

## DR. RAJESH M. KAMBLE



### Educational Qualifications

B. Sc. (Chemistry)	1997	Dr. B. A. M. U. Aurangabad, India
M. Sc. (Organic Chemistry)	1999	Dr. B. A. M. U. Aurangabad, India
Ph. D. (Chemistry)	2008	University of Mumbai, Mumbai, India
SET (Chemistry)	2000	-----

### Positions held

August 2000 – March 2003	<b>“Lecturer in Chemistry”</b> , Department of Chemistry, Govt. of Maharashtra’s Ismail Yousuf College, Jogeshwari (East), Mumbai – 400 060 India
March 2003 – Sept. 2014	<b>“Assistance Professor in Analytical Chemistry”</b> , Department of Chemistry, University of Mumbai, Santacruz (East), Mumbai – 400 098 India
Sept. 2014 to Dec. 2017	<b>“Associate Professor in Analytical Chemistry”</b> , Department of Chemistry, University of Mumbai, Santacruz (East), Mumbai – 400 098 India
Dec. 2017 to date	<b>“Professor in Analytical Chemistry”</b> , Department of Chemistry, University of Mumbai, Santacruz (East), Mumbai – 400 098 India

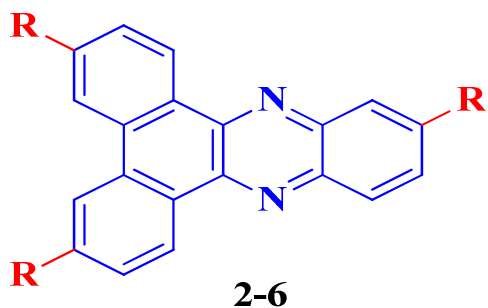
## Area of Research Interest

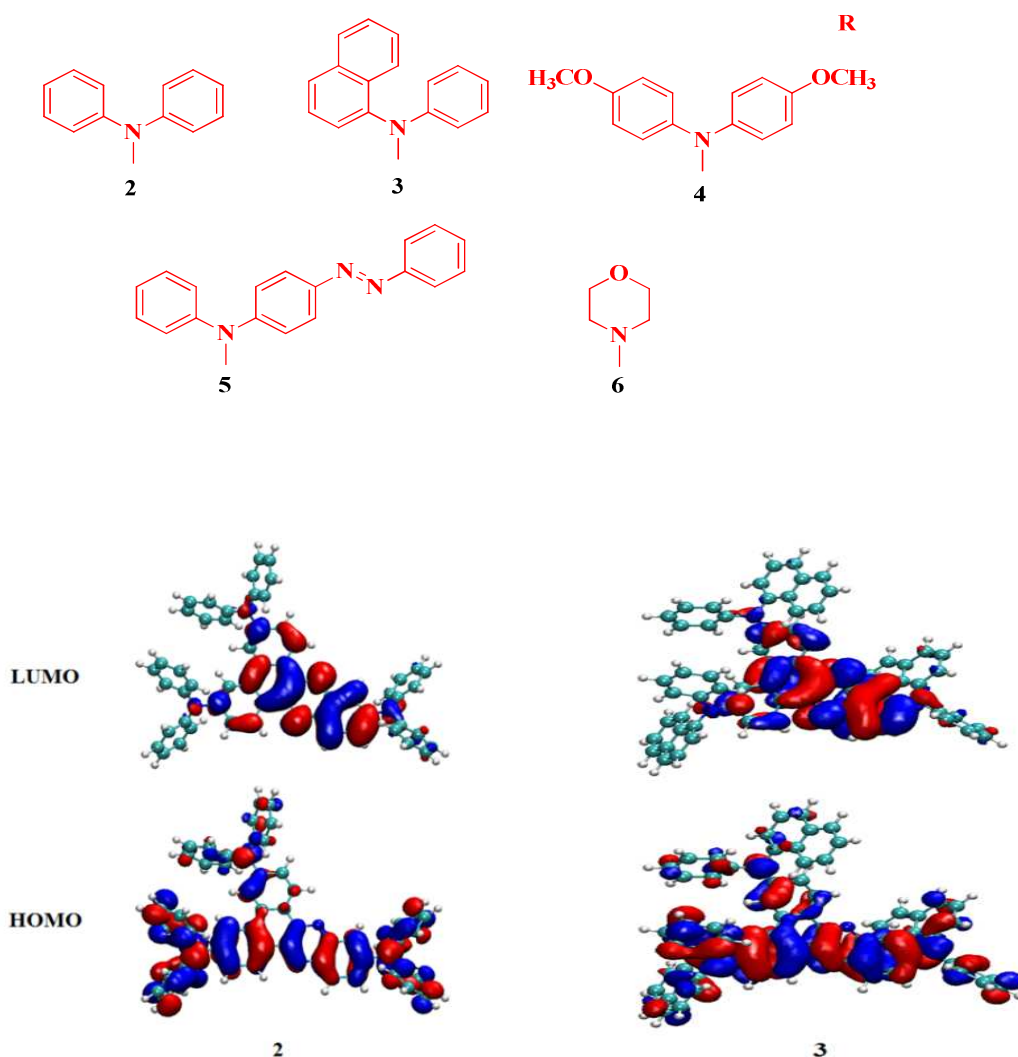
- Design, Synthesis and characterization of novel AIE functional organic materials for applications in Organic Light Emitting Devices (OLEDs), Bio-imaging and Solar cells

Current focus of the material chemists is to prepare the functionalized organic compounds for use as semiconductors, solar cells, organic field effect transistors etc. Molecular organic materials with conjugated  $\pi$ -electron systems have found widespread use due to their special optical and electronic properties. Such molecules seem to be promising organic semiconducting materials in OLEDs. In view of this, we synthesize and screen small organic molecules i.e. functionalized heteroaromatics for this purpose.

