

PERSONAL INFORMATION



Sulalit Bandyopadhyay

 Jonsvannsveien 105B, Trondheim 7050, Norway.
 +4773550339  +4745071041
 sulalit.bandyopadhyay@ntnu.no / S.Bandyopadhyay-2@tudelft.nl
 <https://www.ntnu.no/ansatte/sulalit.bandyopadhyay>
<http://folk.ntnu.no/bandyopa/>
 Sex Male | Date of birth 05/01/1988 | Nationality Indian

 CURRENT POSITION
2018 - PRESENT

Post Doctoral Research Fellow (100%)

Department of Chemical Engineering, Norwegian University of Science and Technology (NTNU), Norway.

Teaching Duties:

TKP 4190 Fabrication and Application of Nanomaterials (Spring Semester), Experiment Design for Felles Lab (Fall Semester), TKP 4100 Fluid Flow and Heat Transfer (Spring Semester).

Administrative Duties:

Operative Leader at Department of Chemical Engineering for HYPROS Gemini Centre on Hydrometallurgy.
 Member of Admission Committee for International MSc Students at Dept. of Chemical Engineering, NTNU (2013 - present).
 Member of MSCHEMENG Programme Board (2018 – present).
 Co-ordinator and Initiator for IKP PhD Forum (2018 – present).
 Co-ordinator for IKP Days (2018 – present).

Researcher (25%)

Department of Water Management, TU Delft, Netherlands.

WORK EXPERIENCE

Sep 2017 – Feb 2018

Polymer Scientist, Antifouling, Jotun Performance Coatings.

R & D Chemist 2, Technology Development, Jotun A/S, Sandefjord, Norway.

- Develop and maintain antifouling products by preparing, testing and evaluating paint/binder/raw materials.

Jan 2017 – Aug 2017

Post Doctoral Research Fellow.

TU Delft and IHE Delft Institute for Water Education, Netherlands.

Principal researcher involved with Tailoring a new generation of water tracers: DNA-tracer in STW funded Project: **“WaterTagging: DNA-microparticles for tracing and modelling water flows and travel times in natural systems”**. Principal Investigator, Dr. Thom Bogaard, TU Delft and Dr. Jan Willem Foppen, IHE Delft Institute for Water Education .

Jan 2013 – Jan 2017

Lecturer & Teaching Assistant.

Department of Chemical Engineering, NTNU, Norway.

Teaching Duties:

TKP 4190 Fabrication and Application of Nanomaterials (Spring Semester), TKP 4115 Surface and Colloid Chemistry, Felles Lab (Fall Semester).

Administrative Duties:

Member of Admission Committee for International MSc Students at Dept. of Chemical Engineering, NTNU (2013- 2017).
 Member of PhD Admission Committee at Dept. of Chemical Engineering, NTNU (2014-2015).

Feb 2011 – Aug 2011

Research Assistant and Summer Intern.

Prof Gisle Øye, Ugelstad Laboratory, Department of Chemical Engineering, NTNU, Norway.

Research Work on : **Characterization of acid extracted, base extracted and asphaltene extracted crude oils** under JIP Project "Produced Water Management-Interactions between oil water emulsions and solids".

EDUCATION AND TRAINING

- Aug 2012 – Nov 2016
PhD Title
Supervisor
PhD in Chemical Engineering.
“**Smart and Multifunctional Core-Shell Nanoparticles (NPs) for Drug Delivery**”.
Dr. Wilhelm Robert Glomm, Senior Research Scientist, SINTEF Industry, Trondheim, and Former Associate Professor at Department of Chemical Engineering, NTNU, Norway.
- Aug 2010 – June 2012
Institutions
Master of Science (MSc) in Chemical Engineering.
NTNU, Norway and ETH, Zurich.
Overall Grade : A
- Aug 2006 – June 2010
Institution
Bachelor of Chemical Engineering (BChE Hons.).
Jadavpur University, India.
CGPA 9.14 Percentage marks 85.56

PERSONAL SKILLS

Mother tongue
Other language(s)

Bengali

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C2	C2	C2	C2	C2
Norwegian	A2/B1	A2/B1	A2/B1	A2/B1	A2/B1
Hindi	C2	C2	C2	C2	C2
Urdu	C2	-	C2	C2	-

Ongoing Projects

Role: Principal Investigator

- **Functional Nano-particles in Medicine.** (2020 - 2024) Funding: NTNU Health, NV Faculty and MH Faculty
- **Production of Magnetic Beads for Corona Testing in Norway.** (March 2020 – present) Funding: FHI, Norway.
- **High-throughput Synthesis of Non-spherical Plasmonic Nanoparticles (NPs) for Applications in Endotoxin Sensing (Nano-Syn-Sens).** (2020 – 2024) Funding: RCN, Norway and DST, India.

