

RAJESH S. BHOSALE | Ph.D.

Associate Professor & Head | Department of Chemistry | School of Science
INDRASHIL UNIVERSITY | Rajpur, Mehsana-382470, Gujarat, India
Email: rajeshbhosale24@gmail.com / rajesh.bhosale@indrashiluniversity.edu.in
Mob.: +91-7981951658



Publications	92 [84 Journals, 5 Book Chapters 3 Books,]	Google citations	2000
Conferences	18 [11 International, 7 National]	H-Index	23
Personal	Born Sep 21, 1977; Male; Married; Indian	Post Ph.D. experience	12+ Years

Professional & Research Experiences

Position	Institute/ University	Year
Associate Professor	Department of Chemistry, Indrashil University, Rajpur, Mehsana, India	08/2018- Present
CSIR-SRA (Scientist's Pool)	Polymers & Functional Materials Division, CSIR-Indian Institute of Chemical Technology, Hyderabad, India	07/2015-06/2018
RMIT-Research Associate	RMIT-IICT Research Centre, CSIR-Indian Institute of Chemical Technology, Hyderabad, India	04/2013-06/2015
Postdoctoral Researcher	Freiburg Institute for Advance Studies (FRIAS), Freiburg, Germany	04/2011-10/2012
SNSF-Postdoctoral Fellow	Massachusetts Institute of Technology (MIT), Cambridge, USA	03/2010-02/2011
Research Assistant	Department of Chemistry, Swami Ramanand Teerth Marathwada University, Nanded, India	03/2003-06/2005

Academic Qualifications

Ph.D. (Chemistry, *DOI: 10.13097/archive-ouverte/unige:6528*) Supervised by **Prof. Stefan Matile** at University of Geneva, Geneva (**Switzerland**) -26/11/2009

M.Sc. (Organic Chemistry, 67.84%) at Swami Ramanand Teerth Marathwada University, Nanded (**India**)-2002

Academic Awards

2015: CSIR- Senior Research Associateship (**Scientists' Pool Scheme**) Award.
2010: Swiss National Science Foundation (**SNSF**) Postdoctoral Fellowship Award.
2006: Ph.D. Fellowship Award, University of Geneva, Switzerland.

Academic Administrative Experience

1. **HoD**, Chemistry, Indrashil University (June 2020- present).
 - Member, Institutional Biosafety Committee, Indrashil University (March 2020-present)
 - Member, Recruitment Committee, School of Sciences, Indrashil University (2019 - 2021)
 - Member, Academic council, Indrashil University (August 2020- present)
 - Member, Board of Study, Indrashil University (June 2019 – present)
 - Member, Doctoral Research Committee (DRC), Indrashil University (July 2019-present)
2. **Nodal Officer**: Indrashil University, for **SHODH** (ScHeme of Developing High Quality Research) scheme, Knowledge Consortium of Gujarat, Department of Education, Government of Gujarat (2019–present)
3. **Ph.D. Coordinator**: Performing duty as coordinator of Ph.D. Section, Indrashil University (July 2021 – present)
4. **External Affair Coordinator**: Performing duty as SOS external affair coordinator, Indrashil University (January 2022 – present)
5. **National Education Policy (NEP) 2020 Coordinator**: Performing duty as NEP-2020 coordinator of Indrashil University (June 2021 - present)
6. **Seminar Coordinator**: School of Sciences, Indrashil University (academic year 2018-2019)
7. **Organizing Secretary**: Organized a first national conference on synthetic biology for reprogramming cells, Indrashil University (24th - 25th January 2020)
8. **Workshop Convenor**: Organized a “Indo-Australia Workshop on Advanced Functional Materials-2021 (IAWAM-2021)”, Indrashil University (11th – 13th November 2021)
9. **Jury**: Attended and evaluated posters in “Science and Start-up Conclave, “eUReka 3.0-2020” on 30th January, 2020, at Institute of Advanced Research, Gandhinagar

Scientific Administrative Experience

1. **Associate Editor**: ‘*Frontiers in Chemistry*’ (IF: 5.2) in the supramolecular chemistry section
2. **Guest Associate Editor**: Topic: New Approaches in Toxicity Testing of Nano therapeutics; ‘*Frontiers in Pharmacology*’ (IF: 5.8)
3. **Journal Reviewer**: Materials (MDPI), Chemical Communication, RSC Advances, Chemistry Select, Tetrahedron Letter, Synthetic Communication, Synthetic Letter
4. **Thesis Reviewer**: Invited as external reviewer for Master and PhD thesis from: Central University of Gujarat, ICT-Mumbai, CSIR-IICT Hyderabad, SRTM University Nanded, Shivaji University Kolhapur