Our group is actively working on the synthesis of novel functionalized heteroaromatic compounds utilizing various electron-donor/acceptor moieties which exhibits interesting optical and electrochemical properties as compared to the existing similar type of organic semiconductors.

A series of novel donor-acceptor type of molecules (**2–6**) based on dibenzo[*a,c*]phenazine were synthesized by employing a palladium-catalyzed C–N bond forming amination reaction. The absorption spectra of **2–6** showed intramolecular charge transfer (ICT) transitions in the range of 447–513 nm in solution. The synthesized compounds are yellow-green light emitter and act as **hole-transporting (P-type)** materials.

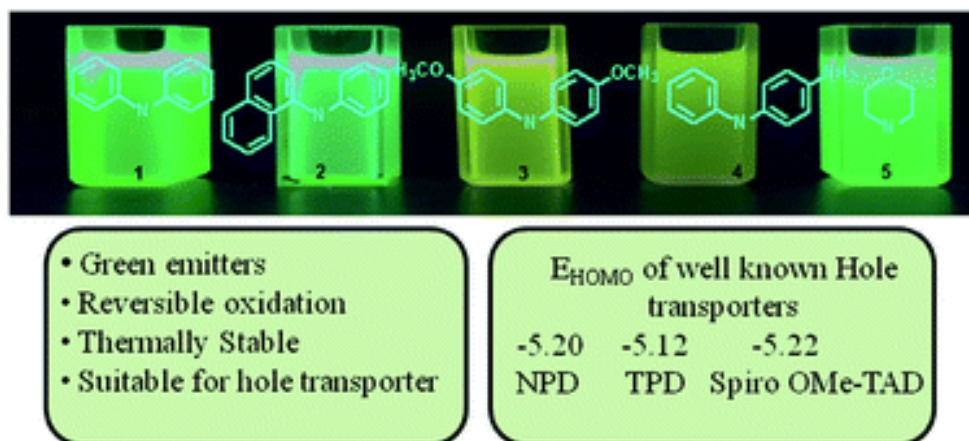




HOMO and LUMO energy level of **2** and **3** by using DFT calculation

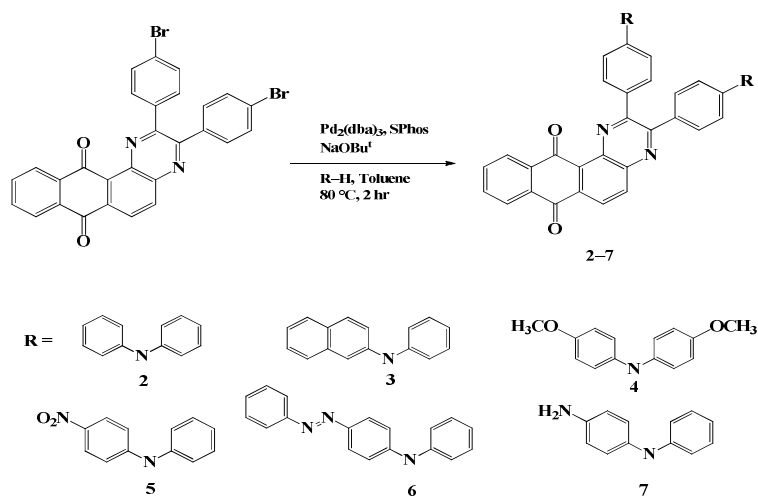
(*New J. Chem.* 2017, **41**, 628–638)

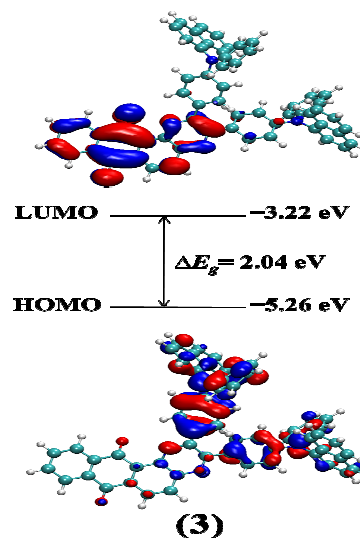
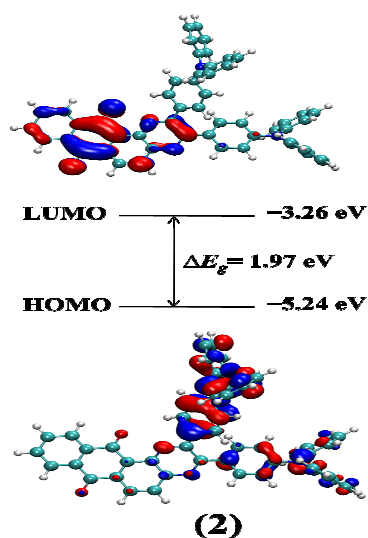
We have synthesized some derivatives of xanthone and Acridone by substituting electron donor diarylamine groups at its 2,7-position. The synthesized compounds are green light emitter and act as **hole-transporting (P-type)** materials.



(*RSC Adv.*, 2016, **6**, 17129–17137; *J. Chem. Sci.* 2015, **127**, 2063–2071)

- Triarylamines based on naphtho[2,3-*f*]quinoxalines-7,12-dione (**2–7**) have been synthesized via Buchwald-Hartwig palladium-catalyzed C–N bond forming reaction. Absorption spectra of these Donor-Acceptor molecules showed an intramolecular charge transfer transitions (ICT) in the range of 405–561 nm. The electron affinities (LUMO energy levels) of the molecules are within 3–4 eV and are suitable to be used as **n-type (electron transporting/acceptor)** materials in optoelectronic devices. The theoretically obtained results are in agreement with the experimental results.





(*RSC Adv.*, 2016, **6**, 60084–60093)

## Research Projects

### A. Research projects completed:

1. Title: Development of Validated Stability-indicating LC method for simultaneous estimation of anti-inflammatory drugs in a commercial tablet.

