

UNIVERSITY OF CALCUTTA

ACADEMIC DEPARTMENT

FACULTY ACADEMIC PROFILE/ CV



1. **Full name of the faculty member:** Dr. Sriparna Datta
2. **Designation:** Professor
3. **Specialization :** Pharmaceutical & Fine Chemical Technology
4. **Contact information:** Flat No. 41, 201, Manicktala Main Road, Kolkata -700054
Email id. sriparna_d@yahoo.com Mob: 9830695346
5. **Academic qualifications:**

College/ university from which the degree was obtained	Abbreviation of the degree
University of Calcutta	B.Tech in Chemical Technology
University of Calcutta	M.Tech in Pharmaceutical Technology
University of Calcutta	Ph.D (Tech)

6. **Positions held/ holding:**
 1. Worked for 13 years in the R & D Division of a Public Sector Undertaking of All India repute
 2. Now working in the **Department of Chemical Technology, University of Calcutta** since August,1997, presently as Professor.
7. **Research interests:**
 - Microbiology
 - Pharmaceutical Formulation
8. **Research guidance :**

Number of researchers awarded M. Tech : 18
Number of researchers pursuing Ph.D : ...Awarded – 8, Pursuing - 4
9. **Projects :**

Completed projects :

 - 1) UGC Major Project (F.No. 32-108/2006(SR) Dt. 12.03.2007 entitled :
“Isolation of active components from the fruit body of Polyporus gramocephalous and study of their microbial and biological properties”
 - 2) AICTE Project (Ref No. 8023/RID//RPS-15/(Govt)/Policy-II/2011-12, entitled :
“Microbial degradation of petroleum hydrocarbons and biosurfactant production”
 - 3) UGC Major Project sanctioned vide F.No. 41-501/2012(SR) Dt. 23.07.2012 entitled :
“Biosurfactant production from waste oils by microbes”
 - 4) Nanoscience & Nanotechnology Project entitled “Novel Functionalized Nano-Biomaterial for Drug Delivery, Bioremediation and Sensing Application” with Dr. Debashis Das as Co-Investigator

- 5) DBT Project entitled “ Studies on Phytomedicine Andrographolide Nanoparticle drug delivery devices” as Co-investigator with Prof. Arup Mukherjee
- 6) WB-DST Project entitled “ Production of potential Exopolysaccharides from microbes and exploration of their commercial applications”. Ref.No.682 (Sanc.)/ST/P/S&T/15G-7/2016, dated : 09.11.2016.
- 7) UPE Project Phase II entitled “Studies on Characterization and Application of Bacterial Extracellular polymeric substances from waste”

10. Select list of publications:

a) *Journals*:

- Das D., Ara T., Datta S., Mukherjee A. "New water resistant biomaterial biocide film based on guar gum" - *Bioresource Technology* 102: 5878 – 5883, 2011.
- Sahoo S., Dutta S., Biswas D., Banik Choudhary R., Biosurfactant Production from n-Paraffins by an Air Isolate *Pseudomonas aeruginosa* OCD₁, *J. Oleo Science*, Vol.59, No.11 p 601-605 (2010).
- De A., Sana S., Datta S., Mukherjee A., “ Protective efficacy of ursodeoxycholic acid nanoparticles in animal model of inflammatory bowel disease” *J. Microencapsul., online.*, 2014, 1464-5246.
- De A., Datta S., Mukherjee A. “Quantitative analysis of Glycyrrhizic acid from a polyherbal preparation using liquid chromatographic technique” *J.Adv. Pharm. Tech. Res.* Vol 3 No. 4, Pg 210-215, 2012.
- Bhattacharya M., Sana S., Biswas D., Datta S. “ Utilization of waste engine oil by *Ochrobactrum pseudintermedium* strain C1 that secretes an exopolysaccharide as a bioemulsifier”. *Biocatal & Agric Biotechnol.*,3,167-176.(doi:10.1016/j.bcab.2014.09.002)
- De A., Datta S., Mukherjee A. “Design and in vitro evaluation of a bi polymeric delivery device for the amelioration of colonic diseases using a popular glucocorticoid as a model drug” –*Acta Poloniae Pharmaceutica – Drug Research*, Vol 68, No. 5 pp.735-744, 2011.
- Bhattacharya Munna., Sana Santanu., Biswas Dipa., Datta Sriparna., Biodegradation of waste lubricants by a newly isolated *Ochrobactrum* sp. C1. 3 *Biotech*, DOI 10.1007/s13205-015-0282-9\ 2015.
- Sana S., Bhattacharya M., Biswas D., Datta S. “RSM study for the production of rhamnolipid using *Catla catla* Fish fat” *Int. J. Curr. Microbiol. & Appl Sciences*, 2015, 4 (1): 169-178.
- Santanu Sana., Asit Mazumder., Sriparna Datta*., and Dipa Biswas., Towards the development of an effective in vivo wound healing agent from *Bacillus* sp. derived biosurfactant using *Catla catla* fish fat. *RSC Adv.*, 2017, 7, 13668.
- Helen Chattopadhyay,a Biswajit Auddy,a Tapas Sur,b.,Santanu Sanaa and Sriparna Datta*a. Accentuated transdermal application of glucosamine sulphate attenuates experimental osteoarthritis induced by monosodium iodoacetate.*J. Mat Chem B*.2016, 4, 4470.
- Helen Chattopadhyay, Amit Kumar De, and Sriparna Datta., Novel Starch-PVA Polymer for Microparticle Preparation and Optimization Using Factorial Design Study. *International Scholarly Research Notices*, V 2015, Article ID 261476, 8 pages.
- Mallick, S. B., Chattopadhyay, H., De, A. K., & Datta, S. A comparative study of two separate analytical techniques for the simultaneous determination of diclofenac