Research Project

S. No.	Sponsored Project	Title of the Project
1.	CSIR-SRA (Pool Officer;(18,00,000 Rs) 2015-2018	Design, synthesis and photovoltaic characterization of phosphole bearing conjugated copolymers: A new family of electron-acceptors
2.	Swiss SNSF Project (44,500 US\$) 2010-2011	Nanostructured Organic Electronic Materials for Chemical and Biological Sensing

Book:

- [03] Pandya A., **Bhosale R.**, Singh V. (2022); Design, principle and application of self-assembled nanobiomaterials in biology and medicine. **Elsevier** (accepted).
- [02] **Bhosale R.**, Singh V. (2021); Advances in Aggregation Induced Emission Materials in Biosensing and Imaging for Biomedical Applications - Part B (Volume 185) (Progress in Molecular Biology and Translational Science). **Elsevier**, ISBN-13: 978-0323996044
- [01] **Bhosale R.**, Singh V. (2021); Advances in Aggregation Induced Emission Materials in Biosensing and Imaging for Biomedical Applications - Part A (Volume 184) (Progress in Molecular Biology and Translational Science). **Elsevier**, ISBN-13: 978-0323907392

Book Chapter:

- [05] Waghchoure A. P., Reddy J. P., **Bhosale R. S.** “Fluorescence based miniaturized microfluidic and nanofluidic systems for biomedical applications”. **Prog Mol Biol Transl Sci.**, 2022,186, 217-243. Editors: Pandya A., Singh V.
- [04] Biradar, M. R.; **Bhosale, R. S.**; Bhosale, S. V. “Aggregation induced emission materials for tissue imaging”. **Prog Mol Biol Transl Sci.**, 2021,185, 1-18. Editors: Bhosale R., Singh V.
- [03] Bandyopadhyay, S.; Kalangi, S. K.; Singh, V.; **Bhosale, R. S.** “Introduction to Aggregation Induced Emission (AIE) Materials”. **Prog Mol Biol Transl Sci.**, 2021,184, 1-9. Editors: Bhosale R., Singh V.
- [02] Singh, A.; Chaudhary, D.; Waghchoure, A. P.; Kalariya R. N.; **Bhosale, R. S.** “AIE Materials for Nucleus Imaging”. **Prog Mol Biol Transl Sci.**, 2021,184, 250-218. Editors: Bhosale R., Singh V.
- [01] **Bhosale, R. S.**; Aljabri, M.; La, D. D.; Bhosale, S. V.; Jones, L. A.; Bhosale, S. V.; Principles and Applications of Aggregation-Induced Emission “Tetraphenylethene derivatives - a Promising Class of AIE Luminogens: Synthesis, Properties and Applications”, **Springer publisher**, 2019, 223-264. Editors: Tang Y., Tang B. Z

Peer Reviewed Publications:

- [84] Bhusanur D. I., Nadimetla D. N., Harmalkar S. S., **Bhosale R. S.**, Puyad A. L., Wagalgave S. M., Bhosale Sid. V., Bhosale She. V. “Synthesis, crystal structure and supramolecular self-assembly of tetraphenylethylene subunit appended isoindigo derivatives” **J. Mol. Struct.**, 2022, 1255, 132452.
- [83] Gayke M., Narode H., Eppa G., **Bhosale R. S.**, Yadava J. S. “Synthetic Approaches toward the Synthesis of Brivaracetam: An Antiepileptic Drug” **ACS Omega**, 2022, 7, 2486 – 2503.
- [82] Narode H., Gayke M., **Bhosale R. S.**, Eppa G., Gohil N., Bhattacharjee G., Singh V., Pawar R. P., Rajani D. P., Yadava J. S. “Vanillin containing 9H-fluoren sulfone scaffolds: Synthesis, biological evaluation and molecular docking study” **Result in Chemistry**, 2022, 4, 100269.
- [81] Tanneeru K., Bhatraju N. K., **Bhosale R.S.**, Kalangi S. K. “Assessing differential binding of aggregation induced emission-based luminogens to host interacting surface proteins of SARS-CoV-2 and influenza virus-an in silico approach” **Front. Microbiol.**, 2021, 12, 766351.
- [80] Shaikh D. B., Aljabri M. D., Nadimetla D. N., Birajdar S. S., Kobaisi M. A., **Bhosale R. S.**, Antolasic F., Bhosale Sid. V., Bhosale She. V. “pH-Controlled supramolecular self-assembly of naphthalenediimide appended L-alanine and ethylenediamine asymmetric bolaamphiphile” **Helv. Chim. Acta**, 2021, 104, e2100011.
- [79] Mehmood T., **Bhosale R. S.**, Reddy J. P. “Bis (2-methylpyridinium) tetrachloridocuprate (II): synthesis, structure and Hirshfeld surface analysis”, **Acta Crystallogr. E: Crystallogr. Commun.**, 2021, 77, 726-729.
- [78] Birajdar S. S., Brix S., Rao P. S., **Bhosale R. S.**, Kobaisid M. A., Gupta A., Lessard B. H., Bhosale Sid. V., Bhosale She. V. “Conjoint use of naphthalene diimide and fullerene