Funding Agency: University of Mumbai

Amount: Rs. 25,000

Period: 2011-2012

2. Title: Synthesis, characterization and investigation of photophysical and electrochemical properties of anthraquinone analogs.

Funding Agency: University Grants Commission, Delhi

Amount: Rs. 1,40,000/-

Period: 2013-2015

3. Title: Synthesis, characterization and study of optoelectronic properties of functionalized heteroaromatics for organic light emitting diode applications.

Funding Agency: Science & Engineering Research Board (SERB), Delhi

SERB/F/8418/2015-16

Amount: Rs. 5,50,000/-

Period: 2016-2017

## B. Ongoing research projects: Nil

### Membership of Professional Societies

1. Life member of Society for Materials Chemistry (SMC) (LM-541)
2. Life member of The Indian Science Congress Association (L24938)

### Co-ordinator of Refresher Courses in Chemical Sciences

1. UGC Human Resource Development Centre University of Mumbai refresher course for college/University teachers in “**Advances in Chemical Sciences**” organized by Department of Chemistry, University of Mumbai from 10<sup>th</sup> October 2016 to 29<sup>th</sup> October 2016.

### Conferences Organized

**Secretary** of UGC-SAP sponsored National Conference on “**Recent Developments in Chemical Sciences**” (RDSCS-2018) (on the eve of **50 Years Golden Jubilee Year Celebration of Department**) organized by Department of Chemistry, University of Mumbai during 8<sup>th</sup> and 9<sup>th</sup> March 2018.

### Supervision of Research Students

M. Sc. (Projects)	:	79
M. Sc. (by Research)	:	01
Ph. D. Currently working	:	06

**Ph. D. (Working)**

Sr. No.	Name	Topic of Research	Status
1.	Ms. Deepali N. Kanekar	“Synthesis, Photophysical, Electrochemical and Theoretical Investigation of Organic Optical Materials”	Working
2.	Ms. Pooja Singh	“Synthesis, Characterization and Optoelectrochemical Studies of Heterocyclic Systems for Organic Electronics”	Working
3.	Mr. Deepak Kapse	“Synthesis, Characterization and Optoelectrochemical Investigation of Functionalized Heterocyclic Compounds for Organic Electronics”	Working
4.	Mr. Suraj Mahadik	“Synthesis, Characterization and Optoelectronic Studies of Donor-Acceptor based Heterocyclic Compounds for Organic Electronics”	Working
5.	Mr. Kiran Bole		Working
6.	Mr. Kaustubh Naik		Working

**Ph. D. (Awarded)**

Sr. No.	Name	Topic of Research	Status	
1.	Mr. Bharat Kumar Sharma (NET-LS)	“Synthesis, Characterization and Optoelectronic study of Electroactive materials for Organic Electronics”	Degree awarded (30 <sup>th</sup> October 2017)	Working as a Scientist in R & D at Galaxy Surfactants
2.	Mr. Mohd. Azam Shaikh (NET-JRF)	“Synthesis, Characterization and Optoelectronic Studies of Functionalized Heteroaromatics for Organic Electronics”	Degree awarded (12 <sup>th</sup> February, 2018)	Working as Assist. Professor at Mithibai College

**M. Sc. (By Research)**

Sr. No.	Name	Topic of Research	Status
1.	Mr. Shrawan G. Singh	“Simultaneous Determination of Anti-Inflammatory Drugs on High Performance Liquid Chromatography”	Degree awarded (2013)

## Publications

1. 2,3-di(thiophen-2-yl)quinoxaline Amine Derivatives: Yellow-blue Fluorescent Materials for Applications in Organic Electronics.  
Suraj Mahadik, Sajeev Chacko and **Rajesh M. Kamble**, *Chemistry Select*, 2019, 4, 10021–10032 (DOI: [10.1002/slct.201902109](https://doi.org/10.1002/slct.201902109))
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**, *Dyes & Pigments*, 2019, 167, 36–50 (<https://doi.org/10.1016/j.dyepig.2019.04.005>)
3. The design and synthesis of 2,3-diphenylquinoxaline amine derivatives as yellow-blue emissive materials for optoelectrochemical study.  
Pooja S. Singh, Sajeev Chacko and **Rajesh M. Kamble**, *New J. Chem.*, 2019, 43, 6973–6988 (DOI: [10.1039/c9nj00248k](https://doi.org/10.1039/c9nj00248k))
4. Design, Synthesis, Opto–Electrochemical and Theoretical Investigation of Novel Indolo[2,3-*b*]naphtho[2,3-*f*]quinoxaline Derivatives for *n*–Type Materials in Organic Electronics.  
**Rajesh M. Kamble**, Bharat K. Sharma, Azam M. Shaikh and Sajeev Chacko, *Chemistry Select*, 2018, 3, 6907–6915 (DOI: [10.1002/slct.201801208](https://doi.org/10.1002/slct.201801208))
5. 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**, *Chemistry Select*, 2018, 3, 4114–4123 (DOI: [10.1002/slct.201800562](https://doi.org/10.1002/slct.201800562))
6. Electrochemically synthesised xanthone-cored conjugated polymers as materials for electrochromic windows.  
H. F. Higginbotham, M. Czichy, B. K. Sharma, A. M. Shaikh, **R. M. Kamble**, P. Data, *Electrochimica Acta*, 2018, 273, 264–272 ([doi.org/10.1016/j.electacta.2018.04.070](https://doi.org/10.1016/j.electacta.2018.04.070))
7. Synthesis and Optoelectronic Investigation of Triarylaminines based on Imidazoanthraquinone as Donor–Acceptors for *n*-type Materials.  
Bharat K. Sharma, Azam M. Shaikh, Sajeev Chacko and **Rajesh M. Kamble**, *J. Chem. Sci.* 2018, 130(5), 49. (<https://doi.org/10.1007/s12039-018-1443-2>)
8. Functionalized Triarylaminines for Applications in Organic Electronics.  
**Rajesh M. Kamble**, *J. Indian Chem. Soc.*, 2017, 94, 1359–1362.
9. Synthesis, Optoelectronic and Theoretical Investigation of Anthraquinone Amine–Based Donor–Acceptor Derivatives.  
Azam M. Shaikh, Sajeev Chacko and **Rajesh M. Kamble**, *Chemistry Select*, 2017, 2, 7620–7629 (DOI: [10.1002/slct.201701475](https://doi.org/10.1002/slct.201701475))