Role: Co - Principal Investigator

- **Understanding the Growth and Properties of Nanomaterials for Biomedical Applications.** (2018 – 2021) Funding: NV Faculty, NTNU, Norway.
- **Nanostructured Hybrid Catalysts for Photocatalytic Applications.** (2018 – 2021) Funding: NV Faculty, NTNU, Norway.
- **Hybrid Nanoparticles for Environmental and Biomedical Applications.** (2018 – 2020) Funding: Department of Materials Science and Engineering, NTNU, Norway.
- **Nanoparticles for Applications in Oil Industries.** (2017 – 2020) Funding: University of Stavanger, Norway.

Role: Research Partner/ Collaborator

- **LIBRES - Lithium ion Battery Recycling”, Innovation Project for the Industrial Sector under ENERGIX.** (2018 – 2022) Funding: Industries and RCN, Norway.
- **“WaterTagging: DNA-microparticles for tracing and modelling water flows and travel times in natural systems”.** (2018 – 2022) Funding: STW, Netherlands.
- **“URBANWAT -Tools and criteria for URBAN groundWATER management”.** (2019 – 2021) Funding: NWO, Netherlands; CDTI, Spain and ANR/AFB, France.
- **“GREENCAM – Cooperation and partnership strategy for the enhancement of the education quality of strategic master Chemistry of Advanced Materials in line with Green Chemistry requirements – Green Chemistry of Advanced Materials.** (2019 – 2021) Funding: EEA Financial Mechanism 2014-2021.

Completed Projects

- **PhD thesis: “Multifunctional and Smart Core-Shell Nano-particles for Drug Delivery”** under Associate Prof Wilhelm Robert Glomm at Ugelstad Laboratory, Chemical Engineering Department, NTNU, Norway.
- **“Synthesis and property control of nanogel coated Fe-oxide nanoparticles for drug delivery”**, under Dr. P. Sujatha Devi, Principal Scientist, Nano-structured Materials Division, (NMSD) Central Glass and Ceramic Research Institute (CGCRI), Kolkata. **(PhD Exchange)**.
- **“Bio-Degradable Nano-clusters as Drug Delivery Vehicles”**, under Prof Massimo Morbidelli, Dr. Miroslav Soos at Chemical Engineering Department, ETH Zurich and Associate Prof Wilhelm Robert Glomm at Chemical Engineering Department, NTNU, Norway. **(Master thesis)**.
- **“Smart Nano-particles for Drug Delivery”**, under Associate Prof Wilhelm Robert Glomm at Chemical Engineering Department, NTNU, Norway. **(Master Specialization Project)**.
- **“Process Design and Economic Investigation of LPG Production from Natural Gas Liquids (NGL)”**, under Prof Sigurd Skogestad, at Chemical Engineering Department, NTNU, Norway. **(Semester Design Project)**.
- **“Synthesis of iron-oxide nano-particles for targeted drug delivery”**, under Dr. Someswar Datta, Scientist, Grade-IV, Bio-Ceramics and coating Division, Central Glass & Ceramic Research Institute (CGCRI) (CSIR national Lab), Kolkata.
- **“Synthesis, characterization and MRI applications of magnetite nano-particles synthesized on dendrimer templates”**, under Dr. Rajdip Bandyopadhyaya, Chemical Engineering Department, IIT Bombay.
- **“Electrodeposition of Aluminium on nanostructured surfaces”**, under Dr. Julien Bachmann in Prof. Kernel Nielsch’s group, Institute for Angewandte Physik, University of Hamburg.
- **“Application of Superparamagnetic Nano particles”**, under Dr. Someswar Datta, Scientist, Grade-IV, Bio-Ceramics and coating Division, Central Glass & Ceramic Research Institute (CGCRI), Kolkata and Prof. Alakananda Mukherjee, Chemical Engineering Department, Jadavpur University **(B.E project)**.

Supervision

PhD Students

- Anuvansh Sharma (2018 – present)
- Karthik Raghunathan (2018 – present)
- Jibin Antony (2018 – present)
- Muhammad Awais Ashfaq Alvi (2017 – present)
- Radhika Gautam Gunaji (2018 – present)
- Azad Anugerah Ali Rasol (2018 – present)
- Rafat Abdul-Razzaq (2019 – present)
- Faruk Ibrahim Yakasai (2019 – present)

Master Students

8 master students for Specialization projects and Master thesis (2013 – 2018).