- derivatives to generate organic semiconductors for n-type organic thin film transistors” *ChemistryOpen.*, 2021, 10, 414-420.
- [77] Patila P. D. J., Wagalgavea S. M., Kobaisid M. A., Birajdara S. S., **Bhosale R. S.**, Ingle R. D., Pawar R. P., Bhosale She. V., Bhosale Sid. V. “An efficient naphthalimide based receptor for selective detection of Hg²⁺ and Pb²⁺ ions”, *Indian J. Chem. Sect. B*, 2021, 60, 1353-1361.
- [76] Wagalgave S. M., Padghan S. D., Kobaisi M. A., La D. D., Bhamidipati K., Puvvada N., **Bhosale R. S.**, Bhosale Sid. V., Bhosale She. V. “Selectivity and bio-compatibility of self-assembled chiral flower-like and helical nanostructures”, *New J. Chem.*, 2020, 44, 18092-18101.
- [75] Shaikh D. B., Liu W., **Bhosale R. S.**, Said A. A., Kobaisi M. A., Bhosale Sid. V., Bhosale She. V., Zhang Q. “Novel core-modulated naphthalenediimides with CN-TFPA as electron transport layer for inverted perovskite solar cells”, *Mater. Res. Bull.*, 2020, 132, 111009.
- [74] Gokulwad S. P., Nadimetla D. N., Shaikh D. B., La D. D., Kobaisi M. A., **Bhosale R. S.**, Bhosale Sid. V., Bhosale She. V. “Supramolecular self-assembly of naphthalene diimide bolaamphiphile with biologically important amines: Cyclam, spermine and melamine”, *J. Mol. Struct.*, 2020, 1206, 127743.
- [73] Liu W., Shaikh D. B., Rao P. S., **Bhosale R. S.**, Said A. A., Mak A. M., Wang Z., Zhao M., Gao W., Chen B., Lam Y. M., Fan W., Bhosale Sid. V., Bhosale She. V., Zhang Q. “Molecular aggregation of Naphthalene diimide (NDI) derivatives in electron transport layers of inverted perovskite solar cells and their influence on the device performance”, *Chem. Asian J.*, 2020, 15, 112–121.
- [72] Shejul D. A., Wagalgave S. M., Jadhav R. W., Al Kobaisi M., La D. Duc, Jones L. A., **Bhosale R. S.**, Bhosale Sid. V., Bhosale She. V. “Aggregation-induced emission characteristics and solvent triggered hierarchical self-assembled chiral superstructures of naphthalenediimide amphiphiles”, *New J. Chem.*, 2020, 44, 1615-1623.
- [71] Shaikh D. B., Said A. A., Wang Z., Rao P. S., **Bhosale R. S.**, Mak A. M., Zhao K., Zhou Y., Liu W., Gao W., Xie J., Bhosale Sid. V., Bhosale She. V., Zhang Q. “Influences of Structural Modification of Naphthalenediimides with Benzothiazole on Organic Field-Effect Transistor and Non-Fullerene Perovskite Solar Cell Characteristics”, *ACS Appl. Mater.*, 2019, 11, 44487-44500.
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- [68] Pramod D. Jawale Patil, Rajita D. Ingle, Sopan M. Wagalgave, **Rajesh S. Bhosale**, Sidhanath V. Bhosale, Rajendra P. Pawar, Sheshanath V. Bhosale “A Naphthalimide-benzothiazole conjugate as colorimetric and fluorescent sensor for selective trinitrophenol detection”, *Chemosensors*, 2019, 7, 38.
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- [65] Santosh P Gokulwad, Vishal G More, Mohammad Al Kobaisi, **Rajesh S Bhosale**, Dung Duc La, Frank Antolasic, Sidhanath V Bhosale, Sheshanath V Bhosale “Solvent-Induced Self-Assembly of Naphthalenediimide Conjugated to Tetraphenylethene through D-and L-Alanine”, *ChemistrySelect*, 2019, 4, 2626–2633.
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- naphthalene diimides*”, *Mater. Chem. Front.*, 2019, 3, 1231-1237.
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- [60] More Y. W., Padghan S. D., **Bhosale R. S.**, Pawar R. P., Puyad A. L., Bhosale Sid. V., Bhosale Sid. V., “Proton triggered colorimetric and fluorescence response of a novel quinoxaline compromising a donor-acceptor system”, *Sensors*, 2018, 18, 3433.
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- [58] Shaikh D. B., Said A. A., **Bhosale R. S.**, Chen W., Bhosale Sid. V., Puyad A. L. Bhosale She. V., Zhang Q., “Dithiafulvenyl-naphthalene diimide-based small molecules as efficient non-fullerene electron-transport layer for inverted perovskite solar cells”, *Asian J. Org. Chem.*, 2018, 7, 2294-2301.
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- [53] Kumar R., Yadav R., Kolhe M. A, **Bhosale R. S.**, Narayan R. “8-Hydroxypyrene-1, 3, 6-trisulfonic acid trisodium salt (HPTS) based high fluorescent, pH stimuli waterborne polyurethane coatings”, *Polymer*, 2018, 136, 157-165.
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- [51] **Bhosale R. S.**, La D. D., Padghan S., Kobaisi M. Al, Jones L. A., Bhosale Sid. V., Bhosale She. V., “Supramolecular Flower-Like Microarchitectures Self-Assembly from Naphthalenediimide Amphiphile Bearing Melamine Functionality”, *ChemistrySelect*, 2017, 2, 10118-10122.
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- [46] Gottom R., **Bhosale R. S.**, Palaniappan S. "Polyaniline salt containing dual dopants, pyrelenediimide tetracarboxylic acid and sulfuric acid: fluorescence and supercapacitor", *J. APPL. POLYM. SCI.*, 2017, 134, 45456.
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- [44] **Bhosale R.**, La D. D., Kobaisi M. Al, Bhosale She., Bhosale Sid. "Melamine and spermine mediated supramolecular self-assembly of octaphosphonate tetraphenyl porphyrin", *ChemistrySelect*, 2017, 2, 1573 – 1577.
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Oral Presentation in Conferences:

- [19] **Invited Speaker:** Delivered invited talk on "Towards the Development of AIE/AIEE Active Organic Fluorescent Materials" at on National Webinar on "Recent Trends in Chemical Sciences" conducted by Department of Chemistry, Deogiri College, Aurangabad, on 28-09-2021.
- [18] **Invited Speaker:** Delivered talk on "Towards the Development of AIE/AIEE Active Fluorescent Materials" in the 3rd National Conference in Chemistry (NCONC-20) in IIT-Gandhinagar, **India** on 12th February, **2020**.
- [17] **Invited Speaker:** Delivered an invited talk on "Towards the Development of Organic Functional materials" at the St Xavier College Ahmadabad, **India** on 2nd March **2020**.
- [16] **Invited Speaker:** Delivered talk on "CO₂ as a green precursor in polymer synthesis". National conference on "Materials for Advanced Techonology & Applications", 21st September **2016**, Maharashtra Institute of Technology, Aurangabad, **India**.
- [15] Delivered a talk on "Ordered and Oriented Supramolecular Surface Architectures for Soft Photovoltaics". Chimia 2009, 63, 377, SCS Annual Fall Meeting, 4th September **2009**, Lausanne, **Switzerland**.
- [14] Delivered a talk on "Synthetic Supramolecular Zipper Assembly for Organic solar cell" Opoplzer lecture, 30th January **2009**, University of Geneva, **Switzerland**.

