

## Bio-Data: Dr. Arvind Misra

### Dr. Arvind Misra

Professor of Organic Chemistry  
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D/B: 08.09.1973



### Academic Qualifications:

Standard	University/Board	Division	Year
10 <sup>th</sup>	UP Board, Allahabad	I <sup>st</sup>	1988
12 <sup>th</sup>	UP Board, Allahabad	I <sup>st</sup>	1990
B.Sc.	University of Allahabad, Allahabad	I <sup>st</sup>	1994
M.Sc.	University of Allahabad, Allahabad	I <sup>st</sup>	1996
Ph.D	University of Allahabad, Allahabad <b>Ph.D. Supervisor: Prof. Krishna Misra</b>	Synthesis and Related Studies on Oligonucleotides of Therapeutic Value <b>Submitted: 02.08. 2001</b>	<b>Awarded: 20.12. 2001</b>
PDF	DBT-Post Doctoral Fellow DBT-PDF Program IISc. Bangalore, Department of Biotechnology, New Delhi at Institute of Genomics and Integrative Biology, Delhi <b>Mentor: Prof. S. K. Brahmachari &amp; Dr. K. C. Gupta</b>	Design and synthesis of fluorescence probe for DNA diagnostics, Fluorescent Oligonucleotide Microarray and Molecular Beacons	Jan. 2002 to May, 2004 <b>(2.4 Years)</b>
<b>Academic Positions:</b>	Professor Associate Professor Assistant Professor Stage – III Assistant Professor Stage – II Assistant Professor Stage – I Lecturer (First Appointment in BHU)	27 <sup>th</sup> September 2017 20 <sup>th</sup> May 2016 20 <sup>th</sup> May 2013 20 <sup>th</sup> May 2008 January 2006 20 <sup>th</sup> May 2004	
<b>Academic Experiences:</b>	Teaching Experience: UG/PG/PhD Classes: Research experience: PhD Produced: Students working for PhD Degree: MSc. projects/Dissertation Completed: Research Projects:  Research Papers: Conferences/Symposium: Invited Lecturers: Total citations (as per Google Scholar): Impact Factor: H-index:	15 years ~ 21 years 8 07 25 Completed: 04 (DST 02; CSIR 02); Ongoing: 01 (CSIR, New Delhi) 72 72 15 ~1363 ~215.545 22 (i10-index, 39)	

### Area of Specialization:

Our academic research broadly covers physico-organic, bioorganic and biophysical chemistry. Currently our group research activity is mainly focused on the design and synthesis of some novel organic, organo-metallic framework and inorganic functional materials, scaffolds, fluorophores, fluorescent probes, good chromogenic and fluorogenic chemosensors and biosensors to detect heavy and transition metal ions, anions, ROS and biomolecules. We are also engage on utilizing optoelectronic behaviors of some of molecules to construct logic devices such as logic gates and molecular security keypad lock systems. We use different spectroscopic

techniques to characterize and study the basic mechanisms (reaction as well as photophysical mechanism such as ICT, PET, FRET, MLCT, EET etc.). These molecules have also been explored as a fluorescent tag to label biomolecules (DNA/RNA/Protein) and for noncovalent interaction studies. Synthesis of nucleoside analogues and covalent attachment of fluorophores with oligonucleotides for homogeneous hybridization studies in DNA diagnostics and related biophysical studies. Some heterobifunctional reagents have also been developed to immobilize biomolecules on the solid surfaces as well as to construct oligonucleotides/protein microarrays for diagnostic purposes.

### **Academic Responsibilities:**

#### **Membership/participation in education and Research Development:**

Member, Department Research Committee (DRC)

Member, Board of Studies, Department of Chemistry, I.Sc,

Member, Faculty Affairs Committee (FAC)

Member, Project Evaluation/Screening Committee

Member, Central Instrument Management and Purchase Committee

Member, DST-FIST Program

Member, DST PURSE Program

Member, UPE Program

Member, UG/PG/PhD Admission Committees

Member, Up-gradation of UG/PG/PhD courses, design of new curriculum computer added methods

Member, Departmental Anti-ragging Committee

Member, Organizing committee related to academic affairs at the Department Level (Conference/Symposium/Lecture)

Course Convener, B.Sc. Semester I and V

Examiner, Moderator, Paper setter and Invigilator: UG/PG/PhD Courses (Theory and Practical); University level entrance (UET/PET) examination

Additional Superintendent: UG Theory Examination

Tabulator, University end semester/annual examination results (UG & PG) in the office of The Controller of Examination, BHU

#### **Administrative Responsibilities / Contribution to corporate life:**

Observer: UG/PG/SET Courses University level entrance (UET/PET) examination

Warden, Broacha Hostel, Institute of Science, BHU 2006-07

Warden Rama Krishna Hostel Institute of Science, BHU 2016 – till date

Member, Hostel Inspection committee

Member, Anti-ragging Committee

Program Officer, National Service Scheme (NSS) 2005-2009 Educational Tour,

AKANSHA Cultural Program

Orientation program for UG/PG students

Sports Activity in Broacha Hostel, RK Hostel, I.Sc, BHU

#### **Additional Information/ Achievements:**

Associate Editor, World Research Journal of Organic Chemistry Bioinformatics Publications Journals

Review Editor, Frontiers in Chemistry, Switzerland.

