



ENLIGHTENMENT TO EXCELLENCE

UNIVERSITY OF NORTH BENGAL

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Raja Rammohunpur, Dist- Darjeeling, West Bengal, Pin-734013, India.

Department of Chemistry

Print



Dr. Pranab Ghosh

M.Sc., Ph.D.

Professor

Fellow Member- International Congress of Chemistry and Environment, Indore, M.P. ; Life Member- Chemical Research Society of India (CRSI), Department of Organic Chemistry, IISc, Bangalore; Tribology society of India, Hyderabad; Indian Chemical Society, 92, APC Road, Kolkata-9.

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Subject Specialization: Organic Chemistry

Area of Research Interest: Natural product Chemistry, Organic Synthesis and Synthetic Methodology, Polymer Chemistry and Lube oil additives.

Number of Ph.D. students: a) Supervised: 26(till the date) b) Ongoing: 08

Number of M. Phil. students: a) Supervised: 01 b) Ongoing: Nil

Number of Publications: 182 (till the date) (Journals/Book/Book Chapter/ Monographs etc).

Number of thesis evaluated: 14 (till the date)

Activity as a reviewer of research papers for the journals:

- Royal Society of Chemistry
- American Chemical Society
- Taylor & Francis.
- Bentham Publications
- Wiley
- Springer etc

Area of Research:

1. Isolation and characterization of Natural products from the medicinal plants available in Darjeeling hill and Terai region of West Bengal.
2. Transformative reactions on steroids and triterpenoids following Green Chemistry Protocol to synthesize a library of biologically active compounds.
3. Development of new Synthetic Methodology for the synthesis of bioactive heterocyclic compounds.
4. Synthesis, Characterization and Performance Evaluation of Chemical additives used in lubricating oils.

Professional Experience:

Industrial:

Level	Duration	No of years	Name of the organization
ASSISTANT MANAGER (R & D)	1993-2000	07	LUBRIZOL INDIA LTD. [A Govt. of India MNC with Lubrizol Corporation, USA] , 9/3 Thane Belapur Road, Turbhe, New Bombay- 400705

Teaching:

Level	Duration	Present designation	Name of the University / College
PG	2006 Onwards	Professor	Dept. of Chemistry, University of North Bengal, WB, India.
HRDC (formerly known as UGC Academic Staff College)	2012 onwards	Resource person for OP & RC program	i. University of North Bengal WB, India. ii.S.P.University of Pune, Pune.
PG	1998-2000	Visiting	Institute of Science, University of Bombay, Madam

		Professor(Honorary)	Cama Road, Fort, Bombay.
UG	2000 – 2006	Left as Sr. Lecturer	Raiganj (University) College, Raiganj, Uttar Dinajpur, WB, India.
UG	1990 – 1992	Left as a Lecturer	ST. Joseph's College, Darjeeling, WB, India.

Selective List of Publications (2017-2019):