Poster Presentation in Conferences:

- [13] HPTS Based Sensor for Recognition of Arginine and Lysine. A Tributary symposium on “100-Years of Chemical Bonding by Gilbert N. Lewis”, CSIR-IICT, Hyderabad, **India**. 4-5.08.2016
- [12] Chemiresistive Polymer/SWCNT Sensors for Chemical Warfare Agents. National Symposium on polymers and Coatings, CSIR-IICT, Hyderabad, **India**. 25-26.04.2014.
- [11] Novel Azobenzene Derivatives for Optoelectronics. Workshop on New Materials for Renewable Energy, Trieste, **Italy**. 17-21.10.2011.
- [10] Topologically Matching, Ordered and Oriented Supramolecular Surface Architectures for Soft Photovoltaics. Abstract Book IV Joint International Symposium on Macrocyclic and Supramolecular Chemistry (ISMSC-4), Maastricht, **Netherlands**. 21-25.06. 2009.
- [09] Ordered and Oriented Supramolecular Photovoltaics. Abstract Book 40th CUSO Summer School Organic Chemistry, Functional Biosupramolecular System. Villars, **Switzerland**, 23-27.08. 2009.

Training in Workshops & Conference:

- [08] International Conference on Polymer Science and Technology (MACRO 2017), 9-11. 01. 2017, Vikram Sarabhai Space Centre, Thiruvananthapuram, **India**.
- [07] International Conference on Chemical Biology, Disease Mechanisms and Therapeutics, 6-8. 02. 2014, CSIR-IICT, Hyderabad, **India**.
- [06] Challenges and Prospects of Polymer Chemistry, 02-04.05.2012, Schluchsee, **Germany**.
- [05] Black Forest Focus on Soft Matter 5: Self-Assembly on all Scales, 24-27.05. 2011, Titissee, **Germany**.
- [04] Material Day 2010, Materials for Sensors, 13.10.2010, MIT, **USA**.
- [03] CUSO's Summer School: The Challenge of Future Energy Sources, 17-21. 08. 2008, Villars, **Switzerland**.
- [02] CUSO's Summer School: Bottom-Up Approach to Nanotechnology, 26-30. 08. 2007, Villars, **Switzerland**.
- [01] Swiss Japanese symposium on Chemical Biology, 25-30. 06. 2007, Lausanne, **Switzerland**.

Students Working Under Supervision

Ph.D. Students @ IU

- | | |
|---|---|
| 1) Mr. Narode Hanuman Machindra (SHODH-JRF) | 4) Mr. Nirav Patel (JRF-Indrashil University) |
| 2) Mr. Kalariya Ravikumar Nitinbhai (SHODH-JRF) | 5) Ms. Waghchoure Aishwarya Prakash (SHODH-JRF) |
| 3) Mr. Jadhav Krishna Ashokrao (JRF-Indrashil University) | 6) Ms. Chaudhari Vaishaliben Dilipbhai (JRF-Indrashil University) |

Courses Taught (UG, PG and PhD)

1) Teaching Duties @ IU

- Advanced Organic Chemistry – I
- Medicinal Chemistry
- Supramolecular Chemistry
- Structure and Function of Biomolecules
- Bioinorganic and Bioorganic Chemistry
- Research Methodology
- Biochemical Techniques Lab
- Analytical Techniques Lab
- Advanced multistep synthesis Lab

3) Teaching Duties @ UniG

- Undergraduate and Diploma Laboratory courses.
- Worked a part-time teaching assistant/laboratory demonstrator

2) Teaching Duties @ CSIR-IICT (AcSIR)

- Synthetic Methods for Organic Chemistry
- Advanced Polymer Chemistry
- Advanced Material Sciences

4) Teaching Duties @ SRTMU

- Responsible of presenting, assisting, and facilitating laboratory exercises for M.Sc.students

Referees

- **Prof. Stefan Matile**, Department of Organic Chemistry, University of Geneva, 30, quai Ernest Ansermet, CH-1211 Geneva 4 Switzerland, Phone: +41 (0)22 37 96523, Email: stefan.matile@unige.ch

- **Prof. M. Lakshmi Kantam**, DR. B. P. Godrej Distinguished Professor, Department of Chemical Engineering, Institute of Chemical Technology, Mumbai, INDIA, Cell +91 9769101554, Email: lk.mannepalli@ictmumbai.edu.in

- **Dr. J.S. Yadav**, JC Bose Fellow, CSIR Bhatnagar Fellow, Director, and Vic-chancellor, Indrashil University, Rajpur, Mehsana-382470, Gujarat INDIA, Cell +91 7069076528, Email: yadavfna@gmail.com