sodium and diacerein from combined dosage form. *Brazilian Journal of Pharmaceutical Sciences*, 53(2)., 2017.

- Sana, S., Datta, S., Biswas, D., & Bhattacharya, M. Production kinetics of Rhamnolipid using fish fat: A step towards environmental hazard control of sewage. *Environmental Technology & Innovation*, 8, 299-308., 2017.
- Basu, A., Kundu, S., Sana, S., Halder, A., Abdullah, M. F., Datta, S., & Mukherjee, A. Edible nano-bio-composite film cargo device for food packaging applications. *Food Packaging and Shelf Life*, 11, 98-105., 2017.
- Sana, S., Datta, S., Biswas, D., & Sengupta, D. Assessment of synergistic antibacterial activity of combined biosurfactants revealed by bacterial cell envelop damage. *Biochimica et Biophysica Acta (BBA)-Biomembranes*. 1860.,579-585., 2018.
- Chattopadhyay H., Sriparna D., Transdermal delivery of Diacerein with homing carrier Glucosamine sulphate laden in oil-in-water nanoemulsion. *Materials Today: Proceedings*. Vol 5, Issue 3, Part 3, 9690-9697.
- Sengupta D., Datta S., Biswas D., Towards better production of bacterial exopolysaccharides by controlling genetic as well as physic-chemical parameters. *Appl. Microbiol & Biotechnol.*, 102: 1587 – 1598., 2018.
- Sengupta D., Datta S., Biswas D., Exploring two contrasting surface-active exopolysaccharides from a single strain of *Ochrobactrum* utilizing different hydrocarbon substrates. *Journal of Basic Microbiology*, <https://doi.org/10.1002/jobm.201900080>, 24th June, 2019.
- Chattopadhyay, Helen & Auddy, Biswajit & Sur, Tapas & Gupta, Mradu & **Datta, Sriparna**. (2020). *Transdermal co-delivery of glucosamine sulfate and diacerein for the induction of chondroprotection in experimental osteoarthritis*. Drug Delivery and Translational Research. 10.1007/s13346-019-00701-7.
- Alam, A., Mishra, S., Hassan, A., Bera, R., **Dutta, S.**, Das Saha, K., & Das, N. (2020). *Triptycene-Based and Schiff-Base-Linked Porous Networks: Efficient Gas Uptake, High CO₂/N₂ Selectivity, and Excellent Antiproliferative Activity*. *ACS omega*, 5(8), 4250–4260. <https://doi.org/10.1021/acsomega.9b04160>
- Mishra, Snehasis & Manna, Krishnendu & Kayal, Utpal & Saha, Moumita & Chatterjee, Sauvik & Chandra, Debraj & Hara, Michikazu & **Datta, Sriparna** & Bhaumik, Asim & Das Saha, Krishna. (2020). *Folic acid-conjugated magnetic mesoporous silica nanoparticles loaded with quercetin: a theranostic approach for cancer management*. *RSC Advances*. 10. 23148-23164. 10.1039/D0RA00664E.
- Sengupta D, **Datta S**, Biswas D. *Surfactant exopolysaccharide of *Ochrobactrum pseudintermedium* C1 has antibacterial potential: Its bio-medical applications in vitro*. *Microbiol Res*. 2020;236:126466. doi:10.1016/j.micres.2020.126466
- Saha I, **Datta S**, Biswas D. *Exploring the role of bacterial extracellular polymeric substances for sustainable development in agriculture*. *Curr Microbiol*. 2020. 10.1007/s00284-020-02169-y
- Banerjee S., Mukherjee N., Gajbhiye R.L., Mishra S., Jaisankar P., Datta S., Das Saha K., *Intracellular anti-leishmanial effect of Spergulin-A, a triterpenoid saponin of *Glinus oppositifolius**. *Infection and Drug Resistance* 2019;12 2933–2942.
- Roy P., Bhat V.S., Saha S., Sengupta D., Das S., Datta S., *Mesoporous carbon nanospheres derived from agro-waste as novel antimicrobial agents against gram-negative bacteria*. *Environmental Science and Pollution Research*., <https://doi.org/10.1007/s11356-020-11587-1>. 2020