10. Synthesis and Studies of Imidazoanthraquinone Derivatives for Applications in Organic Electronics.  
Bharat K. Sharma, Swati Dixit, Sajeew Chacko, **Rajesh M. Kamble** and Neeraj Agarwal, *Eur. J. Org. Chem.* 2017, 30, 4389–4400. ([10.1002/ejoc.201700769](https://doi.org/10.1002/ejoc.201700769))
11. Synthesis, Spectral, Electrochemical and Theoretical Investigation of indolo[2,3-*b*]quinoxaline dyes derived from Anthraquinone for n-type materials.  
Bharat K. Sharma, Azam M. Shaikh, Sajeew Chacko and **Rajesh M. Kamble**, *J. Chem. Sci.* 2017, 129(4), 483–494. ([DOI 10.1007/s12039-017-1252-z](https://doi.org/10.1007/s12039-017-1252-z))
12. Novel electroluminescent donor-acceptors based on dibenzo[*a,c*]phenazine as hole transport materials for organic electronics.  
Azam M. Shaikh, Bharat K. Sharma, Sajeew Chacko and **Rajesh M. Kamble**, *New J. Chem.*, 2017, 41, 628–638. ([DOI: 10.1039/c6nj03553a](https://doi.org/10.1039/c6nj03553a))
13. Synthesis and opto-electrochemical properties of tribenzo[*a,c,i*]phenazine derivatives for hole transport materials.  
Azam M. Shaikh, Bharat K. Sharma, Sajeew Chacko and **Rajesh M. Kamble**, *RSC Advances*, 2016, 6, 94218–94227. ([DOI: 10.1039/c6ra20964e](https://doi.org/10.1039/c6ra20964e))
14. Synthesis and Optoelectronic Investigations of Triarylamine based on naphtho[2,3-*f*]quinoxaline-7,12-dione core as Donor-Acceptors for n-type materials.  
Azam M. Shaikh, Bharat K. Sharma, Sajeew Chacko and **Rajesh M. Kamble**, *RSC Advances*, 2016, 6, 60084–60093. ([DOI: 10.1039/c6ra11149a](https://doi.org/10.1039/c6ra11149a))
15. Synthesis, Photophysical and Electrochemical Studies of Acridone-Amine based Donor-Acceptors for Hole Transport Materials.  
Bharat K. Sharma, Azam M. Shaikh, Neeraj Agarwal and **Rajesh M. Kamble**, *RSC Advances*, 2016, 6, 17129–17137. ([DOI: 10.1039/c5ra25115j](https://doi.org/10.1039/c5ra25115j))
16. Electron Deficient Molecules: Photophysical, Electrochemical and Thermal Investigations of naphtho[2,3-*f*]quinoxaline-7,12-dione derivatives.  
Azam M. Shaikh, Bharat K. Sharma and **Rajesh M. Kamble**, *Chem. Heterocycl. Comp.* 2016, 52(2), 110–115. ([DOI: 10.1007/s10593-016-1842-6](https://doi.org/10.1007/s10593-016-1842-6))
17. Synthesis, Photophysical, Electrochemical and Thermal Investigation of Triarylamine based on 9*H*-Xanthen-9-one: Yellow–Green Fluorescent Materials.  
Bharat K. Sharma, Azam M. Shaikh and **Rajesh M. Kamble**, *J. Chem. Sci.* 2015, 127(11), 2063–2071. ([DOI 10.1007/s12039-015-0973-0](https://doi.org/10.1007/s12039-015-0973-0))
18. Synthesis, Photophysical, Electrochemical and Thermal Studies of Triarylamine based on benzo[*g*]quinoxalines.  
Azam M. Shaikh, Bharat K. Sharma and **Rajesh M. Kamble**, *J. Chem. Sci.* 2015, 127(9), 1571–1579. ([DOI 10.1007/s12039-015-0904-0](https://doi.org/10.1007/s12039-015-0904-0))

