Dr. Deepali Narayan Kanekar

CONTACT

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PROFILE SUMMARY

I have been in research and teaching field for past 7 years. My main areas of focus in chemistry are Analytical, Physical and Organic chemistry. I worked as Assistant professor in University of Mumbai teaching Organic & Analytical Chemistry. I've successfully completed my Ph.D. Thesis work entitled "Synthesis, Photophysical, Electrochemical and Theoretical Investigation of Organic Optical Materials." As a part of research program, I got to explore various synthesis, separation, purification, and analysis techniques. I want to leverage my knowledge and skills acquired during Ph.D. to further established myself into the field.

SKILLS

- Good analytical thinking and experienced in publishing research.
- Good written and presentation skills.
- Demonstrated expertise in teaching, training, guiding and motivating M.Sc. students.
- Design and synthesis of organic semiconducting molecules for their application in Organic Electronics. Characterization of molecules with various spectroscopic techniques such as FT-IR, H1 and C13 NMR and MALDI-TOF/ Mass spectrometry.
- Deep experience in working with Column Chromatography, UV-Vis Spectrophotometer, Spectrofluorometer, DLS and other Electrochemical characterization technologies.

WORK EXPERIENCE

Kirti M. Doongursee College, Dadar — Jan 2023 — May 2023

Visiting Faculty in Chemistry

- Delivered lectures on Chromatography, X-ray spectroscopy, Mass spectrometry, and Surface analytical techniques to M.Sc. Students

Department of Chemistry, University of Mumbai — Oct 2019 — Aug 2022

Assistant Professor in Chemistry

- Delivered lectures on topic like Green Chemistry, Non-Classical Methods, Natural Products, Drug Discovery/Design and Development, Organic Electronics and Photonics molecules, physical organic chemistry, Surface analytical techniques and Chemical Safety to M.Sc. Chemistry
- Took practicals of Organic Chemistry M.Sc.1.
- Created E-learning platform for students through Video demonstration on Analytical Chemistry Practical's during Pandemic
- Engaged in mentoring and motivating M.Sc. Students for their Research Project

CSIR-National Institute of Oceanography, Mumbai Aug 2014 — Feb 2015

Project Assistant-II

- My responsibility there was Sampling and Analysis of water samples for different parameters such as DO, COD, BOD, Salinity, Suspended solid, Nutrients, Petroleum Hydrocarbon, Texture, Phenol, pH, heavy metals (Mercury) and Sampling and Analysis of Sediment samples of the sea for parameter Petroleum Hydrocarbon, heavy metals (Mercury).
- Instrument Handled during job:
  - Flow Injection Mercury System (FIMS 400)
  - UV−Visible Spectrophotometer
  - Spectro-fluorophotometer (RF-5301 PC)
  - Autosal
  - pH-Meter

Bhavans College, Andheri Sept 2013 — Mar 2014

Lecturer

- Delivered Physical Chemistry lectures to B.Sc.
- Students. Conducted the Chemistry Practical's of F.Y. BSc. Students
- Managed and Worked as Expert in Chemistry Practical Exam

PhD & PUBLICATIONS

By understanding the importance of the structure-property relationship in the D-A system, I have designed and synthesized a variety of small D-A-based molecules and studied their photophysical, electrochemical and thermal properties in detail. Further, the molecular structure of synthesized compounds was rationalized with theoretical calculations. We hypothesized that combination of different D-A systems and the modulation of donor moiety on respective acceptor entity results into;

i. High molar extinction coefficient,
ii. Tuning with a broad range of emission,
iii. Solvatfluorochromism,
iv. Solid-state emission,
v. AIE property,
vi. Alteration of HOMO and LUMO energy levels in such a way that it decreases bandgap that results into an electron or ambipolar charge transport.
vii. Enhancement of thermal stability

This research work done under PhD thesis have been published in international journals. The list of publications is as below,

1. Synthesis, opto-electrochemical and theoretical investigation of pyrazino[2,3-*b*]phenazine amines for organic electronics. Deepali N. Kanekar, Sajeev Chacko and Rajesh M. Kamble, *ChemistrySelect*, **2018**, 3, 4114–4123. (https://doi.org/10.1002/ slct.201800562)
2. Quinoxaline based amines as Blue-orange emitters: effect of modulating donor system on Optoelectrochemical and theoretical properties. Deepali N. Kanekar, Sajeev Chacko and Rajesh M. Kamble, *Dye Pigm.*, **2019**, 167, 36−50. (https://doi.org/10.1016/ j.dyepig.2019.04.005)
3. Synthesis and investigation of the photophysical, electrochemical and theoretical properties of phenazine–
   amine based cyan blue-red fluorescent materials for organic electronics. Deepali N. Kanekar, Sajeev Chacko and Rajesh M. Kamble, *New. J. Chem.*, **2020**, 44, 3278–3293. (https://doi.org/10.1039/c9nj06109f)
4. Study of modulating Opto-electrochemical Properties in Suzuki coupled Phenazine derivatives for Organic Electronics. Deepali N. Kanekar, Purav M. Badani and Rajesh M. Kamble, *Chem. Pap.,* **2021**, 75, 5945–5961 (2021). https://doi.org/10.1007/s11696-021-01772-y.
5. Fluorescent Indolo [2, 3-b] quinoxalin-2-yl)(Phenyl) methanone Dyes: Photophysical, AIE Activity, Electrochemical, and Theoretical Studies. Deepali N. Kanekar, Sudhakar Dhanawade, Anand Jadhav, Mohmmed Ghadiyali, S Chacko, Rajesh M Kamble, *Monatsh Chem* **2022**, 153, 895–906. https://doi.org/10.1007/s00706-022-02974-0

