

Mahesh Hariharan

Professor, School of Chemistry, Indian Institute of Science Education and Research Thiruvananthapuram (IISER TVM), Maruthamala P. O., Vithura, Kerala, India 695551
Tel: 91-471-2778101 Fax: 91-471-2597427
Research Website: <http://www.iisertvm.ac.in/faculties/mahesh.php> Email: mahesh@iisertvm.ac.in

Education

- **B.Sc.**, 1998, The Cochin College, Mahatma Gandhi University, Kottayam, Kerala.
- **M.Sc.**, 2000, Sacred Heart College, Mahatma Gandhi University, Kottayam, Kerala.
- **Ph.D.**, 2006, National Institute for Interdisciplinary Science and Technology, Trivandrum, Kerala
(Title: *“Design of Photoactivated DNA Cleaving Agents: Synthesis and Study of Photophysical and Photobiological Properties of Bifunctional Organic Ligands”* Supervisor: Dr. Danaboyina Ramaiah).

Appointments

Jan 2020-present	Professor , IISER Thiruvananthapuram, Kerala, India
June 2016-July 2018	Head , School of Chemistry, IISER Thiruvananthapuram, Kerala, India
Nov 2016	Visiting Professor , University of Würzburg, Germany
Sept 2014-Dec 2019	Associate Professor , IISER Thiruvananthapuram, Kerala, India
June 2014-Sept 2014	Visiting Professor , Montana State University, Montana, USA
May-July 2010, July 2013	Visiting Fellow , Northwestern University, Illinois, USA
July 2009-Sept 2014	Assistant Professor , IISER Thiruvananthapuram, Kerala, India
March 2007-July 2009	Postdoctoral Fellow , Northwestern University, Illinois, USA Mentor: Prof. Frederick D. Lewis

Honors and Awards

- Lectureship Award for Asian and Oceanian Photochemist Sponsored by Eikohsha 2020
- Chemical Research Society of India Bronze Medal 2020
- Featured in The Journal of Physical Chemistry Virtual Special Issue “Young Scientists” 2019
- Featured in Chemistry-A European Journal Young Chemists Special Issue 2018
- Featured in ChemComm Emerging Investigators Issue 2017
- Chemical Society of Japan Distinguished Lectureship Award, 2017
- Fellow of the Royal Society of Chemistry, 2016-
- Associate Editor of Photochemical and Photobiological Sciences, 2016-
- Associate Editor of RSC Advances, 2015-
- Chartered Chemist and Scientist of the Royal Society of Chemistry, 2015
- Asian and Oceanian Photochemistry Association Young Scientist Prize, 2014
- Indo-US Science and Technology Forum Fellowship, 2014
- Kerala State Young Scientist Award, 2013
- DST-DAAD Fellowship, 2004 to visit University of Mainz, Germany, Mentor: Prof. Bernd Epe
- CSIR-Research Scholarship, 2001 and shortlisted for Shyama Prasad Mukherjee Fellowship exam

Research Interests

Excited state dynamics in biomolecules, organic crystals and organised donor-acceptor systems

Ongoing Research Grants

1. DST Nano Mission: *Photochemical and Electrochemical Processes in Assembled Molecules and Nanomaterials: Implications of Electric Field and Coherence in Photovoltaics*, xx/xx/2020-xx/xx/2025, Rs. 3,50,00,000. Principal Investigator: Prof. K. George Thomas; **Co-Investigators: Mahesh Hariharan**, Dr. R. S. Swathi, Dr. A. Muthukrishnan and Prof. G. U. Kulkarni.
2. Science and Engineering Research Board: *Unravelling the Interplay of Reorganization Energy, Driving Force and Electronic Coupling on the Rate of Electron Transfer*, 06/02/2020-05/02/2023, Rs. 45,21,000. **Principal Investigator: Mahesh Hariharan**
3. DST FIST Grant for School of Chemistry@IISER Thiruvananthapuram: 500 MHz NMR Spectrometer with Solid State Attachment, 07/03/2017-06/03/2022, Rs. 4,85,00,000. **Project Coordinator: Mahesh Hariharan** (Conceived, proposed and sanctioned during the time of my Headship: June 2016-July 2018).
4. Indo-Italian Project: *Charge and Energy Transfer in Molecular Multifunctional Materials*, 16/11/2017-15/11/2020, Rs. 10,20,000. **Principal Investigator: Mahesh Hariharan**

Completed Research Grants

5. DST Nano Mission: *Dipolar and Multipolar Interactions in Assembled Molecules and Nanostructures: Developing a General Description and its Applications*, 29/09/2016-27/03/2020, Rs. 5,90,30,800. Principal Investigator: Prof. K. George Thomas; **Co-Principal Investigator: Mahesh Hariharan** and Investigator: Dr. R. S. Swathi.
6. Kerala State Council for Science Technology and Environment: *Design, synthesis and photocatalytic water splitting properties of functional cobalt based inorganic-organic hybrids*, 26/10/2015-25/1/2019, Rs. 45,20,000. **Principal Investigator: Mahesh Hariharan**
7. Department of Biotechnology: *Mechanistic Investigations on Light Induced Crosslinking of DNA Protein Nanostructures*, 15/02/2013-14/02/2016, Rs. 53,76,000. **Principal Investigator: Mahesh Hariharan**
8. Department of Science and Technology: *Synthesis, Structure and Electronic Properties of Natural and Non-Natural Nucleic Acid Sequences*, 24/05/2012-13/05/2015, Rs. 26,08,000. **Principal Investigator: Mahesh Hariharan**
9. Indo-US Science and Technology Forum: *Effect of Light on DNA under Water-Free Conditions*, 15/06/2014-14/09/2014, Rs. 6,26,000. **Principal Investigator: Mahesh Hariharan**
10. Royal Society of Chemistry Travel Grant to attend '2nd International Conference on Clean Energy Science' Qingdao, China, April 13-16, 2014, Rs. 1,00,000.