19. Photophysical, Electrochemical and Thermal Studies of 5-methyl-5*H*-Benz[*g*]indolo[2,3-*b*]quinoxaline Derivatives: Green and Yellow Fluorescent Materials.  
Azam M. Shaikh, Bharat K. Sharma and **Rajesh M. Kamble**, *Can. Chem. Trans.* 2015, 3(2), 158–170. (DOI:10.13179/canchemtrans.2015.03.01.0175)
20. Synthesis, Photophysical, Electrochemical and Thermal Studies of 2,3-bithienylpyrazino[2,3-*b*]phenazine.  
Azam M. Shaikh, Bharat K. Sharma and **Rajesh M. Kamble**, *Chem. Sci. Trans.* 2015, 4(3), 781–787. (DOI:10.7598/cst2015.1050)
21. Stability-Indicating RP-HPLC Method for Analysis of Paracetamol and Tramadol in a Pharmaceutical Dosage Form.  
S. G. Singh and **R. M. Kamble**, *E-J. Chem.* 2012, 9(3), 1347–1356. (doi:10.1155/2012/732506)
22. Validated RP-HPLC method for simultaneous estimation of paracetamol and tramadol hydrochloride in a commercial tablet.  
S. G. Singh, S. Singh and **R. M. Kamble**, *J. Pharm. Res.* 2011, 4(11), 4038–4040.
23. Diels-Alder Reaction of 1,3,3-trimethyl-2-vinyl-1-cyclohexene with 4*H*-chromen-4-ones: A Convergent Approach to ABCD Tetracyclic Core of Marine Diterpenoids Related to Puupehenone and Kampanols.  
**R. M. Kamble** and M.M.V. Ramana, *Helv. Chim. Acta.* 2011, 94(2), 261–267. (doi:10.1002/hlca.201000188)
24. First Lewis acid catalyzed [4+2] cycloaddition reaction of 1,3,3-trimethyl-2-vinyl-1-cyclohexene with chromones: a new entry to analogues of the puupehenone group of marine diterpenoids and kampanols.  
**R. M. Kamble** and M.M.V. Ramana, *Monatsh. Chem.* 2011, 142, 501–506. (doi:10.1007/s00706-011-0480-z)
25. Simultaneous Determination of Preservatives (Methyl Paraben and Propyl Paraben) in Sucralfate Suspension Using High-Performance Liquid Chromatography.  
S. G. Singh, S. Singh and **R. M. Kamble**, *E-J. Chem.* 2011, 8(1), 340–346. (doi: 10.1155/2011/360431)
26. Microwave-assisted Diels-Alder reaction of 1,3,3-trimethyl-2-vinyl-1-cyclohexene with chromones: An expeditious approach to analogues of puupehenone group of marine diterpenoids and kampanols.  
**R. M. Kamble** and M.M.V. Ramana, *Can. J. Chem.* 2010, 88, 1233–1239. (doi:10.1139/V10-137)
27. Synthesis and antimicrobial activity of *endo*-(±)-1,2,3,4,6,6a,12a,12b-octahydro-4,4,12b-trimethyl-benzo[*a*]xanthen-12-ones.  
**R. M. Kamble** and M.M.V. Ramana, *J. Pharm. Res.* 2010, 3(12), 2804–2807. (ISSN: 0974-6943)

28. Development and validation of a stability indicating LC method for the determination of hydrochlorothiazide in pharmaceutical formulations.  
S. G. Singh, S. Singh and **R. M. Kamble**, *J. Pharm. Res.* 2010, 3(12), 2949–2952. (ISSN: 0974-6943)

### Papers Presented in Conferences, Symposia and Workshops

1. Nano-assembled Bipolar Quinoxaline-amine Derivatives for Optoelectronic Applications.  
Pooja S. Singh and **Rajesh M. Kamble**, *Nano Express* 2019 at National Centre for Nanosciences and Nanotechnology, University of Mumbai, Santacruz (E), Mumbai-400098, 15–16 March 2019 (Young Scientist Research Award Oral Presentation).
2. Novel D–A–D Based AIE active Bipolar Quinoxaline Derivatives for Organic Electronics.  
Pooja S. Singh 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 (OP–7).
3. Photophysical Study of Anthracene Derivatives as AIE Active Chromophores.  
Pragati Naik, Megha Kamble, Pooja S. Singh 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–8).
4. 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).
5. Synthesis, Photophysical, Electrochemical and Theoretical Investigation of Organic Optical Materials.  
Deepali N. Kanekar and **Rajesh M. Kamble**, 31<sup>st</sup> Research Scholar's Meet 2019, Indian Chemical Society (Mumbai Branch), and School of Chemical Sciences, UMDAE, Centre for Excellence in Basic Sciences, University of Mumbai, Santacruz (E), Mumbai-400098, 8–9 February 2019 (OP–19).
6. Solid state emissive-bipolar quinoxaline derivatives for Organic Electronics.  
Deepali N. Kanekar and **Rajesh M. Kamble**, DAE-BRNS 7<sup>th</sup> 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**).

7. D–A–D Based Novel Quinoxaline Derivatives with Aggregation Induced Emmision (AIE) Activity for Organic Electronics.  
Pooja S. Singh and **Rajesh M. Kamble**, DAE-BRNS 7<sup>th</sup> Interdisciplinary Symposium on Materials Chemistry (ISMC-2018), Chemistry Division, Bhabha Atomic Research Centre, Trombay, Mumbai-400085, India, 4–8 December 2018 (E-142).
8. 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 Award**).
9. Novel 2,3-dipheylquinoxaline derivatives: Yellow-Green Emitter and Ambipolar Materials for Organic Electronics.  
Pooja S. Singh 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-59).
10. Synthesis, Photophysical, Electrochemical and Theoretical Investigation of Anthraquinone–Amine Based Donor-Acceptor Derivatives for Ambipolar materials.  
Azam M. Shaikh 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-16 **Best Poster Award**).
11. Triarylamines based on acenaphtho[1,2-b]pyrido[2,3-e]pyrazineas n-type materials for Organic Electronics.  
Manju Yadav, Manjinder K. Manni, Pooja Shigaonkar, Pooja S. Singh, Deepak M. Kapse 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-45 **Best Poster Award**).
12. Synthesis and Optoelectronic studies of Acenaphthoquinoxaline 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).
13. Synthesis and Optoelectrochemical Studies of 2,3-di(thiophen-2-yl)quinoxaline Derivatives as Hole-transporting Materials for Organic Electronics.  
Suraj S. Mahadik and **Rajesh M. Kamble**, International Conference on Advances in Chemical Sciences (ICACS-2018), Department of Chemistry, Shivaji University, Kolhapur – 416004, 1–3 February 2018 (PP-91).
14. Synthesis and Optoelectrochemical Studies of Pyrido[2,3-b]pyrazine Amine Derivatives as Green Light Emitter for Organic Electronics.  
Deepak M. Kapse and **Rajesh M. Kamble**, International Conference on Advances in Chemical Sciences (ICACS-2018), Department of Chemistry, Shivaji University, Kolhapur – 416004, 1–3 February 2018 (OP-10) (**Consolation Prize**)