Editor, Global Advance Research Journal of Chemistry and Material Science (GARJCMS)

Editorial Board Member, Indian Journal of Scientific Research,

Editorial Board Member, Global Journal of Analytical Chemistry,

Editorial Board Member, International J. Chemistry and Application,

Editorial Board Member, International J. Chemistry and Chemical Engineering

#### **Referee of International and National Journals:**

*ACS Sensors, ACS Applied Material and Interface, Analytical Chemistry, J. Organic Chemistry, Inorganic Chemistry, Industrial & Engineering Chemistry Research, Chemistry - A European Journal, Bioorganic Medicinal Chemistry Letter, Chinese J. Organic Chemistry, Analytica Chimica Acta, Analyst, Biotechniques, Talanta, J. Inclusion Phenomena and Macrocyclic Chemistry, International Journal of Biomedical Sciences, Sensors and Actuators: B: Chemical; Photochemistry and Photobiology: Chemistry; Section B, Molecules, Spectrochimica Acta. Organic Bioorganic*

*chemistry, New Journal of Chemistry, Canadian J. Chemistry, Biosensor and Bioelectronics, Journal of Advanced Research*

### **Awards/Rewards/Fellowships/ Recognitions:**

1. National Scholarship for Teacher's ward (for securing > 65% marks in High School), 10+2, UP Board, Directorate of Education Allahabad, UP GOVT. Year 1989-90
2. National Scholarship for Teacher's ward, UG (BSc.), Directorate of Education Allahabad, UP GOVT. Year 1991-94
3. National Scholarship for Teacher's ward, PG (MSc.), Directorate of Education Allahabad, UP GOVT. Year 1995-96
4. Junior Research Fellowship, NRI Sponsored Research Project (NVS Chemical Pvt. Ltd. USA, PI, Prof. Krishna Misra), Department of Chemistry, University of Allahabad, Allahabad. Year 1999-2000.
5. Senior Research Fellowship, NRI Sponsored Research Project (NVS Chemical Pvt. Ltd. USA, PI, Prof. Krishna Misra), Department of Chemistry, University of Allahabad, Allahabad. Year 2000-2001.
6. DBT-Post Doctoral Fellow (Jan. 2002 to May, 2004; 2.4 Years, Institute of Genomics and Integrative Biology, Delhi Mentor: Prof. S. K. Brahmachari & Dr. K. C. Gupta) DBT-PDF Program IISc. Bangalore, Department of Biotechnology, New Delhi
7. DST Fast Track Research Project for Young Scientist (2007)
8. 3<sup>rd</sup> Best Poster Award, Indo-Japan workshop on biomolecular electronics and organic nanotechnology for environment preservation (IJWBME-2009). Held on 17-20 December, 2009 National Physical Laboratory (NPL) New Delhi.
9. ACS Author Rewards for publishing with ACS. "Selective Naked-Eye Detection of Hg<sup>2+</sup> through an Efficient Turn-On Photoinduced Electron Transfer Fluorescent Probe and Its Real Applications" Analytical Chemistry DOI: 10.1021/ac501780z Dt 01/09/2015
10. Member, American Chemical Society, USA. 2015-2018
11. Excellent poster presentation award-2016 (Student: Sushil K. Dwivedi) Chemical Research Society of India (CRSI-2016)
12. First prize, (Student: Dr. Priyanka Srivastava) International conference on Recent Advances in analytical science held on 27-29 March, 2014, Department of Chemistry, Indian Institute of Technology, B.H.U. Varanasi, U.P. INDIA
13. ACS Publications Awards, Certificate for Recognition, For ACS Publications Reviewing Activity in 2015.
14. Based on the reference value of outstanding achievements, Marquis Who's Who has inducted my profile in the new Who's Who in the World® 2015 (32nd Edition).
15. Life Member, National Academy of Sciences, (NASI), Allahabad. 27/04/2012
16. Life Member, Chemical Research Society of India, Bangalore. 26/09/2010
17. Life Member, Society of Material Chemistry, BARC (SMC-INDIA) 2013 (LM660)
18. Bharat Jyoti Award, India International Friendship Society, New Delhi 20/12/2012
19. Life Member, International Academy of Physical Sciences, Allahabad. 2017 [N18315]
20. Member, Indian Science Congress.
21. Member, Indian Chemical Society, Kolkatta.
22. Certificate of outstanding contribution in reviewing, November 2018, Analytica Chimica Acta (Elsevier)
23. Certificate of outstanding contribution in reviewing, April 2018, Dyes and Pigments (Elsevier)
22. Certificate of Reviewing, March 2017, Biosensors and Bioelectronics (Elsevier)
23. Certificate of Reviewing, January 2016, Europ. J. Med. Chem. (Elsevier)
24. Certificate of outstanding contribution in reviewing, November, 2016 Sensors and Actuators B. Chemical (Elsevier)
25. Certificate of Reviewing, April 2014 Spectrochimica Acta Part A: Mol. and Biomol. Spectroscopy (Elsevier)
26. Certificate of Reviewing, October 2010, Analytical Biochemistry (Elsevier)
27. Certificate of Reviewing, January 2010, J. Photochem. and Photobiol. B: Chemistry (Elsevier)
28. Certificate of Reviewing, December 2009, Talanta (Elsevier)
29. Champion, Cricket tournament, 25<sup>th</sup> Annual Day Sports Meet, CBT-CSIR, Mall Road Delhi. 07/04/2002. Runner's up, Shotput (Men's), 25<sup>th</sup> Annual Day Sports Meet, CBT-CSIR, Mall Road Delhi. 07/04/2002.