HONORS AND AWARDS

- Nanoscale Advances Best Poster Prize by Royal Society of Chemistry in 7th Interdisciplinary Symposium on Material Chemistry (ISMC) held at Bhabha Atomic Research Centre (BARC). (Dec-2018)
- Best Oral Presentation Award in UGC-SAP sponsored National Conference on Recent Developments in Chemical Sciences (RDCS), held at University of Mumbai. (March-2018)
- DST-PURSE Junior Research Fellowship (JRF), Department of Science and Technology, New Delhi. (2016-2019)

CONFERENCES AND PRESENTATIONS

1. Indoloquinoxaline Derivatives of Anthraquinone as Red Fluorescent n-type Materials for organic Electronics. **Deepali N. Kanekar**, Bharat K. Sharma and Rajesh M. Kamble, DAE-BRNS 6th Interdisciplinary Symposium on Materials Chemistry (ISMC-2016), Chemistry Division, Bhabha Atomic Research Centre, Trombay, Mumbai-400085, India, 6–10 December 2016 (M–106).
2. New Tetrazatetracene derivatives as Ambipolar materials for Organic Electronics. **Deepali N. Kanekar** and Rajesh M. Kamble, National Conference on Recent Developments in Chemical Sciences (RDCS-2018), Department of Chemistry, University of Mumbai, India, 8–9 March 2018 (OP–7, Best Oral Presentation Award).
3. Synthesis and Optoelectronic studies of Acenapthoquinoxaline derivatives. Bhakti G. Thali, Akash Paswan, Deepika Yadav, **Deepali N. Kanekar**, Suraj Mahadik and Rajesh M. Kamble, National Conference on Recent Developments in Chemical Sciences (RDCS-2018) Department of Chemistry, University of Mumbai, India, 8–9 March 2018 (PP–17).
4. Solid state emissive-bipolar quinoxaline derivatives for Organic Electronics. **Deepali N. Kanekar**and Rajesh M. Kamble, DAE-BRNS 7th Interdisciplinary Symposium on Materials Chemistry (ISMC-2018), Chemistry Division, Bhabha Atomic Research Centre, Trombay, Mumbai-400085, India, 4–8 December 2018 (E–141; Nanoscale Advances Poster Prize by Royal Society of Chemistry, India Branch).
5. n-type Pyrazino-Phenazine Based Derivatives for Organic Electronics. Sonal S. Sanap, **Deepali N. Kanekar** and Rajesh M. Kamble, National Conference on Recent Trends in Chemistry (RTC-2019), Department of Chemistry, The Institute of Science, Mumbai, India, 14–15 February 2019 (PP–26).
6. Synthesis, Photophysical, Electrochemical and Theoretical Investigation of Organic Optical Materials. **Deepali N. Kanekar** and Rajesh M. Kamble, 31st Research Scholar's Meet 2019, Indian Chemical Society (Mumbai

Branch), and School of Chemical Sciences, UM-DAE, Centre for Excellence in Basic Sciences, University of Mumbai, Santacruz (E), Mumbai-400098, 8–9 February 2019 (OP–19).

7. 6H–indolo(2,3–b)quinoxaline derivatives as Blue-Red Emissive Materials for Organic Electronics. **Deepali N. Kanekar**, Sudhakar S. Dhanawade, Anand B. Jadhav and Rajesh M. Kamble, National Conference on Recent Trends in Chemistry (NCRTC-2020), Department of Chemistry, The Institute of Science, Dr. Homi Bhabha State University, Mumbai, India, 13−14 February, 2020 (PP-2).

WORKSHOPS

- Participated in Hands-on-workshop for fabrication of OLED's and Solar Cells of Indo-German-Teachers Program on Organic Electronics, organized by TIFR and University of Cologne, (December 2017).
- Participated in the DAE-BRNS 4th National Workshop on Material Chemistry – NWMC-(ENBIO-MAT) organized by UM-DAE Centre for Excellence in Basic Sciences (CBS), Mumbai and Society for Materials Chemistry, Mumbai (December 2017).

MEMBERSHIP

- American Chemical Society "ACS" membership
- Society of Materials Chemistry "SMC", India membership

EDUCATION

2022	Ph. D. in Chemistry from Department of Chemistry, University of Mumbai. Thesis submitted on "Synthesis, Photophysical, Electrochemical and Theoretical Investigation of Organic Optical Materials" with 5 publications.
2013	M.Sc. in Chemistry from K. J. Somaiya College of Science & Commerce, Vidyavihar affiliated to University of Mumbai & secured 74.7%
2011	B.Sc. in Chemistry from Kirti M. Doongursee College, Dadar affiliated to University of Mumbai & secured 70%
2008	H.S.C. from Kirti M. Doongursee College, Dadar affiliated to University of Mumbai & secured 67.5%
2006	S.S.C. from R. M. Bhatt High School, Parel (Maharashtra State Board) & secured 75.86%

ADDITIONAL QUALIFICATIONS

- SET (eligibility for Assistant professor) – Maharashtra – January 2018.
- Diploma in German (level A2), Department of German, University of Mumbai (2018-19).
- Certificate in German (level A1), Department of German, University of Mumbai (2017-18).
- MS-CIT, Maharashtra state board of Technical Education, Mumbai. (April 2009).

INTERESTS

Listening to music, learning new things, love to travel and explore new places.

REFERENCES

References available upon request.

(Dr. Deepali N. Kanekar)