15. Synthesis, Characterization, Opto-electrochemical and Theoretical Studies of Functionalized Heteroaromatics for Organic Electronics.  
Azam M. Shaikh and **Rajesh M. Kamble**, 29<sup>th</sup> Research Scholar's Meet 2017, Indian Chemical Society (Mumbai Branch), and Dept. of Chemistry, St. Xavier's College, Mumbai-400001, 17–18 February 2017 (OP–12).
16. Novel small  $\pi$ -conjugated organic materials based on Donor–Acceptor architecture for applications in Organic Electronics.  
Bharat K. Sharma and **Rajesh M. Kamble**, 29<sup>th</sup> Research Scholar's Meet 2017, Indian Chemical Society (Mumbai Branch), and Dept. of Chemistry, St. Xavier's College, Mumbai-400001, 17–18 February 2017 (OP–8).
17. Anthraquinone-Imidazole Derivatives as Air Stable n-Type Materials for Organic Semiconductors: Synthesis, Optoelectronic, Thermal and Theoretical Studies.  
Bharat K. Sharma and **Rajesh M. Kamble**, DAE-BRNS 6<sup>th</sup> Interdisciplinary Symposium on Materials Chemistry (ISMC-2016), Chemistry Division, Bhabha Atomic Research Centre, Trombay, Mumbai-400085, India, 6–10 December 2016 (M–105; **Best Paper Award–1<sup>st</sup> Prize**).
18. Synthesis and Optoelectronic Investigations of 3,6,11-Trisubstituted-Dibenzo[a,c]Phenazine Derivatives as Hole Transport Materials for Organic Electronics.  
Azam M. Shaikh and **Rajesh M. Kamble**, DAE-BRNS 6<sup>th</sup> Interdisciplinary Symposium on Materials Chemistry (ISMC-2016), Chemistry Division, Bhabha Atomic Research Centre, Trombay, Mumbai-400085, India, 6–10 December 2016 (M-103).
19. 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 6<sup>th</sup> Interdisciplinary Symposium on Materials Chemistry (ISMC-2016), Chemistry Division, Bhabha Atomic Research Centre, Trombay, Mumbai-400085, India, 6–10 December 2016 (M–106).
20. Colour Tuning in Indoloquinoxaline–based small molecules as Blue–Red Fluorescent Chameleons for Optoelectronic Applications.  
M. Manigandan, Supriya Gavande, Bharat K. Sharma and **Rajesh M. Kamble**, National UGCSAP Workshop on Advanced Functional Materials: Synthesis to Applications, Department of Physics, University of Mumbai, India, 21–22 March 2016 (PP).
21. Red Fluorescent Indoloquinoxaline derivatives of Anthraquinone as Efficient Emitters for Organic Red–Light–Emitting Diodes.  
Supriya Gavande, Bharat K. Sharma and **Rajesh M. Kamble**, National UGCSAP Workshop on Advanced Functional Materials: Synthesis to Applications, Department of Physics, University of Mumbai, India, 21–22 March 2016 (PP).

22. Optoelectronic and Thermal Studies of 6-methyl-6*H*-indolo[2,3-*b*]quinoxaline Derivatives for Organic Electronics.  
Sandesh Gaikwad, Azam M. Shaikh and **Rajesh M. Kamble**, National UGC SAP Workshop on Advanced Functional Materials: Synthesis to Applications, Department of Physics, University of Mumbai, India, 21–22 March 2016 (PP).
23. Triarylamines based on benzo[*g*]quinoxalines: Donor-Acceptor Electroluminescent Materials.  
Sandeep C. Surve, Azam M. Shaikh, Bharat K. Sharma and **Rajesh M. Kamble**, International Conference on Materials for the Millennium (MatCon 2016), Department of Applied Chemistry, Cochin University of Science and Technology, Kochi-682022, India, 14–16 January 2016 (OPM19).
24. Donor-Acceptor based Triarylamines containing Xanthone and Acridone/amine segments as Electroluminescent Materials.  
Bharat K. Sharma and **Rajesh M. Kamble**, International Conference on Materials for the Millennium (MatCon 2016), Department of Applied Chemistry, Cochin University of Science and Technology, Kochi-682022, India, 14–16 January 2016 (OPM20).
25. Triarylamines based on Naphtho[2,3-*f*]quinoxaline-7,12-dione: Synthesis and Optoelectronic properties.  
Azam M. Shaikh and **Rajesh M. Kamble**, International Conference on Materials for the Millennium (MatCon 2016), Department of Applied Chemistry, Cochin University of Science and Technology, Kochi-682022, India, 14–16 January 2016 (OPM21).
26. Synthesis, Optical, Electrochemical and Thermal Studies of Triarylamines based on Benzo[*g*]quinoxalines and Naphtho[2,3-*f*] quinoxaline-7,12-dione derivatives.  
Azam M. Shaikh and **Rajesh M. Kamble**, International Conference on New Horizons in Synthetic and Materials Chemistry (ICSMC-2015), Department of Chemistry, University of Mumbai, India, 26–28 November 2015 (OP–18).
27. Optoelectronic Investigation of Naphtho[2,3-*f*]quinoxaline-7,12-dione derivatives: Electron Deficient Molecules.  
Sukanya V. Kodere, Azam M. Shaikh, and **Rajesh M. Kamble**, International Conference on New Horizons in Synthetic and Materials Chemistry (ICSMC-2015), Department of Chemistry, University of Mumbai, India, 26–28 November 2015 (PP–87).
28. Synthesis, Photophysical and Electrochemical Properties of Acridone and Xanthone-amines based Donor-Acceptors as Hole-transporting Materials for Electroluminescent Devices.  
Bharat K. Sharma, Azam M. Shaikh and **Rajesh M. Kamble**, International Conference on New Horizons in Synthetic and Materials Chemistry (ICSMC-2015), Department of Chemistry, University of Mumbai, India, 26–28 November 2015 (PP–151).