6 master students for Specialization projects and Master thesis (2019 – present).

Fields of Interests

- Nanomaterials.
- Polymer Reaction Engineering.
- Bioprocess Engineering.
- Thermodynamics of materials.
- Hydrometallurgy

Selected Journal Publications

15 articles published in peer-reviewed international journals, 162 citations to date, h-index: 7 (Google Scholar, 05/2020). Manuscripts under Review – 2, Manuscripts in preparation – 4.

- **“Tuning and tracking the growth of gold nanoparticles synthesized using binary surfactant mixtures”**, Karthik Raghunathan, Jibin Antony, Sarmad Munir, Jens-Petter Andreassen and Sulalit Bandyopadhyay, *Nanoscale Advances* (2020).
- **“Growing gold nanostructures for shape-selective cellular uptake”**, Sulalit Bandyopadhyay, Birgitte H. McDonagh, Gurvinder Singh, Karthik Raghunathan, Axel Sandvig, Ioanna Sandvig, Jens-Petter Andreassen and Wilhelm R. Glomm, *Nanoscale Research Letters*, 13, 254 (2018).
- **“Synthesis, Characterization and Drug Loading of Multiresponsive p[NIPAm-co-PEGMA] (core)/p[NIPAm-co-AAc] (Shell) Nanogels with Monodisperse Size Distributions”**, Rajesh Raju, Sulalit Bandyopadhyay, Anuvansh Sharma, Susana V. Gonzalez, Per H. Carlsen, Odd Reidar Gautun, Wilhelm R. Glomm, *Polymers*, 10, 3 (2018).
- **“A robust method to calculate the volume phase transition temperature (VPTT) for hydrogels and hybrids”**, Sulalit Bandyopadhyay, Anuvansh Sharma, Muhammad Awais Ashfaq Alvi, Rajesh Raju, Wilhelm R. Glomm, *RSC Advances*, 7, 53192-53202 (2017).
- **“The Influence of Differently Shaped Gold Nanoparticles Functionalized with NIPAM-Based Hydrogels on the Release of Cytochrome C”**, Sulalit Bandyopadhyay, Anuvansh Sharma, Wilhelm R. Glomm, *Gels*, 3, 42 (2017).
- **“Shape tunable synthesis of anisotropic gold nanostructures through binary surfactant mixtures”**, Sulalit Bandyopadhyay, Gurvinder Singh, Wilhelm R. Glomm, *Materials Today Chemistry*, 3, 1-9 (2017).
- **“Influence of polymer coating on release of l-dopa from core-shell Fe@Au nanoparticle systems”**, Sulalit Bandyopadhyay, Muhammad Awais Ashfaq Alvi, Anuvansh Sharma, Kaizheng Zhu, Anna-Lena Kjøniksen, Bo Nyström, Wilhelm R. Glomm, *Colloid and Polymer Science*, 295, 391-402 (2017).
- **“Synthesis of gadolinium oxide nanodisks and gadolinium doped iron oxide nanoparticles for MR contrast agents”**, Gurvinder Singh, Birgitte H. McDonagh, Sjoerd Hak, Davide Peddis, Sulalit Bandyopadhyay, Ioanna Sandvig, Axel Sandvig, Wilhelm R. Glomm, *Journal of Materials Chemistry B*, 5, 418-422 (2017).
- **“Incorporation of Fe@Au nanoparticles into multiresponsive pNIPAM-AAc colloidal gels modulates drug uptake and release”**, Sulalit Bandyopadhyay, Marte Kee Andersen, Muhammad Awais Ashfaq Alvi, Anuvansh Sharma, Rajesh Raju, Birgitte Hjelmeland McDonagh, Wilhelm R. Glomm, *Colloid and Polymer Science*, 294, 1929-1942 (2016).
- **“L-DOPA-Coated Manganese Oxide Nanoparticles as Dual MRI Contrast Agents and Drug-Delivery Vehicles”**, Birgitte H. McDonagh, Gurvinder Singh, Sjoerd Hak, Sulalit Bandyopadhyay, Ingrid L. Augestad, Davide Peddis, Ioanna Sandvig, Axel Sandvig, Glomm, Wilhelm R. Glomm, *Small*, 12, 301-306 (2016).
- **“Controlling the self-assembly and optical properties of gold nanoclusters and gold nanoparticles biomineralized with bovine serum albumin”**, Birgitte H. McDonagh, Gurvinder Singh, Sulalit Bandyopadhyay, Sina M. Lystvet, Joseph A. Ryan, Sondre Volden, Eugene Kim, Ioanna Sandvig, Axel Sandvig, Wilhelm R. Glomm, *RSC Advances*, 5, 101101-101109 (2015).
- **“Synthesis and in vitro cellular interactions of superparamagnetic iron nanoparticles with a crystalline gold shell”**, Sulalit Bandyopadhyay, Gurvinder Singh, Ioanna Sandvig, Axel Sandvig, Roland Mathieu, P. Anil Kumar, Wilhelm Robert Glomm, *Applied Surface Science*, 316, 171-178 (2014).
- **“Synthesis of Au nanowires with controlled morphological and structural characteristics”**, Gurvinder Singh, Antonius T.J. van Helvoort, Sulalit Bandyopadhyay, Sondre Volden, Jens-Petter Andreassen, Wilhelm R. Glomm, *Applied Surface Science*, 311, 780–788 (2014).
- **“Application of Design of Experiment on Synthesis of Superparamagnetic Iron Oxide Particle by Modified Solution Combustion”**, Sulalit Bandyopadhyay, Debabrata Basu and Someswar Datta, *Adv. Sci. Lett.* 5, 475-484 (2012).