- Synergistic effect of liquid crystals on the additive performance of poly acrylate in lubricating oil, Mahua Upadhyay, Malay Kumar Das, R. Dąbrowski, Pranab Ghosh, *Asian Jr. Nano Sc & Materials*. 2019, 2, 257 -270.
- Multifunctional Greener Additives for Lubricating Oil, Mahua Upadhyay, Gobinda Karmakar, Gurpreet Singh Kapur, Pranab Ghosh, **Polymer Engineering and Science**, 2018, 58(5), 810-815., DOI: 10.1002/pen.24635.
- Multifunctional biodegradable lube oil additives: Synthesis, characterization, and performance evaluation, P. Ghosh, K. Dey, M. Upadhyay, T. Das, *Petroleum Science and Technology.(Pet. Sci. Tech.)* 2017, 35 (1), 66-71.
- Synthesis and performance evaluation of vegetable oil polymer as a multifunctional lube oil additive, Sujit Talukdar, Mahua Upadhyay, Pranab Ghosh, Accepted for publication, October 2018, *Petroleum Science and Technology*, DOI: 10.1080/10916466.2018.1525398.
- Clean and green approach for one-pot synthesis of pyrazines from ethylenediamine and 1, 2-diketone or its analogues under neat reaction condition, Pranab Ghosh, Rakesh Ranjan Chakraborty, *Letters in Organic Chemistry*, 2019, 14(8), 566 – 570. DOI: [10.2174/1570178614666170609072519](https://doi.org/10.2174/1570178614666170609072519).
- Amine-functionalized graphene oxide nanosheets (AFGONs): an efficient bifunctional catalyst for selective formation of 1,4-dihydropyridines, acridinediones and polyhydroquinolines, Prasun Choudhury, Pranab Ghosh, Basudeb Basu, Accepted for publication, April 2019, *Molecular Diversity*, DOI: 10.1007/s11030-019-09949-0.
- Performance evaluation of polymeric blend of vinyl acetate and acrylate-based copolymers in lubricating oil. Sultana Yeasmin, Pranab Ghosh, Accepted for publication, January 2019, *Petroleum Science and Technology*, DOI: 10.1080/10916466.2019.1566260.
- Friedelane triterpenoids: transformations toward A-ring modifications including 2-homoderivatives, Antara Sarkar, Jayanta Das and Pranab Ghosh, **New Jr. Chem.**, (RSC Publications), 2018,42, 6673 -6688. DOI:10.1039/C8NJ00009C.
- 2-Iodo benzoic acid: an unconventional precursor for the one pot multi-component synthesis of Quinoxaline using organo Cu (II) catalyst, Bittu Saha, Bijeta Mitra, Dhiraj Brahmin, Biswajit Sinha, Pranab Ghosh. *Tetrahedron Letter*, 2018, 59, 3657-3663.
- TiCl₃ catalyzed one-pot protocol for the conversion of aldehydes into 5-substituted 1H- tetrazole, Rakesh Ranjan Chakraborty, Pranab Ghosh, *Tetrahedron Letter*, 2018, 59(40), 3616-3619.
- Poly (methyl methacrylate)-graphene oxide supported palladium catalyst: A ligand free protocol for Suzuki and Heck coupling reaction in water medium, Puja Basak, Pranab Ghosh, *Synthetic Com.* 2018, 48(19), 2584-2599.
- Silica gel an efficient catalyst for one –pot synthesis of pyrazine from ethylene diamine and 1, 2 – diketones and their analogs, Rakesh Ranjan Chakraborty, Rabindranath Singha and Pranab Ghosh, *Ind. Jr. Het. Chemistry*, 2018, 28 (3), 1-7.
- An ionic liquid as a potential multifunctional lubricating oil additive, Sujit Talukdar, Pranab Ghosh, *Pet. Sc. Tech.* 2018. 36 (22), 1920 – 1927.
- Phytochemical Investigation of Sapium baccatum: Identification of 3 α -hydroxy-1 α , 2 α -epoxy lupan, Rabindranath Singha, Pranab Ghosh, *The Pharmaceutical and Chemical Journal*, 2018, 5(2), 9-15.
- One pot route to nitriles from aldehyde and hydroxylamine hydrochloride on silica-gel. Rakesh Ranjan Chakraborty and Pranab Ghosh, *Asian Journal of Green Chemistry*, 2018, 2, 330- 337. DOI:10.22034/ajgc.2018.62809.
- One pot three-component synthesis of 5-substituted 1H-tetrazole from aldehyd, Bijeta Mitra, Suvodeep Mukherjee, Gyan Chandra Pariyar, **Pranab Ghosh**. *Tetrahedron Letters*. 2018, 59, 1385–1389.
- Naturally derived green bio-additives, Debasish Kumar Saha and Pranab Ghosh. *Journal of Macromolecular Science: Part A- Pure and Applied Chemistry*, 2018, 55(4), 384-392.
- Graphene oxide (GO) catalyzed transamidation of aliphatic amides: An efficient metal-free procedure, Suchandra Bhattacharya, Pranab Ghosh, Basudeb Basu *Tetrahedron Letters*, 2018, 59, 899-903.
- Almond oil as potential biodegradable lube oil additive: A green alternative, Debasish Kumar Saha and Pranab Ghosh, *Journal of Polymers and the Environment*. 2018 , 26(6), 2392-2400.DOI:10.1007/s10924-017-1135-x
- Acrylate – α – pinene copolymer as biodegradable multifunctional additives for lube oil Mahua Upadhyay, Koushik Dey and Pranab Ghosh, *Journal of Scientific and Industrial Research*. 2017, 76, 303.
- Dodecylmethacrylate – behenyl acrylate copolymers as potential multifunctional additive for lubricating oil. Mahua Upadhyay, Debasish Kumar Saha and Pranab Ghosh. *Journal of Scientific and Industrial Research.*, Accepted for publication. 2018, MS ID: JSIR/MS/2018/JSIR-9108 (04).
- p-TsOH-Catalyzed one-pot transformation of di- and trihydroxy steroids towards diverse A/B-ring oxo- functionalization, Antara Sarkar, Jayanta Das and Pranab Ghosh, **New Jr. Chem.**, (RSC Publications),2017,41, 9051-9060 ; DOI: 10.1039/c7nj01878a.
- Dodecylmethacrylate - olive oil copolymers as potential biodegradable pour point depressant for lubricating oil, Debasish Kumar Saha, Mahua Upadhyay and Pranab Ghosh, *Petroleum Science and Technology*, 2017, 4, 1-7.
- Castor oil as potential multifunctional additive in the formulation of eco-friendly lubricant. Pranab Ghosh, Mainul Hoque & Gobinda Karmakar., *Polym. Bull.* 2018, 75(2), 501- 514, DOI: 10.1007/s00289-017-2047-6.