Completed Outreach Grants

11. Royal Society of Chemistry: International Conference on Ultrafast Spectroscopy, 21/02/2020-22/02/2020, Rs. 1,00,000/-. **Co-Chairs: Mahesh Hariharan, K. George Thomas and Reji Varghese**
12. Royal Society of Chemistry: IISERTVM-RSC Symposium on Advances in Chemical Sciences, 04/02/2020, Rs. 3,00,000/-. **Convener: Mahesh Hariharan**
13. Royal Society of Chemistry: Salters' Chemistry Camp, 10/01/2020-12/01/2020, Rs. 4,15,992. **Camp Coordinators: Mahesh Hariharan, Reji Varghese and Rajendar Goreti**
14. Samagra Shiksha Keralam Secondary School Teachers' Training Program, 6/12/2019-8/12/2019, Rs. 9,85,602. **Camp Coordinators: Mahesh Hariharan and Reji Varghese**
15. Samagra Shiksha Keralam, Shashtra Padham State Level Science Camp, 26/06/2019-30/06/2019, Rs. 6,44,926. **Camp Coordinators: Mahesh Hariharan**
16. Kerala State Council for Science Technology and Environment: *Crafting Young Scientists of Tomorrow (CRYSTAL) Science Orientation Camp*, 16/05/2019-19/05/2019, Rs. 1,49,191. **Camp Coordinators: Mahesh Hariharan and Reji Varghese**
17. Royal Society of Chemistry: Salters' Chemistry Camp, 28/12/2018-30/12/2018, Rs. 3,15,000. **Camp Coordinators: Mahesh Hariharan, Reji Varghese and Gokulnath Sabhapathy**
18. International Union of Pure and Applied Biology: *Photoinduced Processes in Nucleic Acids and Proteins: A Faraday Discussion*, 11/01/2018-13/01/2018, Rs. 7,50,000 (€10000). **Co-Chairs: Mahesh Hariharan and Anthony Watts**

Professional Service

Organiser, Light-Matter Interactions: Theory and Experiments at the Border with Biology, IISERTVM, 2021
Organiser, Frontiers in Ultrafast Spectroscopy of Photoexcited States, PACIFICHEM, Hawaii, 2021
Co-Convener, Ultrafast Sciences (UFS-2020), IISERTVM, 2021
Rapporteur, Advanced Materials, Vaibhav Summit, 2020
Panellist and Rapporteur, Functional Materials, Vaibhav Summit, 2020
Co-Chair, International Conference on Ultrafast Spectroscopy, IISERTVM, 2020
Convener, Faculty Enrichment Program (Webinar), IISERTVM & Payyanur College, 2020
Coordinator, Student Enrichment Program (Webinar), IISERTVM & St. Joseph's College, 2020
Organising Member, IISERTVM-RSC Symposium on Advances in Chemical Sciences, IISERTVM, 2020
Organising Member, IISER Thiruvananthapuram Frontier Symposium in Chemistry, IISER-TVM, 2020
Coordinator, The Salters' Chemistry Camp, IISERTVM, 2020
Coordinator, Higher Secondary Level Teachers Training Program, IISERTVM, 2019
Coordinator, Shashtra Padham State Level Science Camp, IISERTVM, 2019
Coordinator, Crafting Young Scientists of Tomorrow (CRYSTAL) Science Orientation Camp, IISERTVM, 2019
Co-organiser, One Day International Symposium on Functional Supramolecular Chemistry, IISERTVM, 2019
Co-Chair, Theme Symposium on Photonic Materials, First Indian Materials Conclave, IISc, 2019
Co-Chair, Symposium on Chemical Sciences, 31st Kerala Science Congress, Quilon, 2019

Coordinator, The Salters' Chemistry Camp, IISERTVM, 2018
Co-organiser, Mini-Symposium on Photoprocesses in Chemistry and Biology, IISER-TVM, 2018
Member, International Advisory Board, XXVII IUPAC Symposium on Photochemistry, 2018, Ireland
Co-Chair, Faraday Discussions on Photoinduced Processes in Nucleic Acids and Proteins, 2018
Discussant, Technical Session in 2nd Annual Conference Nanobiotech-2017
Member, Organising Committee of 2nd Annual Conference Nanobiotech-2017
Organiser, Mini-Symposium on Spectroscopy, IISERTVM, 2017
Organiser, Mini-Symposium on Photochemistry and Supramolecular Chemistry, IISERTVM, 2017
Co-Chair, Theme Symposium on Photonic Materials, IUMRS-ICYRAM 2016
Session Chair, International Symposium on Clusters, Cluster-Assemblies and Nanomaterials, 2016
Secretary, Organising Committee of Asian Photochemistry Conference 2014
Co-organiser, IISER-TVM/American Chemical Society Mini-Symposium 2013
Member, Organising Committee of 14th CRSI National Symposium in Chemistry 2012

Graduate Students:

Graduated 5 (Dr. R. T. Cheriya; Dr. A. R. Mallia; Dr. S. K. Rajagopal; Dr. K. Nagarajan and Dr. A. M. Philip)
Ongoing 9 (R. Ramakrishnan; E. Sebastian; D. Sasikumar; A. T. John; M. P. Lijina; S. Krishna; A. Mazumder; K. Vinod and J. Sivanarayanan)

Publications (Total Publications: 74; Patent: 1; Book Chapter: 1)