29. Annelated Thioxanthenes as Blue Emitting Fluorescent Materials.  
Bharat K. Sharma, Trushna A. Omble and **Rajesh M. Kamble**, National Conference on Advances and Innovations in Chemical Sciences (NCAICS-2015), Department of Chemistry, University of Mumbai, India, 12–13 February 2015 (PP–10).
30. Opto-electronic studies of Asymmetric Linear Aceno[2,3-*b*]thiophenediones as Electroluminescent materials.  
Bharat K. Sharma, Smita A. More and **Rajesh M. Kamble**, National Conference on Advances and Innovations in Chemical Sciences (NCAICS-2015), Department of Chemistry, University of Mumbai, India, 12–13 February 2015 (PP–51).
31. Synthesis, Photophysical, Electrochemical and Thermal Studies of 2,3–bithienylpyrazino[2,3–*b*]phenazine.  
Mohd. Azam Shaikh, Harjeet Kaur and **Rajesh M. Kamble**, National Conference on Advances and Innovations in Chemical Sciences (NCAICS-2015), Department of Chemistry, University of Mumbai, India, 12–13 February 2015 (PP–52).
32. Photophysical, Electrochemical and Thermal Studies of 5-methyl-5*H*-Benz[*g*]indolo[2,3-*b*]quinoxaline: Green Luminescent material.  
Mohd. Azam Shaikh, Aeysha A. Shaikh and **Rajesh M. Kamble**, National Conference on Recent Developments in Synthetic & Materials Chemistry (NCRDSMC-2015), Department of Chemistry, N.E.S. Ratnam College, Bhandup (W), Mumbai-400078 India, 16–17 January 2015 (OP–20).
33. Synthesis, Characterization and Optoelectronic Study of Novel Xanthone Derivatives: Yellow-Green Electroluminescent Materials.  
Bharat K. Sharma and **Rajesh M. Kamble**, DAE-BRNS 5<sup>th</sup> Interdisciplinary Symposium on Materials Chemistry (ISMC-2014), Chemistry Division, Bhabha Atomic Research Centre, Trombay, Mumbai-400085, India, 9–13 December 2014 (M–103; **Best Paper Award–3<sup>rd</sup> Prize**).
34. Synthesis and Optoelectronic Studies Of Some Quinoxaline Derivatives.  
Mohd. Azam Shaikh and **Rajesh M. Kamble**, National Conference on Advances In Synthetic and Materials Chemistry (NCASMC-2014), Department of Chemistry, University of Mumbai, India, 10–11 March 2014 (PP–44).
35. Study of Heavy Metals in Industrial Effluents from Mumbai Suburban and Thane Region.  
Prashant Yeram, Kumar Aman, Shrawan Singh and **Rajesh M. Kamble**, Second National Symposium on “Modern Research Trends and Applications in Life Sciences”, Government of Maharashtra’s Elphinstone College, 156, Mahatma Gandhi Marg, Mumbai, India, 9<sup>th</sup> February, 2013 (PP).
36. Water Quality Analysis of Creek and Coast from Mumbai Region of Maharashtra.  
Damor Vikas, Ummekulsum Merchant and **Rajesh M. Kamble**, Second National Symposium on “Modern Research Trends and Applications in Life Sciences”, Government of Maharashtra’s Elphinstone College, 156, Mahatma Gandhi Marg, Mumbai, India, 9<sup>th</sup> February, 2013 (PP).

37. Study of Physico-Chemical Characteristics of Ground Water in Boisar Industrial Area of Maharashtra.  
Rajeshree Patil and **Rajesh M. Kamble**, Second National Symposium on “Modern Research Trends and Applications in Life Sciences”, Government of Maharashtra’s Elphinstone College, 156, Mahatma Gandhi Marg, Mumbai, India, 9<sup>th</sup> February, 2013 (PP).
38. Stability Indicating HPLC Method for Simultaneous Estimation of Paracetamol and Tramadol in Tablet Formulation.  
S. G. Singh and **R. M. Kamble**, National Conference on Advance Materials in Industries, Department of Physics & Chemistry, Govt. Ismail Yusuf Arts, Science and Commerce College, Jogeshwari (East), Mumbai, India, 10–11 February, 2012 (IYC/P/23).
39. Simultaneous determination of Paracetamol and Tramadol in tablet by High performance liquid chromatography.  
S. G. Singh and **R. M. Kamble**, National Seminar on Recent Advances in Synthetic Chemistry & Nanomaterials (RASCN-2012), Department of Chemistry, Shivaji University, Kolhapur, India, 21–22 January, 2012 (PP–9).
40. Simultaneous determination of methyl paraben and propyl paraben preservatives in sucralose suspension using High-Performance Liquid Chromatography.  
S. G. Singh and **R. M. Kamble**, National Seminar on Environmental Pollution and Monitoring (NSEPM 2010), Department of Chemistry, Changu Kana Thakur Arts, Commerce and Science College, New Panvel, India, 17–18 Sept. 2010 (PP–40).
41. A convergent approach for the tetracyclic framework of marine terpenoids, R. M. Kamble and M.M.V. Ramana, 20<sup>th</sup> Research Scholar’s Meet-2008, Indian Chemical Society (Mumbai Branch), and Dept. of Chemistry, V.G. Vaze college, Mulund (E), Mumbai-81, 22–23 Feb. 2008 (OP–6).

### Conferences/ Symposia/ Seminars/ Workshops Attended

1. Workshop on “The State of Art of Thermo analytical Techniques and their Applications” Department of Chemistry, Institute of Science, Mumbai and Indian Thermal Analysis Society, Mumbai, 1–3 March 2003.
2. National Symposium on “Green Chemistry” Institute of Science, Mumbai, 20–21 February 2004.
3. Workshop on “Revised Syllabus for M. Sc. P-II (Analytical Chemistry)” by The Board of Studies in Chemistry, University of Mumbai at Ramnarain Ruia College, Matunga, Mumbai, India, 23<sup>rd</sup> August, 2006.