### **PhD Produced/Ongoing:**

1. Dr. Pratibha Dwivedi: SRF-CSIR, Women Scientist DST, Currently Research Associate, Center of Innovative & Applied Bioprocessing (CIAB) A National Institute under DBT, GOI Mohali, Punjab. Thesis: *Covalent attachment of fluorophore with nucleosides and its biophysical studies*, **2010**.
2. Dr. Divya Mishra, SRF and RA in DST project. Thesis: *Electrochemical oxidation of methanol on transition metal mixed oxide*, **2011**

3. Dr. Mohammad Shahid: SRF-CSIR, RA-CSIR, DST Young Scientist, Hamdard Centenary Research Fellowship from Jamia Hamdard, New Delhi, Currently Pool Officer (CSIR) IIT Delhi. Thesis: *Design and synthesis of some fluorescent probes and their applications*, **2012**
4. Dr. Priyanka Srivastava, JRF/SRF-CSIR, INSPIRE FACULTY, DST at IIT Kanpur (Prof. A. Patra), Awarded Adolf Martens Fellowship, Germany (Dr Ute Resch Genger Federal Institute for material Research and Testing). Thesis: *Synthesis of some fluorescent sensors and related photophysical studies*, **2014**.
5. Dr. Syed. Sibtay Razi, JRF/SRF-CSIR, PDF, Dalian University of Technology, China, (Professor Jianzhang Zhao) Currently Assistant Professor, Gaya College, Gaya, Thesis: *Synthesis, Photophysical Behavior and Application of Some Organic Scaffolds*, **2015**.
6. Dr. Rashid Ali JRF/SRF (UGC-CSIR), RA (CSIR) IIT Guwahati, Assam (Prof. A. T. Khan). Thesis: *Design and Synthesis of some Organic Scaffolds: Photophysical Studies and their Application in Recognition of Ions*, **2016**.
7. Dr. Ramesh Chand Gupta JRF/SRF (UGC-CSIR), Research Scientist, Zydus Cadila, Ahmedabad, Gujrat, Thesis: *Synthesis and Photochemical studies of some new organic scaffold*, **2018**.
8. Mis. Divya Tiwari, JRF/SRF UGC-CSIR. Thesis: *Gephyrotoxin Inspired Discovery of Novel receptor modulators* (Thesis submitted October, 2018), **2019**
9. Mr. Sushil Kumar Dwivedi JRF/SRF (UGC-BSR) Awarded SRF, CSIR 2018. Thesis: *Design and synthesis of some molecular probes and their applications* (Pre-PhD Seminar given May 2019)
10. Ms. Rimpi Bhandari, INSPIRE Fellowship, March, 2018 Thesis: *Design and synthesis of some new organic scaffolds: photophysical studies and their applications*.
11. Ms. Rukshar Praveen, September 2018 Thesis: *Design and synthesis of some new organic fluorescent molecules and their applications*.
12. Ms. Zainab Mariya, INSPIRE Fellowship March 2019 Thesis: *Design and synthesis of some specific new fluorescent molecules and their studies*.
13. Ms. Ritu Singh, NET-JRF, March 2019 Thesis: *Synthesis and related studies of some new fluorescent organic scaffolds*.
14. Mr. Mohammad Kaleem, NET-LS, March 2019 Thesis: *Design and Synthesis of some functional materials and their applications*.
15. Mr. Ravisen Rai, NET-JRF, March 2019 Thesis: *Design and Synthesis of some heteroatom containing molecular scaffolds and their applications*.
16. Mr. Animesh K. Rai, NET-LS, March 2019 Thesis: *Synthesis and studies of some organic materials for diagnostics*.