2020

1. Antiaromaticity Relief as a Determinant in Lowering the Triplet Excited State Energy of Linear Acenes, A. Benny, R. Ramakrishnan, V. Vishnu, M. Madhu and **M. Hariharan***, *Under Review*.
2. Halogen-Halogen Bonded Donor-Acceptor Stacks Foster Orthogonal Electron and Hole Transport, V. Vishnu, R. Ramakrishnan and **M. Hariharan***, *Cryst. Growth Des.* **2020**, *20*, doi/10.1021/acs.cgd.0c01024.
3. Exciton Isolation in Cross Pentacene Architecture, M. P. Lijina, A. Benny, R. Ramakrishnan, N. Nair and **M. Hariharan***, *J. Am. Chem. Soc.* **2020**, *142*, doi/10.1021/jacs.0c06016 (Front Cover).
4. Access to Triplet Excited States of Organic Chromophores, D. Sasikumar, A. T. John, J. Sunny and **M. Hariharan***, *Chem. Soc. Rev.* **2020**, *49*, 6122-6140 (Inside Front Cover).
5. Near-Quantitative Triplet State Population via Ultrafast Intersystem Crossing in Perbromoperylenediimide, A. Mohan, E. Sebastian, M. Gudem, and **M. Hariharan***, *J. Phys. Chem. B* **2020**, *124*, *31*, 6867-6874 (Front Cover).
6. Distinct Excited-State Dynamics of Near-Orthogonal Perylenimide Dimer: Conformational Planarization versus Symmetry Breaking Charge Transfer, H. Song, H. Zhao, Y. Guo, A. M. Philip, Q. Guo, **M. Hariharan*** and A. Xia*, *J. Phys. Chem. C* **2020**, *124*, 237-245.
7. Through-Space Aromatic Character in Excimers, V. Vishnu, M. Madhu, R. Ramakrishnan, A. Benny and **M. Hariharan***, *Chem. Commun.*, **2020**, *56*, 225-228.
8. Metastable Chiral Azobenzenes Stabilized in a Double Racemate, A. Mohan, D. Sasikumar, V. Bhat and **M. Hariharan***, *Angew. Chem. Int. Ed.* **2020**, *59*, 3201-3208 (Inside Front Cover).

2019

9. Distinct Crystalline Aromatic Structural Motifs: Identification, Classification and Implications, R. Ramakrishnan, M. A. Niyas, M. P. Lijina and **M. Hariharan***, *Acc. Chem. Res.* **2019**, *52*, 3075-3086 (Front Cover).
10. In Silico Exploration for Maximal Charge Transport in Organized Tetrabenzoacenes Through Pitch and Roll Displacements, A. Benny, D. Sasikumar and **M. Hariharan***, *J. Phys. Chem. C* **2019**, *123*, 26758-26768 (Front Cover).
11. Decoding the Curious Tale of Atypical Intersystem Crossing Dynamics in Regioisomeric Acetylanthracenes, A. M. Philip, M. Gudem, E. Sebastian and **M. Hariharan***, *J. Phys. Chem. A* **2019**, *123*, 6105-6112 (Virtual Special Issue "Young Scientists" 2019).

12. Anomalous Halogen-Halogen Interaction Assists Radial Chromophoric Assembly, M. A. Niyas, R. Ramakrishnan, V. Vishnu, E. Sebastian and **M. Hariharan***, *J. Am. Chem. Soc.* **2019**, *141*, 4536-4540 (Cover).
13. Deciphering the Multifarious Charge Transport Behaviour of Crystalline Propeller-Shaped Triphenylamine Analogues, R. V. Ambili, D. Sasikumar, P. Hridya and **M. Hariharan***, *Chem. Eur. J.* **2019**, *25*, 1992-2002.

2018

14. Null Exciton Splitting in Chromophoric Greek Cross (+) Aggregate, E. Sebastian, A. M. Philip, A. Benny and **M. Hariharan***, *Angew. Chem. Int. Ed.* **2018**, *57*, 15696-15701 (Inside Front Cover)
15. Concerted Interplay of Excimer and Dipole Coupling Governs the Exciton Relaxation Dynamics in Crystalline Anthracenes, A. M. Philip, S. K. Manikandan, A. Shaji* and **M. Hariharan***, *Chem. Eur. J.* **2018**, *24*, 18089-18096.
16. Viable Access to the Triplet Excited State in Peryleneimide Based Palladium Complex, A. M. Philip, E. Sebastian, G. Gopan, R. Ramakrishnan and **M. Hariharan***, *J. Chem. Sci.* **2018**, *130*, 137 (Prof. M. V. George's Special Issue)
17. Extending the Scope of Carbonyl Facilitated Triplet Excited State towards Visible Light Excitation, S. K. Rajagopal, K. Nagaraj, S. Deb, V. Bhat, D. Sasikumar, E. Sebastian and **M. Hariharan***, *Phys. Chem. Chem. Phys.* **2018**, *20*, 19120-19128.
18. γ -Herringbone Polymorph of 6,13-Bis(trimethylsilylethynyl)pentacene: A Potential Material for Enhanced Hole Mobility, V. Bhat, G. Gopan, N. Nair and **M. Hariharan***, *Chem. Eur. J.* **2018**, *24*, 8679-8685.
19. Structure-Packing-Property Correlation of Self-Sorted vs. Interdigitated Assembly in TTF:TCNQ Based Charge-Transport Materials, M. A. Niyas, R. Ramakrishnan, V. Vishnu and **M. Hariharan***, *Chem. Eur. J.* **2018**, *24*, 12318-12329 (Young Chemists Issue 2018; Inside Front Cover)
20. Excited State Dynamics of Mononucleotides and DNA Strands in a Deep Eutectic Solvent, Y. Zhang, K. deLaHarpe, **M. Hariharan** and B. Kohler*, *Faraday Discuss.*, **2018**, *207*, 267-282 (Front Cover)