Books

- **“Fabrication and Application of Nanomaterials”** by Sulalit Bandyopadhyay, McGraw-Hill Education; 1 edition (June 7, 2019), ISBN-13: 978-1260132236.
- **“Biodegradable Nano-Clusters as drug delivery vehicles: The Future of Drug Delivery Vectors”** by Sulalit Bandyopadhyay, LAP LAMBERT Academic Publishing (July 24, 2012), ISBN 978-3659193026.

Courses and Summer Schools

- Delivered 1-Day Short Course (Invited) on **Solution Based Fabrication of Nanomaterials**, Material Engineering Department, ITS, Surabaya, Indonesia, October 2019.
- Delivered 2-Day Short Course (Invited) on **Fabrication and Application of Nanomaterials - Particle Design Towards Oil Based Applications**, Universiti Teknologi Malaysia (UTM), October 2019.
- Delivered 1-Day Short Course (Invited) on **Synthesis, Functionalization and Characterization of Nanomaterials for Biomedical and Environmental Applications**, Universiti Teknologi Malaysia (UTM), March 2019.

Pedagogical courses

- **PhD Supervisor Seminar- Part 2**, organized by HRE and HS Division, NTNU, Spring 2019.
- **Two Day PhD Supervisor Seminar**, organized by HRE and HS Division, NTNU, Fall 2018.
- **One Day PhD Supervisor Seminar for Post Docs**, organized by HRE and HS Division, NTNU, Fall 2018.
- **Diploma Course in Teacher Training Seminar**, organized by Faculty of Social Sciences and Technology Management, NTNU, Spring 2014.

Awards and Scholarships

- **Best PhD thesis for 2016/2017** at Faculty of Natural Sciences, NTNU.
- **NorFab Project Support** for work in NTNU Nanolab (2017- 2018).
- Recipient of prestigious **PhD Travel Grant** from Faculty of Natural Science and Technology, NTNU (Dec 2015).
- Recipient of **Norges Tekniske Høgskoles Fond** for Summer School at iNano PhD School, Århus University (June 2013).
- **NorFab Small Project Support** for work in NTNU Nanolab (2013-2014).
- Awarded with the prestigious **Erasmus Mundus Fellowship (2010-2012)** for Masters at NTNU, Norway.
- Awarded the first prize in a **Poster Competition**, held at the Chemical Engineering Department, NTNU, Norway, (2010), poster being entitled “**Process Design and Economic Investigation of LPG Production from Natural Gas Liquids (NGL)**”
- Awarded with the prestigious **Dr. Hiralal Roy Smriti Padak (Silver Medal)** for securing the highest marks in the fourth year Bachelor of Chemical Engineering Second Semester Examination in the subject “**General Knowledge in Chemistry and Chemical Engineering**” Viva-voce Examination, 2010.
- Awarded the first prize in a **Poster Competition**, held at the Chemical Engineering Department, Jadavpur University, Kolkata (16th January,2010), poster being entitled “**Electrodeposition of Aluminium from Organic Solvents in AAO Membranes**”
- Awarded with the prestigious **DAAD summer internship fellowship** (WISE - INTERNSHIPS in SCIENCE, TECHNOLOGY and ENGINEERING) for 2009 summer.
- Received the coveted **Medha Samman Award for Best Project for the year 2008**, project being entitled “Synthesis of iron oxide nanoparticles for targeted drug delivery” at the Jagadish Bose Forum, Kolkata.
- Awarded with the **Jagadis Bose National Science Talent Search (JBNSTS) Senior Scholarship**, 2006-07.
- Received the **Medhavi Chatra Puraskar, 2004**, for outstanding performance in I.C.S.E from the Governor of West Bengal.