**Research Projects completed:**

S.No.	Title	Agency	Period
1	Design and synthesis of Diketopyrrolopyrrole chromophore containing some new molecular scaffolds: Photophysical studies and their applications	Council of Scientific and Industrial Research, (CSIR) New Delhi (Ongoing)	2018-2021
2	Design and synthesis of some molecular organic scaffolds: Photophysical studies and applications in recognition of ions and biomolecules.	Council of Scientific and Industrial Research, (CSIR) New Delhi	2015-2018
3	Design, synthesis and optoelectronic properties of some organic molecular scaffolds/materials.	Council of Scientific and Industrial Research, (CSIR) New Delhi	2011-2014
4	Design and synthesis of 2'-O-terminus modified Nucleosides with suitable linkers for the covalent attachment of Fluorophores and its Biophysical Studies.	Department of Science and Technology, New Delhi	2007-2010
5	Electrochemical Oxidation of phenols for waste water treatment.	Department of Science and Technology, New Delhi	2007-2010
6	Research Project Grant	DST- PURSE Program	
7	Research Project Grant	UPE Program	

### Academic Staff College Orientation /Refresher Course/ Summer/Winter School etc. attended:

<u>Name of the Course/ Summer School</u>	<u>Institution</u>	<u>Duration</u>	<u>Sponsoring Agency</u>
42 <sup>nd</sup> Orientation Course Feb 11 to March 8, 2006	BANARS HINDU UNIVERSITY	4 WEEKS	Academic Staff College, (ASC) BANARS HINDU UNIVERSITY
9 <sup>th</sup> Refresher Course Feb 7 to 27, 2009	BANARS HINDU UNIVERSITY	3 WEEKS	Academic Staff College, (ASC) BANARS HINDU UNIVERSITY
3 <sup>rd</sup> Summer School May 11 to 31, 2013	BANARS HINDU UNIVERSITY	3 WEEKS	Academic Staff College, (ASC) BANARS HINDU UNIVERSITY
UGC sponsored one week National Workshop on Antioxidants in health an disease prevention September 23-29-2015	CMP Degree College, University of Allahabad, Allahabad	1 WEEK	CMP Degree college, University of Allahabad, Allahabad in collaboration with local chapter Vigyan Parishad, Prayag
Workshop on "L <sup>A</sup> T <sub>E</sub> X and Other Open Source Software" 4-9 January, 2016	BANARS HINDU UNIVERSITY	1 WEEK	DST-center for Interdisciplinary Mathematical Sciences (CIMS), Banaras Hindu University Varanasi

### List of 10 Representative Publications:

1. Himanshu Mishra, Sima Umrao, Jai Singh, Rajesh Kumar Srivastava, Rashid Ali, **Arvind Misra**, Anchal Srivastava. pH Dependent Optical Switching and Fluorescence Modulation of Molybdenum Sulfide Quantum Dots *Advanced Optical Materials*. **2017**, 5, 1601021, 1-9.
2. Syed S. Razi, Ramesh C. Gupta, Rashid Ali, Sushil K. Dwivedi, Priyanka Srivastava and Arvind Misra. A new D- $\pi$ -A type Intramolecular charge transfer Dyad System to detect F<sup>-</sup>: Anion induced CO<sub>2</sub> sensing. *Sensors and Actuators B: Chemical*. **2016**, 236, 520-528.
3. Priyanka Srivastava, Syed S. Razi, Rashid Ali, Ramesh C. Gupta, Suresh S. Yadav, G. Narayan and Arvind Misra. Selective naked-eye detection of Hg<sup>2+</sup> through an efficient turn-on PET fluorescent probe and its real applications. *Analytical Chemistry*, **2014**, 86, 8693-8699.
4. Mohammad Shahid, Syed S. Razi, Priyanka Srivastava, Rashid Ali and Arvind Misra. A useful scaffold based on acenaphthene exhibiting Cu<sup>2+</sup> induced excimer fluorescence and sensing cyanide via Cu<sup>2+</sup> displacement approach. *Tetrahedron* **2012** 44, 9076-9084.
5. Priyanka Srivastava, Syed S. Razi, Rashid Ali, S. Srivastav, S. Patnaik, S. Srikrishna and **Arvind Misra**. Cell permeable and organelle specific smart turn-on photoinduced electron transfer blue fluorescent probe to detect Mitochondria and ATP, *Biosensors and Bioelectronics* **2015**, 69, 175-789.
6. Mohammad Shahid, Priyanka Srivastava and Arvind Misra. An efficient naphthalimide based fluorescent dyad (ANPI) for F<sup>-</sup> and Hg<sup>2+</sup> mimicking OR, XNOR and INHIBIT logic function, *New J. Chem.* **2011** 35, 1690-1700.
7. Priyanka Srivastava, Mohammad Shahid and Arvind Misra. Protein assisted fluorescent enhancement of a dansyl containing fluorescent reagent: Detection of Hg<sup>2+</sup> ion in aqueous medium. *Org. Biomol. Chemistry*, **2011**, 9, 5051-5055
8. Arvind Misra and Mohammad Shahid. Photophysical properties of some azonaphthol derivatives for selective recognition of mercury ion in aqueous medium *J. Phys. Chem. C*. **2010**, 114, 16726-16739.