2017

21. Enhanced Intersystem Crossing in Carbonylpyrenes, S. K. Rajagopal, A. R. Mallia and **M. Hariharan***, *Phys. Chem. Chem. Phys.*, **2017**, *19*, 28225-28231
22. Unsolicited Photoexcited State Pathways Relegate the Long-Lived Charge Separation in Self-Assembled Nucleobase-Arene Conjugate, A. M. Philip, F. Kuriakose and **M. Hariharan***, *J. Phys. Chem. C* **2017**, *121*, 23259-23267 (Front Cover)
23. Long Alkyl Side-Chains Impede Exciton Interaction in Organic Light Harvesting Crystals, K. Nagarajan, G. Gopan, R. T. Cheriya and **M. Hariharan***, *Chem. Commun.*, **2017**, *53*, 7409 (Emerging Investigator's Issue 2017)
24. Twisted Perylene Diimides with Tunable Redox Properties for Organic Sodium-Ion Batteries, H. Banda, D. Damien, K. Nagarajan, A. Raj, **M. Hariharan*** and M. M. Shaijumon*, *Adv. Energy Mater.* **2017**, *7*, 1701316 (Inside Front Cover)
25. Self-Assembled Donor-Acceptor Trefoils: Long-Lived Charge Separated State Through Aggregation, A. R. Mallia and **M. Hariharan***, *J. Phys. Chem. C* **2017**, *121*, 4778-4788
26. Persistent Charge Separated States in Self-Assembled Twisted Non-Symmetric Donor-Acceptor Triad, A. R. Mallia, A. M. Philip, V. Bhat and **M. Hariharan***, *J. Phys. Chem. C* **2017**, *121*, 4765-4777 (Front Cover)
27. Enhanced Intersystem Crossing in Core-Twisted Aromatics, K. Nagarajan, A. R. Mallia, K. Muraleedharan and **M. Hariharan***, *Chem. Sci.* **2017**, *8*, 1776-1782 (Outside Back Cover)

28. V-shaped Oxydiphthalimides: Side Chain Engineering Regulates Crystallisation-Induced Emission Enhancement, G. Gopan, P. S. Salini, S. Deb and **M. Hariharan***, *CrystEngComm* **2017**, *19*, 419 (Front Cover)
29. Crystalline Triphenylamine Substituted Arenes: Solid State Packing and Luminescence Properties, A. R. Mallia, R. Ramakrishnan, M. A. Niyas, R. Sethy and **M. Hariharan***, *CrystEngComm*, **2017**, *19*, 817 – 825
- 2016**
30. Prolonged Charge Separated States in Twisted Stacks of All-carbon Donor and Acceptor Chromophores, A. M. Philip, A. R. Mallia and **M. Hariharan***, *J. Phys. Chem. Lett.* **2016**, *7*, 4751–4756 (ACS Liveslides)
31. On the Origin of Multiexponential Fluorescence Decays from 2-Aminopurine-Labeled Dinucleotides, J. Remington, A. Philip, **M. Hariharan** and B. Kohler*, *J. Chem. Phys.* **2016**, *145*, 155101
32. Columnar/Lamellar Packing in Cocrystals of Arylbipyridines with Diiodoperfluorobenzene, R. Ramakrishnan, A. R. Mallia, M. A. Niyas, R. Sethy and **M. Hariharan***, *Cryst. Growth Des.* **2016**, *16*, 6327–6336
33. Haloacetylation Driven Transformation of Sandwich Herringbone to Lamellar/Columnar Packing in Pyrene, P. S. Salini, S. K. Rajagopal and **M. Hariharan***, *Cryst. Growth Des.* **2016**, *16*, 5822–5830 (One of the most read articles)
34. S••• π , π - π and C-H••• π Contacts Regulate Solid State Fluorescence in Regioisomeric Bisthiazolylpyrenes, S. K. Rajagopal, P. S. Salini and **M. Hariharan***, *Cryst. Growth Des.* **2016**, *16*, 4567–4573 (One of the most read articles)
35. Crystallization Induced Green-Yellow-Orange Emitters Based on Benzoylpyrenes, S. K. Rajagopal, V. S. Reddy and **M. Hariharan***, *CrystEngComm* **2016**, *18*, 5089-5094
36. Access to Triplet Excited State in Core-Twisted Perylene diimide K. Nagarajan, A. R. Mallia, V. S. Reddy and **M. Hariharan***, *J. Phys. Chem. C* **2016**, *120*, 8443–8450
37. Crystallization induced enhanced emission in conformational polymorphs of a rotationally flexible molecule, A. R. Mallia, R. Sethy, V. Bhat and **M. Hariharan***, *J. Mater. Chem. C* **2016**, *4*, 2931-2935
- 2015**
38. Nonparallel Stacks of Donor and Acceptor Chromophores Evade Geminate Charge Recombination, A. R. Mallia, P. S. Salini and **M. Hariharan***, *J. Am. Chem. Soc.* **2015**, *137*, 15604–15607 (Front Cover and JACS Spotlights)
39. A Polyimide based all-organic sodium ion battery, H. Banda, D. Damien, K. Nagarajan, **M. Hariharan** and M. M. Shaijumon*, *J. Mater. Chem. A* **2015**, *3*, 10453-10458
- 2014**
40. C-H•••H-C and C-H••• π Contacts Aid Transformation of Dimeric to Monomeric Anthracene in the Solid State, K. Nagarajan, S. K. Rajagopal and **M. Hariharan***, *CrystEngComm* **2014**, *16*, 8946-8949
41. Progressive Acylation of Pyrene Engineers Solid State Packing and Colour via C-H•••H-C, C-H•••O and π - π Interactions, S. K. Rajagopal, A. M. Philip, K. Nagarajan and **M. Hariharan***, *Chem. Commun.* **2014**, *50*, 8644-8647 (Inside Front Cover)
42. Light Harvesting Vesicular Donor-Acceptor Scaffold Limits the Rate of Charge Recombination in the Presence of an Electron Donor, R. T. Cheriya, A. R. Mallia and **M. Hariharan***, *Energy Environ. Sci.* **2014**, *7*, 1661-1669 (Front Cover; Hot Article)
43. Non-natural G-quadruplex in a Non-natural Environment, S. K. Rajagopal and **M. Hariharan***, *Photochem. Photobiol. Sci.* **2014**, *13*, 157-161 (Nick Turro's Special Issue)
44. Thymine Photodimer Formation in DNA Hairpins. Unusual Conformations Favor (6-4) vs. (2+2) Adducts, **M. Hariharan***, K. Siegmund, C. Saurel, M. McCullagh, G. C. Schatz and F. D. Lewis*, *Photochem. Photobiol. Sci.* **2014**, *13*, 266-271. (Nick Turro's Special Issue)