- Effect of the ortho-hydroxy group of salicylaldehyde in the A3 coupling reaction: A metal-catalyst-free synthesis of propargylamine, Sujit Ghosh, Kinkar Biswas, Suchandra Bhattacharya, Pranab Ghosh and Basudeb Basu, *Beilstein J. Org. Chem.* 2017, 13, 552–557. doi:10.3762/bjoc.13.53
- Dodecyl methacrylate and vinyl acetate copolymers as viscosity modifier and pour point depressant for lubricating oil, Pranab Ghosh, Mainul Hoque, Gobinda Karmakar, and Malay Kr. Das, *International Journal of Industrial Chemistry*, (Springer) 2017, 8(2): 197-205. DOI 10.1007/s40090-017-0119-y.
- Graphene Oxide (GO): An Efficient Carbocatalyst for the Benign Synthesis of Functionalized 1,4-Benzothiazines, Suchandra Bhattacharya, Pranab Ghosh, [Basudeb Basu](#), *Tetrahedron Letters*, 2017, 58(10), 926-931. DOI: 10.1016/j.tetlet.2017.01.068.
- Terpolymers based on sunflower oil/alkyl acrylate/styrene as sustainable lubricant additive, Pranab Ghosh, Mainul Hoque & Gobinda Karmakar. *Polymer Bulletin*. 2017,74, 2685-2700. [DOI 10.1007/s00289-016-1863-4].
- **Castor oil based multifunctional greener additives for lubricating oil**, Pranab Ghosh, Mainul Hoque, Gobinda Karmakar and Sultana Yeasmin. **Current Environmental Engineering (Bentham Science)**, 2017, 4(2), 197-206.
- β -Pinene – acrylate copolymer as a potential biodegradable multifunctional additives for lube oil, Mahua Upadhyay, Sujit Talikdar & Pranab Ghosh, *Petroleum Science and Technology*, **2017**, 35 (21), 2051-2058.