9. Arvind Misra and Mohammad Shahid, Immobilization of self-quenched DNA hairpin probe with a heterobifunctional reagent on glass surface for sensitive detection. *BioOrganic Med. Chem.* **2009**, *17*, 5826-5833.
10. Arvind Misra, Mohammad Shahid and Pratibha Dwivedi, An efficient thiourea-based colorimetric chemosensor for naked-eye recognition of fluoride and acetate anions: UV-Vis and <sup>1</sup>HNMR studies. *Talanta* **2009**, *80*, 532-538.

### **Research Papers under communication/submission:**

1. Himanshu Mishra; Vijay K Singh; Rashid Ali; K. Vikram; Jai Singh; **Arvind Misra**; Hirdyesh Mishra; Anchal Srivastava. A ground state interaction study of inorganic TMDs quantum dot (MoS<sub>2</sub>-QDs) and metal ion (Fe<sup>3+</sup>) framework based on photoluminescence quenching *ACS Appl. Nano Mater.*, **2019** (Under review).
2. Sushil K. Dwivedi, Manjit Singh, Priya Singh, Biplob Koch and **Arvind Misra** A naphthalimide based molecular probe for the selective detection of Fe<sup>3+</sup> and pyrophosphate in aqueous and biological medium: Cell Imaging and Logic interpretation. *Analytical Chemistry* **2019** (under review).
3. Rashid Ali, Ramesh C. Gupta, Syed S. Razi, Hirdyesh Mishra and **Arvind Misra**. Synthesis and photophysical behavior of Imidazole-Coumarin containing Donor-Acceptor type Dyad: Time domain correlation in dual anion (F<sup>-</sup> and CN<sup>-</sup>) recognition and Guest-controlled self-assembly. **2019** (under submission).
4. Ramesh C. Gupta, Sushil K. Dwivedi, Rashid Ali and **Arvind Misra**, Ratiometric Signaling of Hydrazine by the substitution of Malononitrile Based anthracene fluorophore. **2019** (under submission).
5. **Arvind Misra**, Mohammad Shahid, Priyanka Srivastava, Ramesh C. Gupta, Sushil K. Dwivedi Rashid Ali and Syed S. Razi. A molecular keypad lock system exhibits tunable fluorescence switching (On-Off) with Zn<sup>2+</sup> and F<sup>-</sup> ions, **2019** (under submission).

### **Full List of Publications:**

1. Sushil K. Dwivedi, Syed S. Razi and **Arvind Misra** A sensitive colorimetric detection of CN<sup>-</sup> and AcO<sup>-</sup> anions in semi-aqueous environment through a coumarin-naphthalene conjugate azo dye. *New J. Chem.*, **2019**, *43*, 5126 - 5132 [IF. 3.201].
2. Ramesh C. Gupta, Sushil K. Dwivedi, Syed S. Razi, Priya Singh, Biplob Koch and **Arvind Misra**. A Chemodosimeter exhibiting fluorescence "Turn-On" response to detect Cu<sup>2+</sup>: Cell Imaging and Logic function. *Chemistry Select* **2019**, *4*, 2761 –2765. [IF. 1.051]
3. Vijay K. Singh, Himanshu Mishra, Rashid Ali, Sima Umrao, Rajesh Srivastava, Shiju Abraham, Arvind Misra, Vidya Nand Singh, Hirdyesh Mishra, R. S. Tiwari, and Anchal Srivastava. In Situ Functionalized Fluorescent WS<sub>2</sub>-QDs as Sensitive and Selective Probe for Fe<sup>3+</sup> and a Detailed Study of Its Fluorescence Quenching. *ACS Appl. Nano Mater.*, **2019**, *2* (1), pp 566–576.
4. Sushil K. Dwivedi, Ramesh C. Gupta, Rashid Ali, Priyanka Srivastava, Priya Singh, Biplob Koch, Biswajit Maiti and **Arvind Misra**, Dual Fluorophore containing efficient PET based molecular probe for selective detection of Cr<sup>3+</sup> and PO<sub>4</sub><sup>3-</sup> ions through fluorescence "Turn-Off" response in partial aqueous and biological medium: Live cell imaging and Logic application. *Analytical Chemistry* **2018** *90*, 10974–10981. [IF. 6.042].
5. Sushil K. Dwivedi, Ramesh C. Gupta, Rashid Ali, Syed S. Razi, Sumit K. Hira, Partha P. Manna and **Arvind Misra**. Smart PET based organic scaffold exhibiting bright "Turn-On" green fluorescence to detect Fe<sup>3+</sup> ion:

- Live cell imaging and logic implication, *Journal of Photochemistry and Photobiology A: Chemistry* **2018**, 358 (1), 157-166. [IF 2.891]
6. Rashid Ali, Ramesh C. Gupta, Sushil K. Dwivedi and **Arvind Misra**, Excited state proton transfer (ESIPT) based molecular probe to sense F<sup>-</sup> and CN<sup>-</sup> anions through fluorescence “Turn – On” response, *New J. Chem.*, **2018**, 42, 11746–11754. [IF 3.201]
  7. Ramesh C. Gupta, Sushil K. Dwivedi, Rashid Ali, and **Arvind Misra**. An efficient chemodosimeter exhibiting fluorescence “turn-on” emission for selective and sensitive detection of cyanide and HCN gas. *Chemistry Select* **2018**, 3, 2025–2031. [IF. 1.051]
  8. **Arvind Misra** and Rashid Ali, Imidazole and oxazole containing fluorescent dyad: Cu<sup>2+</sup> induced fluorescence quenching and Cyanide sensing “On-Off-On” via copper displacement approach, *Indian Journal of Chemistry Sec: B*, **2018**, 57B, 217-228. [0.625].
  9. Priyanka Srivastava, Ramesh C. Gupta and **Arvind Misra**. Michael-Reaction-Based Simple “Turn-On” Fluorescent Chemodosimeter to Detect Cys in Partial Aqueous Medium. *ChemistrySelect* **2018**, 3, 12900–12906 [IF. 1.505].
  10. Ramesh C. Gupta, Syed S. Razi, Rashid Ali, Sushil K. Dwivedi, Priyanka Srivastava, Priya Singh, Biplob Koch and **Arvind Misra**. An Efficient Hg<sup>2+</sup> Ensemble Based on a Triazole bridged Anthracene and Quinoline system for Selective Detection of Cyanide through Fluorescence Turn-Off-On Response in Solution and Live cell. *Sensors and Actuators B: Chemical*. **2017**, 251, 729-738 [IF. 5.401].
  11. Ramesh C. Gupta, Rashid Ali, Syed S. Razi, Priyanka Srivastava, Sushil K. Dwivedi and **Arvind Misra**. Synthesis and application of a new class of D–π–A type charge transfer probe containing imidazole – naphthalene units for detection of F<sup>-</sup> and CO<sub>2</sub>. *RSC Adv.*, **2017**, 7, 4941–4949. [IF. 3.708; Citation:1]
  12. Mohammad Shahid, **Arvind Misra** Photoenolization via excited state proton transfer and ion sensing studies of hydroxy imidazole derivatives. *Journal of Photochemistry and Photobiology A: Chemistry* **2017**, 335, 190–199. [IF. 3.035; Citation: 01].
  13. Himanshu Mishra, Sima Umrao, Jai Singh, Rajesh Kumar Srivastava, Rashid Ali, **Arvind Misra**, Anchal Srivastava. pH Dependent Optical Switching and Fluorescence Modulation of Molybdenum Sulfide Quantum Dots *Advanced Optical Materials*. **2017**, 5, 1601021, 1-9. [IF. 7.43]
  14. Syed S. Razi , Rashid Ali , Ramesh C. Gupta , Sushil K. Dwivedi , Gunjan Sharma , Biplob Koch , **Arvind Misra**, Phenyl-end-capped-thiophene (P-T type) based ICT fluorescent probe (D–π–A) for detection of Hg<sup>2+</sup> and Cu<sup>2+</sup> ions: Live cell imaging and logic operation at molecular level. *Journal of Photochemistry and Photobiology A: Chemistry* **2016**, 324, 106–116. [IF. 3.035; Citation:02]
  15. Syed S. Razi, Ramesh C. Gupta, Rashid Ali, Sushil K. Dwivedi, Priyanka Srivastava and Arvind Misra. A new D–π–A type Intramolecular charge transfer Dyad System to detect F<sup>-</sup>: Anion induced CO<sub>2</sub> sensing. *Sensors and Actuators B: Chemical*. **2016**, **236**, 520–528. [IF. 5.401; Citation:26]
  16. Rashid Ali, Syed S. Razi, Mohammad Shahid, Priyanka Srivastava and **Arvind Misra**. Off-On-Off fluorescence behavior of an intramolecular charge transfer probe toward anions and CO<sub>2</sub>. *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy* **2016** **168**, 21–28. [IF. 2.653; Citation: 09]
  17. Rashid Ali, Syed S. Razi, Ramesh C. Gupta, Sushil K. Dwivedi and **Arvind Misra**. An Efficient ICT based Fluorescence Turn-On Dyad for Selective Detection of Fluoride and Carbon dioxide *New J. Chem.* **2016**, 40, 162—170. [IF. 3.487; Citation: 21]