2013

45. Thermal Response of DNA Supramolecular Polymers Assembled with Hydrophobic Sticky Ends, **M. Hariharan**,* Y. Zheng, B. Rybtchinski and F. D. Lewis*, *J. Phys. Chem. B*, **2013**, *117*, 14649–14654.
46. Perylene Polyimide Based Organic Electrode Materials for Rechargeable Lithium Batteries, P. Sharma, D. Damien, K. Nagarajan, M. M. Shaijumon,* and **M. Hariharan***, *J. Phys. Chem. Lett.*, **2013**, *4*, 3192–3197 (One of the most read articles)
47. Breakdown of Exciton Splitting through Electron Donor–Acceptor Interaction: A Caveat for the Application of Exciton Chirality Method in Macromolecules, J. Joy, R. T. Cheriya, K. Nagarajan, A. Shaji, and **M. Hariharan***, *J. Phys. Chem. C*, **2013**, *117*, 17927–17939
48. Single Component Organic Light-Harvesting Red Luminescent Crystal, R. T. Cheriya, K. Nagarajan and **M. Hariharan***, *J. Phys. Chem. C*, **2013**, *117*, 3240–3248

2012

49. DNA-Enforced Conformational Restriction of an Atropisomer, R. T. Cheriya, J. Joy, S. K. Rajagopal, K. Nagarajan and **M. Hariharan***, *J. Phys. Chem. C*, **2012**, *116*, 22631–22636
50. Effect of Temperature on Symmetry Breaking Excited State Charge Separation: Restoration of Symmetry at Elevated Temperature, H. Khandelwal, A. R. Mallia, R. T. Cheriya and **M. Hariharan***, *Phys. Chem. Chem. Phys.*, **2012**, 15282–15285
51. Energy Transfer in Near-Orthogonally Arranged Chromophores Separated through a Single Bond, R. T. Cheriya, J. Joy, A. P. Alex, A. Shaji, and **M. Hariharan***, *J. Phys. Chem. C*, **2012**, *116*, 12489–12498
52. Facially-Selective Thymine-Thymine Photodimerization in TTT Triads, P. P. Neelakandan, Z. Pan, **M. Hariharan** and F. D. Lewis*, *Photochem. Photobiol. Sci.*, **2012**, *11*, 889–892

2011

53. Electron Donor–Acceptor Interactions with Flanking Purines Influence the Efficiency of Thymine Photodimerization, Z. Pan, **M. Hariharan**, J. D. Arkin, A. S. Jalilov, M. McCullagh, G. C. Schatz, and F. D. Lewis*, *J. Am. Chem. Soc.* **2011**, *133*, 20793–20798.
54. Conformation of a Dodecane DNA Hairpin Linker, Multiple Gauche Bonds Cover the Bases, K. Siegmund, **M. Hariharan**, and F. D. Lewis*, *J. Phys. Chem. B*, **2011**, *115*, 3740–3746

2010

55. Hydrophobic Self-Assembly of a Perylenediimide-Linked DNA Dumbbell into Supramolecular Polymers, P. P. Neelakandan, Z. Pan, **M. Hariharan**, Y. Zheng, F. D. Lewis*, H. Weissman, and B. Rybtchinski*, *J. Am. Chem. Soc.* **2010**, *132*, 15808–15813.
56. Conformational Control of Thymine Photodimerization in Single-Strand and Duplex DNA Containing Locked Nucleic Acid TT Steps, **M. Hariharan**, M. McCullagh, G. C. Schatz, and F. D. Lewis*, *J. Am. Chem. Soc.* **2010**, *132*, 12856–12858.
57. Structure and Stability of Alkane-Linked DNA Hairpin Conjugates, **M. Hariharan**,* K. Siegmund, and F. D. Lewis*, *J. Org. Chem.* **2010**, *75*, 6236–6243.
58. Perylenediimide-Linked DNA Dumbbells: Long-Distance Electronic Interactions and Hydrophobic Assistance of Base-Pair Melting, **M. Hariharan**, K. Siegmund, Y. Zheng, H. Long, G. C. Schatz, and F. D. Lewis*, *J. Phys. Chem. C* **2010**, *114*, 20466–20471.
59. DNA Base-Pair Flipping with Fluorescent Perylenediimide Pincers, T. A. Zeidan, **M. Hariharan**, K. Siegmund, and F. D. Lewis*, *Photochem. Photobiol. Sci.* **2010**, *9*, 916–922.
60. Conformational Control of TT-Dimerization in DNA Hairpins. A Molecular Dynamics Study, M. McCullagh,

M. Hariharan, F. D. Lewis, D. Markovitsi, T. Douki and G. C. Schatz, *J. Phys. Chem. B* **2010**, *114*, 5215-5221.

61. Site-selective Interactions: Squaraine Dye-Serum Albumin Complexes with Enhanced Fluorescence and Triplet Yields, V. S. Jisha, K. T. Arun, **M. Hariharan** and D. Ramaiah*, *J. Phys. Chem. B* **2010**, *114*, 5912-5919.
62. Electron Hopping among Cofacially Stacked Perylenediimides Assembled Using DNA Hairpins, T. M. Wilson, T. A. Zeidan, **M. Hariharan**, F. D. Lewis, and M. R. Wasielewski, *Angew. Chem.* **2010**, *49*, 2385-2388.
63. Direct Evidence on the External Stimuli Induced Disassembly of DNA through Microscopic Techniques, **M. Hariharan**, E. Kuruvilla and D. Ramaiah*, *J. Phys. Chem. Lett.* **2010**, *1*, 834-838.
64. Photoinduced DNA Damage Efficiency and Cytotoxicity of Novel Viologen Linked Pyrene Conjugates, **M. Hariharan**, D. Ramaiah*, I. Schulz, S. C. Karunakaran and B. Epe*, *Chem. Comm.* **2010**, *46*, 2064-2066.