4. International Conference in Emerging Trends in Chemical Sciences, Department of Chemistry, University of Mumbai, India, 23<sup>rd</sup>–25<sup>th</sup> Jan, 2007.
5. National Seminar on Nanomaterials, Department of Chemistry, University of Mumbai, India, 28–29 March 2008.
6. 2<sup>nd</sup> DAE-BRNS International Symposium on Materials Chemistry (ISMC-2008), Babha Atomic Research Centre, Mumbai, 2–6 December 2008.
7. National Conference on Chemistry of Materials (NCCM-2009), Department of Chemistry, University of Mumbai, India, 20–21 February 2009.
8. National Conference on Synthesis and Applications of Novel Materials (NCSANM-2010), Department of Chemistry, University of Mumbai, India, 4–5 March, 2010.
9. International Conference on Supramolecular Chemistry and Nanomaterials (ICSN-2011), Department of Chemistry, University of Mumbai, India, 14–16 February, 2011.
10. A one day lecture series “INSPIRE” as a part of Science Week Celebration (INSPIRE-2011), Department of Physics, University of Mumbai, India, 22<sup>nd</sup> February, 2011.
11. Workshop on ‘Recent Advances in Radiation Biophysics’, Department of Biophysics with Indian Society for Radiation Biology (ISRB) and International Society for Science & Technology (ISST), India, 28<sup>th</sup> February, 2011.
12. National Workshop on “Nanostructured Materials for Energy Devices and Environment” Department of Physics and Centre for Nanosciences & Nanotechnology, University of Mumbai, India, 17–18 August, 2011.
13. DAE-BRNS National Workshop on “Materials Chemistry (Functional Materials) NWMC-2011 (FUN-MAT)” Chemistry Division, BARC and Society for Materials Chemistry (SMS), Mumbai, India, 7–8 December, 2011.
14. Second National Symposium on “Modern Research Trends and Applications in Life Sciences”, Government of Maharashtra’s Elphinstone College, 156, Mahatma Gandhi Marg, Mumbai, India, 9<sup>th</sup> February, 2013.
15. National Conference on Advances In Synthetic and Materials Chemistry (NCASMC-2014), Department of Chemistry, University of Mumbai, India, 10–11 March 2014.
16. DAE-BRNS 5<sup>th</sup> Interdisciplinary Symposium on Materials Chemistry (ISMC-2014), Chemistry Division, Bhabha Atomic Research Centre, Trombay, Mumbai-400085, India, 9–13 December 2014.
17. 102<sup>nd</sup> Indian Science Congress, Science & Technology for Human Development (ISC-2015), University of Mumbai, Mumbai, India, 3–7 January 2015.

18. National Conference on Recent Developments in Synthetic & Materials Chemistry (NCRDSMC-2015), Department of Chemistry, N.E.S. Ratnam College, Bhandup (W), Mumbai-400078 India, 16–17 January 2015.
19. 3<sup>rd</sup> National workshop on Materials Chemistry-NWMC-2015 (Optical Materials), Chemistry Division, Bhabha Atomic Research Centre, Mumbai-400085, India, 20–21 November 2015.
20. International Conference on Materials for the Millennium (MatCon 2016), Department of Applied Chemistry, Cochin University of Science and Technology, Kochi-682022, India, 14–16 January 2016.
21. 8<sup>th</sup> Indian Youth Science Congress, University of Mumbai, Mumbai, India, 16–18 February 2017.
22. 29<sup>th</sup> Research Scholar's Meet 2017, Indian Chemical Society (Mumbai Branch), and Dept. of Chemistry, St. Xavier's College, Mumbai-400001, 17–18 February 2017.

#### Invited lectures delivered at various Universities and Research Institutes

1. AIE Active–Bipolar Quinoxaline Derivatives for Organic Electronics.  
UGC refresher course in ‘Recent Advances in Chemical Sciences and Technology’ organized by Department of Chemistry, University of Mumbai (28<sup>th</sup> November 2018).
2. Functionalized Triarylamines for Applications in Organic Electronics.  
54<sup>th</sup> Annual Convention of Chemists of Indian Chemical Society, Department of Chemistry, Uka Tarsadia University, Bardoli, Surat, Gujarat (25<sup>th</sup> December 2017)  
[ING(IL)-07]
3. Fundamentals and Applications of Gas Chromatography.  
UGC refresher course in “Advances in Materials Chemistry and Technology (AMCT)” organized by Department of Chemistry, University of Mumbai (10<sup>th</sup> November 2017).
4. Functionalized Heterocyclic Triarylamines for Applications in Optoelectronic Devices.  
UGC refresher course in “Advances in Materials Chemistry and Technology (AMCT)” organized by Department of Chemistry, University of Mumbai (10<sup>th</sup> November 2017).
5. Functionalized Heteromatics for Organic Electronics.  
UGC refresher course in “Advances in Chemical Sciences” organized by Department of Chemistry, University of Mumbai (18<sup>th</sup> October 2016).

6. Organic Light Emitting Diodes: Structure and Working Principle.  
UGC refresher course in “Frontiers in Materials Chemistry” organized by Department of Chemistry, University of Mumbai (12<sup>th</sup> November 2014).
7. Organic Semiconductors.  
UGC refresher course in “Frontiers in Chemical Sciences” organized by Department of Chemistry, University of Mumbai (18<sup>th</sup> November 2013).
8. Chromatography: Fundamentals and Applications.  
2<sup>nd</sup> Preparatory Workshop of National Conference on “Phytochemistry: Recent Trends and Challenges” organized by Department of Chemistry, B. N. Bandodkar College of Science, Thane (27<sup>th</sup> October 2012).
9. Principles and Applications of Liquid Chromatography.  
UGC refresher course in “Recent Developments in Materials Chemistry” organized by Department of Chemistry, University of Mumbai (3<sup>rd</sup> October 2012).
10. Basic concepts in Uv-Visible spectroscopy.  
UGC refresher course in “Instrumental Methods in Chemistry” organized by Department of Chemistry, University of Mumbai (21<sup>st</sup> November 2011).

## Contact

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