Organization of Scientific Meetings

- **Organizing Committee Member** of 56th Nordic Polymer Days, 2019, Trondheim.
- **Session Chair** for 56th Nordic Polymer Days, 2019, Trondheim.
- **Session Chair** for Norwegian Nanosymposium 2019, Trondheim.
- **Co-ordinator** for IKP Dagen – Annual Research Days at Department of Chemical Engineering, NTNU.

Memberships of Academies/Scientific Societies

- **Associate Member** of Indian Institute of Chemical Engineers (2010 – present).
- **Member** of Norwegian Chemical Society (NKS).

Commissions of Trust

- **Co-ordinator** for initiation and quality appraisal of experimental project work as part of TKP 4190 Fabrication and Application of Nanomaterials course at Department of Chemical Engineering, NTNU (2015 – present)
- **Joint Departmental Co-ordinator** at Department of Chemical Engineering, NTNU for SIU funded INCP Project *Research and education within advanced hybrid separation techniques in industrial wastewater treatment* (2015-2017).
- **Committee member** for curriculum development for MSc in Chemical Engineering at NTNU. (2013-2016)
- **Responsible academic staff** for feedback monitoring of International Masters Programme at Department of Chemical Engineering, NTNU (2013 – 2015).
- **Committee member** for curriculum development at Department of Chemical Engineering, Jadavpur University, India. (2011-2012)
- **Committee Member of MSCHEMENG Program Council**, Department of Chemical Engineering, NTNU (2018 - present)
- **Editor** for Special Issue "Nordic Polymer Days", Polymers, MDPI Publishing House. (2019 – present)
- **Reviewer** for Materials, Gels, Nanomaterials, Molecules, Applied Sciences, Materials, Pharmaceutics, European Polymer Journal, ACS Books. (2017 – present)

Major Collaborations

- **Jan Genzer**, Self-Assembly of polymers and polymers at surfaces and interfaces, Department of Chemical and Biomolecular Engineering, North Carolina State University, USA.
- **Robert Grass**, DNA based silica particles for tracers, Department of Chemistry and Applied Biosciences, ETH Zurich, Switzerland.
- **Miroslav Soos**, Flash Nanoprecipitation and biodegradable polymers, Department of Chemical Engineering, UCT Prague, Czech Republic.
- **Ethayaraja Mani**, Thermodynamic and process models for nanoparticle growth, Department of Chemical Engineering, IIT Madras, India.
- **Wilhelm Robert Glomm**, Encapsulation and biomedical applications, Department of Biotechnology and Nanomedicine, SINTEF Industry, Trondheim, Norway.

Organizational/Managerial Skills

- **President** of Trondheim Cricket Club (2014 - present).
- **Production Manager** of Socio-Cultural Festival Enhet i Norge, 2018, Trondheim.
- **Development Leader** for Children's and Women's Cricket, NTNUI Cricket Group (2016 - present).
- **Leader** of NTNUI Cricket Group (2013-2015).
- Former **President** of Indian Students' Forum (ISF), Trondheim, Norway (2013-2014).
- Former **Steering Committee member** of ISF, Trondheim (2011-2013).
- Former **Honorary Assistant General Secretary** of CHEMBridge2012, the annual Reunion of the Chemical Engineering Department, Jadavpur University.
- Former **Honorary General Secretary** of Salt Lake School Alumni Association 2010-2013.
- Former **Event Manager and Trips' Co-ordinator** of International Club of Trondheim (ICOT), Trondheim, Norway (2010-2012).
- Former **AIESEC member**, in the Development Sector of AIESEC Kolkata Chapter, the all-student organization funded by the United Nations.
- Former **Honorary Student General Secretary** for CHEMBridge 2010.
- Former **Honorary General Secretary** of International Club of Trondheim (ICOT) (2012-2013).
- Acted as **Event Manager** for Nritya Rytme 2013, Trondheim.