2009

65. Hydrophobic Dimerization and Thermal Dissociation of Perylenediimide-Linked DNA Hairpins, **M. Hariharan**, Y. Zheng, H. Long, T. A. Zeidan, G. C. Schatz, J. Vura-Weis, M. R. Wasielewski, X. Zuo, D. M. Tiede, and F. D. Lewis*, *J. Am. Chem. Soc.* **2009**, *131*, 5920-5929.
66. Sum rules and determination of exciton coupling using absorption and circular dichroism spectra of biological polymers, A. Burin, M. Armbruster, **M. Hariharan** and F. D. Lewis*, *Proc. Natl. Acad. Sci. USA* **2009**, *106*, 989-984.

2008

67. Photoinduced Charge Separation in Pyrenedicarboxamide-linked DNA Hairpins, P. Daublain, K. Siegmund, **M. Hariharan**, J. Vura-Weis, M. R. Wasielewski, F. D. Lewis, V. Shafirovich, Q. Wang, M. Raytchev, and Torsten Fiebig, *Photochem. Photobiol. Sci.* **2008**, *7*, 1501-1508.
68. Context-Dependent Photodimerization in Isolated Thymine-Thymine Steps in DNA, **M. Hariharan** and F. D. Lewis*, *J. Am. Chem. Soc.* **2008**, *130*, 11870-11871.

2007

69. Encapsulation of Electron Donor-Acceptor Dyads in β -Cyclodextrin Cavity: Unusual Planarization and Enhancement in Rate of Electron Transfer Reaction, **M. Hariharan**, P. P. Neelakandan and D. Ramaiah*, *J. Phys. Chem. B*, **2007**, *111*, 11940-11947.
70. Chiral Supramolecular Assemblies of a Squaraine Dye in Solution and Thin Films: Concentration-, Temperature-, and solvent-induced chirality inversion, K. Jyothish, **M. Hariharan** and D. Ramaiah*, *Chem. Eur. J.* **2007**, *13*, 5944-5951.
71. Selective Recognition of Tryptophan through the Inhibition of Intramolecular Charge-Transfer Interactions in an Aqueous Medium, **M. Hariharan**, C. K. Suneesh and D. Ramaiah*, *Org. Lett.* **2007**, *9*, 417-420.

2006

72. Novel Bifunctional Viologen-Linked Pyrene Conjugates: Synthesis and Study of their Interactions with Nucleosides and DNA, **M. Hariharan**, J. Joseph and D. Ramaiah*, *J. Phys. Chem. B* **2006**, *110*, 24678-24686.
73. A Supramolecular ON-OFF-ON Fluorescence Assay for Selective Recognition of GTP, P. P. Neelakandan, **M. Hariharan** and D. Ramaiah*, *J. Am. Chem. Soc.* **2006**, *128*, 11334-11335.
74. Site-Selective Binding and Dual Mode Recognition of Serum Albumin by a Squaraine Dye, V. S. Jisha, K. T.

Arun, **M. Hariharan** and D. Ramaiah*, *J. Am. Chem. Soc.* **2006**, *128*, 6024-6025.

2005

75. Synthesis of a Novel Cyclic Donor-Acceptor Conjugate for Selective Recognition of ATP, P. P. Neelakandan, **M. Hariharan** and D. Ramaiah*, *Org. Lett.* **2005**, 5765-5768.

LIST OF BOOKS/BOOK CHAPTERS

76. Philip, A. M.; Bhat, V.; **Hariharan, M.**, Excited State Dynamics in Chromophore Appended Nucleic Acids in Templated DNA Nanotechnology: Functional DNA Nanoarchitectonics, ed. Govindraju, T., Pan Stanford Publications, Singapore, **2018**.

LIST OF PATENTS

77. A Novel Cyclic Donor-Acceptor Conjugate, Process and a Supramolecular Fluorescent Marker Thereof, D. Ramaiah, P. P. Neelakandan and **M. Hariharan**, IN Patent No. 253901, dated August 31, **2012**.

Invited Seminar and Colloquium Presentations

207 invited lectures at universities and international conferences since 2009.

Invited Lectures

- Ultrafast Excited State Dynamics in Twisted Aromatics, Nanyang Technological University, Singapore, September 20, 2019
- Ultrafast Excited State Dynamics in Twisted Aromatics, The 9th East Asia Symposium on Functional Dyes and Advanced Materials, Taipei, September 17-September 20, 2019
- Ultrafast Excited State Dynamics in Twisted Aromatics, International Conference on Excited State Aromaticity and Antiaromaticity, Sigtuna, Sweden, July 30-August 2, 2019
- Ultrafast Excited State Dynamics in Twisted Aromatics, Weizmann Institute of Science, Israel, April 16, 2019
- Ultrafast Excited State Dynamics in Twisted Aromatics, The Hebrew University of Jerusalem, Israel, April 15, 2019
- Ultrafast Excited State Dynamics in Twisted Aromatics, Technion-Israel Institute of Technology, Israel, April 14, 2019
- Recent Developments in Photoinduced Electron Transfer, 'Asian and Oceanian Photochemistry Association Inaugural Tutorial Workshop on Recent Advances in Photosciences at the 10th Asian Photochemistry Conference (APC 2018)', Taipei, December 16, 2018
- Modulation of Rate of Charge Recombination in DNA, 'Conference on the Complex Interactions of Light and Biological Matter: Experiments meet Theory', International Centre for Theoretical Physics, Trieste, Italy, May 21-25, 2018
- Strategies to Reduce the Rate of Charge Recombination, 'UK-India Frontiers of Science Meeting', The Royal Society at Chiechley Hall, London, May 15-18, 2018
- Strategies to Reduce the Rate of Charge Recombination, Department of Chemistry, University of Sheffield, UK, May 14, 2018
- Strategies to Reduce the Rate of Charge Recombination, 'Molecular Biradicals: Structure, Properties and Reactivity', University of Wuerzburg, Germany, February 27-March 2, 2018
- Strategies to Reduce the Rate of Charge Recombination, University of Parma, Italy, November 7, 2017
- Strategies to Reduce the Rate of Charge Recombination, '8th MRS Trilateral Conference on Advances in Nanomaterials', University of Chinese Academy of Sciences, Beijing, October 28-30, 2017
- Strategies to Reduce the Rate of Charge Recombination, Osaka Prefecture University, Japan, March 22, 2017
- Strategies to Reduce the Rate of Charge Recombination, Kyoto University, Japan, March 21, 2017