18. Mohammad Shahid, Rashid Ali, Syed S. Razi, Priyanka Srivastava, Ramesh C. Gupta, Sushil K. Dwivedi, **Arvind Misra**. Design and synthesis of some imidazolyl derivatives: Photophysical studies and application in detection of anions. *The Open Chemistry journal*. **2016**, *3*, 35-51.
19. Syed S. Razi, Rashid Ali, Priyanka Srivastava and **Arvind Misra**. Smart Excimer Fluorescence probe for visual Detection, Cell Imaging and Extraction of Hg<sup>2+</sup>. *RSC Adv.*, **2015**, *5*, 79538 – 79547. [IF. 3.708; Citation:]
20. Rashid Ali, Syed S. Razi, Priyanka Srivastava, Mohammad Shahid and **Arvind Misra**. A polynuclear hetero atom containing molecular organic scaffold to detect Al<sup>3+</sup> ion through a fluorescence turn-on response. *RSC Adv.*, **2015**, *5*, 61513–61520. [IF. 3.708; Citation: 02]
21. Rashid Ali, Syed S. Razi, Priyanka Srivastava and **Arvind Misra**. Tetrasubstituted imidazole core containing ESIPT Fluorescent Chemodosimeter for Selective detection of Cyanide in different medium. *Sensors and Actuators B: Chemical* **2015**, *Sensors and Actuators B* **2015**, *221*, 1236–1247 [IF. 5.401; Citation: 07].
22. Priyanka Srivastava, Syed S. Razi, Rashid Ali, S. Srivastav, S. Patnaik, S. Srikrishna and **Arvind Misra**. Cell permeable and organelle specific smart turn-on photoinduced electron transfer blue fluorescent probe to detect Mitochondria and ATP, *Biosensors and Bioelectronics* **2015**, *69*, 175-789. [IF. 8.173 ; Citation: 15]
23. Roop Shikha Singh, Rakesh Kumar Gupta, Rajendra Prasad Paitandi, **Arvind Misra**, and Daya Shankar Pandey. Triazole appended BODIPY-piperazine conjugates and their efficacy toward mercury sensing *New J. Chem.* **2015**, *39*, 2233-2239. [IF. 3.487; Citation: 21]
24. Syed S. Razi, Rashid Ali, Priyanka Srivastava and **Arvind Misra**. A coumarin-derived useful scaffold exhibiting Cu<sup>2+</sup> induced fluorescence quenching and fluoride sensing (*On-Off-On*) via copper displacement approach. *Sensors and Actuators B: Chemical* **2015**, *209*, 162-171. [IF. 5.401; Citation: 40].
25. Priyanka Srivastava, Syed S. Razi, Rashid Ali, Ramesh C. Gupta, Suresh S. Yadav, G. Narayan and **Arvind Misra**. Selective naked-eye detection of Hg<sup>2+</sup> through an efficient turn-on PET fluorescent probe and its real applications. *Analytical Chemistry*, **2014**, *86*, 8693–8699. [IF. 5.825; Citation: 82]
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### Papers presented in Conferences / Symposium