- Saha I., Datta S., *Bacterial exopolysaccharides in drug delivery applications*. J. Drug Delivery Science & Technology., 74, 2022, 103557.
- Sengupta D., Datta S., Biswas D., Banerjee S., Das S., *Prospective bioremediation of toxic heavy metals in water by surfactant exopolysaccharide of Ochrobactrum pseudintermedium using cost-effective substrate*. International Microbiology (2021) 24:441–453.

b) **Books/ book chapters :**

• **Books**

1. Engineering Chemistry - Dr. Raghupati Mukherjee & Dr. Sriparna Datta
New Age International Publishers
2. Chemistry For Engineers - Dr. Raghupati Mukherjee & Dr. Sriparna Datta
(WBUT Syllabus), New Age International Publishers
3. Pharmaceutical Chemistry - Dr. Raghupati Mukherjee & Dr. Sriparna Datta
Books & Allied (P) Ltd

• **Book Chapters**

1. “Green Chromatographic Techniques: Separation and Purification of Organic and Inorganic Analytes” edited by Ali Mohammad and Inamuddin., Springer, United Kingdom.
2. “Towards efficient PCB waste management by biodegradation of waste transformer oil.”In:Adhikary K et al (Eds) Environment: Pollution and Protection, pp 55-65, Narosa Publishing House Pvt. Ltd. New Delhi, India (ISBN No. 978-81-8487-4105).
3. “Bacterial Metabolites for Removal of Toxic Dyes and Heavy Metals “**Datta S**, Sengupta D, Saha I. in book *Methods for Bioremediation of Water and Wastewater Pollution*. Inamuddin et al. (ed). Vol 51. **2020**. 10.1007/978-3-030-48985-4

11. **Membership of Learned Societies:**

- 1) Fellow of the Royal Society of Chemistry (London)
- 2) Life Member of the Indian Chemical Society
- 3) Life Member of the Institute of Chemical Engineers
- 4) Life Member of the Institution of Chemists
- 5) Life Member of the Indian Pharmaceutical Association
- 6) Life Member of the Indian Pharmacy Graduates Association

12. **Invited lectures delivered :**

Invited Lectures delivered at Heritage Institute of Technology, Birla Institute of Technology, MESRA, at the Convention of Chemists of Indian Chemical Society.

Delivering lectures regularly in **Faculty Improvement Programmes** of Academic Staff College.

Member of Board of Studies – Pharmaceutical Technology dept., Jadavpur University, Biotechnology Dept., Heritage Institute of Technology.

Acted as Expert for Faculty selection in MAKAUT

13. **Other notable activities :**

1. Acted as Head, Department of Chemical Technology from 2013 to 2015, 2017 - 2019 & January, 2023 till date
2. Acted as the Member of Syndicate, University of Calcutta (2014-2015)
3. Acted as the Member of Senate, University of Calcutta (2013-2015)