- Strategies to Reduce the Rate of Charge Recombination, 'The 97th Chemical Society of Japan Annual Meeting', Keio University, Yokohama, Japan, March 16-19, 2017
- Twists and Turns in the Excited State Properties of Aromatics, 'Mini-Symposium on Photofunctional π Materials', Nara Institute of Science and Technology, Nara, Japan, March 15, 2017
- Strategies to Reduce the Rate of Charge Recombination, 'Symposium on Photonic Materials', IUMRS-ICYRAM 2016, IISc, Bangalore, December 11-15, 2016
- Strategies to Reduce the Rate of Charge Recombination, '9th Asian Photochemistry Conference', Nanyang Technological University, Singapore, December 4-8, 2016
- Ultrafast Intersystem Crossing in Core-Twisted Aromatics, 'Light-Induced Dynamics in Molecular Aggregates', Niederstetten, Germany, November 24-25, 2016
- Strategies to Reduce the Rate of Charge Recombination, University of Wuerzburg, Germany, November 17, 2016
- Strategies to Reduce the Rate of Charge Recombination, Indo-Italian Meeting, University of Parma, Italy, February 18-20, 2016
- Strategies to Reduce the Rate of Charge Recombination 'Pacifichem 2015-Molecular and Supramolecular Photochemistry', Honolulu, Hawaii, USA, December 15-20, 2015
- Tuning the Solid State Packing and Optical Properties of Organic Crystals 'Pacifichem 2015-Aggregation Induced Enhanced Emission', Honolulu, Hawaii, USA, December 15-20, 2015
- Tuning the Solid State Packing and Optical Properties of Organic Crystals 'Department of Chemistry, University of Durham', Durham, UK, February 19, 2015
- Strategies to Reduce the Rate of Charge Recombination '24th Winter I-APS Conference' Florida, USA, January 1-4, 2015
- Exciton Interactions in DNA and Superstructured Organic Materials '8th Asian Photochemistry Conference' Trivandrum, India, November 9-13, 2014
- Light Harvesting Vesicular Donor-Acceptor Scaffold Limits the Rate of Charge Recombination 'Department of Chemistry, Montana State University', Montana, US, June 12, 2014
- Ultrafast Dynamics of Charge Carriers in Superstructured Organic Materials 'The State Key Laboratory of Molecular Reaction Dynamics', ICCAS, Beijing, China, April 18, 2014
- Light Harvesting Vesicular Donor-Acceptor Scaffold Limits the Rate of Charge Recombination '2nd International Conference on Clean Energy Science' Qingdao, China, April 13-16, 2014
- Conformational and Excited State Dynamics of Near-Orthogonal Donor-Acceptor Bichromophores 'Photochemistry Gordon Research Conference' Stonehill College, Easton, MA, July 14-19, 2013
- Light Harvesting Vesicular Donor-Acceptor Scaffold Limits the Rate of Charge Recombination 'International Symposium on Fundamental and Applied Chemistry' Northwestern University, IL, July 12-13, 2013

Invited Lectures (International Conferences Organised/Held in India)

- Ultrafast Excited State Dynamics in Twisted Aromatics, International Conference on Ultrafast Spectroscopy, IISER Thiruvananthapuram, February 21-22, 2020
- Ultrafast Excited State Dynamics in Twisted Aromatics, The 26th CRSI National Symposium in Chemistry & 14th CRSI-RSC Joint Symposium, VIT, Vellore, February 6-8, 2020
- Ultrafast Excited State Dynamics in Twisted Aromatics, FCS2019, TIFR Hyderabad, December 19, 2019
- Ultrafast Excited State Dynamics in Twisted Aromatics, Ultrafast Sciences 2019, IIT Bombay, November 6-9, 2019
- Ultrafast Excited State Dynamics in Twisted Aromatics, Chemical Science in India: Leaders in the Field Symposium, IISER Kolkata, October 18-20, 2019
- Ultrafast Excited State Dynamics in Twisted Aromatics, International Conference on Photochemistry and Sustainable Energy, Camelot Convention Center, Alleppey, October 17-19, 2019
- Ultrafast Excited State Dynamics in Unconventional Chromophoric Assembly, One-Day International Symposium on Structural Dynamics at Different Time and Length Scale, IIT Kanpur, Kanpur, March 25, 2019
- Ultrafast Excited State Dynamics in Unconventional Chromophoric Assembly, International Conference on Chemical Sciences and Nanomaterials (ICCSN-2019), Vellore Institute of Technology, Vellore, March 7-9, 2019