1. Design and synthesis of an efficient molecular organic scaffold exhibiting Hg<sup>2+</sup> induced fluorescence quenching and cyanide sensing (On-Off-On) via mercury displacement approach. 2nd International Conference on Innovations in Chemical, Biological & Environmental Sciences (ICBCES) 2016 February 12, 2016. Swami Sukhdevanand PG College, Shahjahanpur UP.
2. Fluorescence switching (On-Off) behavior of a molecular dyad: Construction of multiple sequential logic functions and keypad lock security device. 2nd International Conference on Innovations in Chemical, Biological & Environmental Sciences (ICBCES) 2016 February 12, 2016. Swami Sukhdevanand PG College, Shahjahanpur, UP.
3. An ESIPT based fluorescent probe for selective detection of cyanide in different medium 2nd International Conference on Innovations in Chemical, Biological & Environmental Sciences (ICBCES) 2016 February 12, 2016 Swami Sukhdevanand PG College, Shahjahanpur, UP.
4. An Anthracene and Triazole-appended quinoline based scaffold exhibiting Hg<sup>2+</sup> induced fluorescence quenching and cyanide sensing (*On-Off-On*) via mercury displacement approach 18<sup>th</sup> CRSI National Symposium in Chemistry (**NSC-18**) February 5-7, 2016 Panjab University, Chandigarh
5. An efficient intramolecular charge transfer probe for recognition of anions and CO<sub>2</sub> 18<sup>th</sup> CRSI National Symposium in Chemistry (**NSC-18**) February 5-7, 2016 Panjab University, Chandigarh
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7. Rationale designing of molecular scaffolds for recognition of metal ions. National Conference on Recent Advances in chemical and Materials Science (NCRACMS-15) February 23-24, 2015. Department of applied Sciences, Madan Mohan Malaviya University of Technology, Gorakhpur
8. Design and Synthesis of ICT Based Receptor for Selective Recognition of Fluoride and Carbon dioxide International Conference on Nascent Developments in Chemical Sciences: Opportunities for Academia-Industry Collaboration (**NDCS-2015**) October 16-18, 2015 Birla Institute of Technology & Science, BITS-Pilani, Pilani Campus (India)
9. Schiff base containing Tetrasubstituted Imidazole based ESIPT Probe for Selective Detection of Cyanide through Chemodosimeter approach 6<sup>th</sup> IJAA-JSPS International Conference on Contemporary Advances of Science and Technology (**IC-CAST-2015**) August 7-9, 2015 Banaras Hindu University, Varanasi.
10. An Intramolecular Charge Transfer Benzimidazole (*D-π-A*) based Probe to Detect F<sup>-</sup> 6<sup>th</sup> IJAA-JSPS International Conference on Contemporary Advances of Science and Technology (**IC-CAST-2015**) August 7-9, 2015 Banaras Hindu University, Varanasi.
11. Intramolecular Charge Transfer Probe for Selective Detection of Fluoride National Symposium on Nanomaterials & Sustainable Synthetic Strategies (**NSNSSS-2015**) March 21-22, 2015. Department of Chemistry, Banaras Hindu University, Varanasi
12. A Simple Benzimidazole based Probe to Detect F<sup>-</sup> ions in Organic Medium National Symposium on anomaterials & Sustainable Synthetic Strategies (**NSNSSS-2015**) March 21-22, 2015 Department of Chemistry, Banaras Hindu University, Varanasi
13. A Simple Imidazole based Fluorescent Probe to detect Al<sup>3+</sup> in Partial Aqueous Medium 17<sup>th</sup> CRSI National Symposium in Chemistry (**NSC-17**) February 6-8, 2015 CSIR-National Chemical Laboratory, Pune
14. An Intramolecular Charge Transfer Probe to detect F<sup>-</sup> and Hg<sup>2+</sup> with different Channels 17<sup>th</sup> CRSI National Symposium in Chemistry (**NSC-17**) February 6-8, 2015 CSIR-National Chemical Laboratory, Pune
15. Science Academies' Lecture-workshop Science Academies' Lecture-workshop on "Spectroscopy in Chemical Biology" 21-22 March, 2014 Department of Chemistry, Faculty of Science, Banaras Hindu University.

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48. National Seminar on Recent trends in Chemical Sciences, Awadhesh Pratap Singh University, Rewa, 12-13<sup>th</sup> May, 2010.
49. Attended the workshop "National Symposium-cum Workshop on X-ray Crystallography (NSWXR-2010) on March 8-9<sup>th</sup>, 2010 in Department of Chemistry, Faculty of Science, Banaras Hindu University.
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58. Attended the National Symposium on "Designing the molecular world through Chemistry", on March 24-25, 2006 in Department of Chemistry, Faculty of Science, Banaras Hindu University, Varanasi-221005.
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69. 38<sup>th</sup> National Workshop on Radiochemistry and Application of Radioisotopes, March 27<sup>th</sup> -April 3<sup>rd</sup> 2000. University of Allahabad, Allahabad.
70. Design and synthesis of 2'-O-terminus modified nucleosides with suitable linkers for the covalent attachment of fluorophores and their biophysical studies. Fast Track Young Scientist Committee Meeting (Chemical Sciences) and Group Monitoring Workshop, Department of Science and Technology, Govt. of India, New Delhi. Department of Chemistry, University of North Bengal, April 23 -24, 2009.
71. Optoelectronic properties of some fluorescent probes in the detection of anions and cations in different media. National Conference of Chemistry and Life. 16-17 September, 2012. Department of Chemistry C.M.P. Degree College University of Allahabad Allahabad.
72. Small Synthetic Organic Molecular Scaffolds for the detection of Anions Asia network of natural and unnatural materials Singapore meeting 2012 October, 3-5, 2012 Division of Chemistry and Biological Chemistry, Nanyang Technological University, Singapore.
73. Synthesis and Optical Properties of some receptors for detection of anions and metal ions. National Seminar on Recent trends in Chemical Sciences, 12-13<sup>th</sup> May, 2010. Department of Chemistry Awadhesh Pratap Singh University, Rewa,
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75. Organic Functional Materials for the detection of Cyanide Anions in Aqueous Medium. International Conference on Chemistry and Materials: Prospects & Perspectives – 2012. 14/16-12-2012. School of physical sciences, Department of applied Chemistry BBR Ambedkar University, Lucknow.
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Place: Varanasi

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