20-22 March 2025 (Delivered on 20th March **2025**).
- Invited talk: “*Polymeric Gels and Micelles: An Overview from Synthesis to Applications*”, International Conference on Advances in Materials and Chemical Sciences (AMCS-24), BIT, Mesra, Ranchi, 18-20 December 2024 (Delivered on 18th December **2024**).
- Invited talk: “*Biopolymeric Materials: From Development to Applications in Environmental Remediation*”, AICTE-VAANI sponsored seminar on RA2M-SD, HIT, Haldia, 7-9 August 2024 (Delivered on 8th August **2024**).
- Chairperson of Technical Session 4: International Conference on Materials and Membranes for Water and Energy (ICMMWE-2024), CSMCRI, Bhavnagar, 10-12 July **2024**.
- Invited talk: “*Biopolymeric Gels and Micelles for Biomedical Applications*”, in International Conference for Functional Materials and Polymer Technology (ICFMPT-2024), ICT-Mumbai, IOC Bhubaneswar, 14-16 March 2024 (Delivered on 16th March **2024**).
- MRSI Medal Lecture: “*Polysaccharide-based Copolymeric Gels and Micelles for Biomedical Applications*”, 34th AGM of MRSI, IIT(BHU), Varanasi, 12-15 December 2023 (Delivered on 14th December **2023**).
- Invited talk: “*Polysaccharide-Based Reagents for the Treatment of Mine Process Water*”, 4th International Conference on Emerging Smart Materials in Applied Chemistry (ESMAC-2023), KIIT-DU, Bhubaneswar, 18-20 November 2023 (Delivered on 18th November **2023**).
- Invited talk: “*Polysaccharide/oligosaccharide based copolymeric gels for various biomedical applications*”, National Conference on the theme “Science & Technology for Sustainable World”, KIIT-DU, Bhubaneswar, 14-15 March 2023 (Delivered on 14th March **2023**).
- Invited talk: “*Biopolymeric materials towards treatment of industrial wastewater*”, Emergent Materials for Energy and Environment (EMEE-2023), IIT Roorkee, 04-05 March 2023, (Delivered on 4th March **2023**).
- Professor R. D. Desai 80th Birthday Commemoration Award Lecture: “*Biopolymeric flocculants: Development and applications*”, International Seminar on Recent Trends in Chemical Science-2022 (RTCS-2022), IIT(ISM) Dhanbad, 16-18 December (Delivered on 18th December **2022**).

- Chairperson of Technical Session 3: International Seminar on Advance Research in Molecular & Material Science - 2022 (ARM2S - 2022), Jointly Organized by Department of Chemistry, Sitananda College, Purba-Medinipur, West Bengal & Sikkim Manipal Institute of Technology, Majhitar, Rangpo, Sikkim in collaboration with Indian Chemical Society, Kolkata, 01–02 March **2022**.
- Invited talk: *"Polysaccharides/oligosaccharide-based gels as drug carriers"*, International Seminar on Recent Advances in Chemistry & Material Sciences -2020 (RACMS-2020) in Commemoration of the birth anniversary of Acharya Prafulla Chandra Ray, organized by Indian Chemical Society, in collaboration with American Chemical Society, (Delivered online on 8th August **2020**).
- Invited talk as Resource Person: *"Modification of biopolymers and their potential applications"*, One-day National WEBINAR on Recent Development of Chemistry, RDC 2020, Kharagpur College (Delivered online on 20th June **2020**).
- Invited talk: *"Modified Polysaccharides as Drugs Carrier"*, POLY-CHAR 2019, Park Village Resort, Kathmandu, 19–23 May 2019 (Delivered on 20th May **2019**).
- Technical Talk: *"Functionalized polysaccharides towards treatment of wastewater"*, International Conference on Application of Supramolecular Chemistry in Water Treatment: An Innovative approach, Tata Steel, Jamshedpur, 4-5 February 2019 (Delivered on 4th February **2019**).
- Invited Lecture: *"Development and applications of biopolymeric hydrogels towards controlled release of model drugs"*, SPSI MACRO-2018, IISER, Pune, 19–22 December 2018 (Delivered on 20th December **2018**).
- Invited Lecture: *"Modified Biopolymeric Composites: Efficient Photocatalysts towards Degradation of Toxic Organic Contaminants"*, Innovation in Materials Science & Technology (IMST-2018), Amity University, Kolkata, 14–16 December 2018 (Delivered on 14th December **2018**).
- Invited Lecture: *"Biopolymeric hydrogels/nanogels/composites: Development and applications"*, at National Centre for Nano-structured Materials, CSIR, Pretoria, South Africa (Delivered on 9th June **2017**).
- Technical Talk: *"Functionalized Biopolymer: Development and Applications"*, Workshop on Synthesis and Characterization of Additives, Tata Steel R&D, Jamshedpur (Delivered on 16th January **2017**).
- Invited Lecture: *"Biopolymeric hydrogels/nanogels: application towards controlled/targeted drug delivery"*, RECENT ADVANCES IN LIFE SCIENCE IN THE LIGHT OF CHEMISTRY, Dept. of Chemistry, Bethune College, Kolkata in collaboration with Royal Society of Chemistry (Eastern India Section) (Delivered on 9th September **2016**).
- Invited Lecture: *"Biopolymer dextrin-based hydrogels/microgels: Application in controlled/targeted drug delivery"*, International Conference on Energy, Functional Materials and Nanotechnology (ICEFN – 2016), Kumaun University, Nainital, 27–29 March 2016 (Delivered on 28th March **2016**).
- Guest Lecture: *"Modified Polysaccharides: Development, characterization and applications"*, TATA STEEL R&D, Jamshedpur (Delivered 9th January **2015**).
- Invited Lecture: *"Modified xanthan gum/SiO₂ hybrid nanocomposite: Efficient adsorbent for removal of toxic dyes and metal ion"*, International Conference and Expo on Recent Advances in Polymer & Rubber Science & Technology (RAPT – 2014), University of Calcutta, 22–24 January 2014 (Delivered on 22nd January **2014**).
- Guest Lecture: *"Modified polysaccharides: Application in wastewater treatment"*, One Day National Seminar on Recent Trends in Macromolecular Science and composite Technology, VIT, Chennai (Delivered on 17th March **2012**).
- Invited Lecture: *"Synthesis, macromolecular characterization and rheological applications of hydrolyzed and unhydrolyzed polyacrylamide grafted carboxymethyl starch (CMS-g-PAM)"*, International Conference ICPPC – 2010, Kottayam, Kerala, 15–17 January 2010 (Delivered on 16th January **2010**).