- Ultrafast Excited State Dynamics in Twisted Aromatics, SAIS Symposium 2019, Indian Association for Cultivation of Science, Jadavpur, Kolkata, March 8-9, 2019
- Ultrafast Excited Dynamics in Twisted Aromatics, International Conference on "Time-resolved Studies of Dynamics in Advanced Materials", Orange County, Karnataka, February 24-28, 2019
- Ultrafast Excited Dynamics in Twisted Aromatics, VIT-RSC Joint Symposium on Advances in Chemical Sciences, Vellore Institute of Technology, Vellore, February 5, 2019
- Strategies to Reduce the Rate of Charge Recombination, 'International Conference on Photochemistry and its Applications', Mahatma Gandhi University, Kerala, India, November 10-13, 2017
- Strategies to Reduce the Rate of Charge Recombination, 'International Conference on Spectroscopy of Biomolecules and Advanced Materials', Christian College, Kerala, India, October 4-7, 2017
- Strategies to Reduce the Rate of Charge Recombination, '8th East Asia Symposium on Functional Dyes and Advanced Materials', CSIR-NIIST, Thiruvananthapuram, India, September 20-22, 2017
- Crystal Engineering π -ways for Enhanced Charge Transport, '24th Congress & General Assembly of the International Union of Crystallography 2017', Hyderabad International Convention Centre, Hyderabad, August 21-28, 2017
- Light Harvesting Vesicular Donor-Acceptor Scaffold Limits the Rate of Charge Recombination 'India-Israel Meeting on Materials Science and Nanoscience' M. G. University, Kerala, India, Jan 31-Feb 01, 2013
- DNA Donor-Acceptor Conjugates: Towards Understanding Biological Processes in Femtosecond Timescale 'IISER-American Chemical Society Mini-Symposium' IISER-TVM, Kerala, India, November 28, 2013
- DNA Donor-Acceptor Conjugates: Towards Understanding Biological Processes in Femtosecond Timescale 'International Conference on Frontiers of Mass Spectrometry 2013' M. G. University, Kerala, September 6-9, 2013
- Ultrafast Dynamics of Charge Carriers in Superstructured Organic Materials 'Organic Devices: The Future Ahead' Bhabha Atomic Research Center, Mumbai, March 3-6, 2014
- Ultrafast Dynamics of Charge Carriers in DNA and Superstructured Organic Materials 'Light in Chemistry, Materials and Biology' Indian Institute of Technology, Kharagpur, February 24-25, 2014
- Ultrafast Dynamics of Charge Carriers in DNA and Superstructured Organic Materials 'International Conference on Advanced Functional Materials' CSIR-NIIST, Kerala, India, February 19-21, 2014
- Light Harvesting Vesicular Donor-Acceptor Scaffold Limits the Rate of Charge Recombination 'India-Japan Workshop on Biomolecular Electronics & Organic Nanotechnology for Environment Preservation' Delhi Technological University, Delhi, India, December 13-15, 2013
- Ultrafast Dynamics of Charge Carriers in Superstructured Organic Materials 'Indo-UK Scientific Seminar', University of Leeds, UK, February 16-18, 2015

Invited Lectures (Universities, Colleges and Schools)

- Molecular Spectroscopy, 'National Webinar on Frontiers of Spectroscopy', Organised by Government College Madappally, October 2, 2020
- Ultrafast Excited State Dynamics in Twisted Aromatics, Webinar Organised by Ohio State University, Columbus, Ohio, September 21, 2020
- Molecular Spectroscopy, 'Short Term Course on CSIR/UGC-JRF Exam in Chemical Sciences', National Institute of Technology, Tiruchirappalli, September 15, 2020
- Ultrafast Excited State Dynamics in Twisted Aromatics, NSFMC 2020, Webinar Organised by Jain University, Bangalore, Sep 31-Aug 4, 2020
- Need and Progress Towards Fast Photography: A Glimpse through Femtosecond Spectroscopy, 'Online Refresher Course in Chemical Science', Organised by Kannur University, Thavakkara, August 15, 2020
- Ultrafast Excited State Dynamics in Twisted Aromatics, Webinar Organised by IIT Gandhinagar, Gujarat, July 03, 2020
- Importance of Communication Skills in Research, Webinar for the Postgraduate Students in Science and Engineering, Organized by KSCSTE, June 26, 2020
- Ultrafast Excited State Dynamics in Twisted Aromatics, Webinar Organised by Institute of Physical Chemistry, Polish Academy of Sciences, Warsaw, June 24, 2020
- Crystal Engineering π -Ways to Regulate the Flow of Excitons, 2nd International (Virtual) Conference on Crystal Engineering: From Molecule to Crystal (CEFMC-2020), June 19-20, 2020

- Research Methodology, Webinar for the Postgraduate Students in Science and Engineering, Organized by KSCSTE, June 12, 2020
- Ultrafast Excited State Dynamics in Twisted Aromatics, Webinar Organised by CLRI, Chennai, June 03, 2020
- Need and Progress Towards Fast Photography: A Glimpse through Femtosecond Spectroscopy, Webinar Organised by St. Xavier's College, Aluva, May 22, 2020
- Ultrafast Processes in Chemical and Biological Systems, E-Summer School on Advanced Functional Materials Organised by Bishop Moore College, Mavelikkara, May 15, 2020
- Ultrafast Processes in Chemical and Biological Systems, SB College, Changanassery, February 15, 2020
- Need and Progress Towards Fast Photography, St. Joseph's College, Moolamattam, February 10, 2020
- Exciting Science of Fast Photography, St. Thomas College, Thrissur, January 31, 2020
- Ultrafast Excited State Dynamics in Twisted Aromatics, University of Calicut, Kozhikode, January 31, 2020
- Ultrafast Processes in Chemical and Biological Systems, Catholicate College, Pathanamthitta, January 24, 2020
- Exciting Science of Fast Photography, Shasthra Patham Science Camp, PSMO College, Malappuram, January 20, 2020
- Molecular Spectroscopy, Bridge Course in "Theory and Problem Solving in Spectroscopy", St. Teresa's College, Cochin, January 4, 2020
- Exciting Science of Fast Photography, 'INSPIRE-A Programme Motivating Young Talents Towards Science', Central University of Kerala, Kasaragod, December 26, 2019
- Exciting Science of Fast Photography, 'INSPIRE-A Programme Motivating Young Talents Towards Science', St. Mary's College, Bathery, December 23, 2019
- Ultrafast Excited State Dynamics in Twisted Aromatics, IISER Mohali, December 17, 2019
- Ultrafast Excited State Dynamics in Twisted Aromatics, 'International Conference on Frontiers of Materials Science', St. Joseph's College, Calicut, December 16, 2019
- Strategies to Reduce the Rate of Charge Recombination, 'Emerging Frontiers in Chemical Science (EFCS2019)', Farook College, Calicut, December 15, 2019
- Ultrafast Excited Dynamics in Twisted Aromatics, International Conference on Energy and Environment, T.K.M. College of Arts and Science, Kollam, December 13, 2019
- Ultrafast Excited Dynamics in Twisted Aromatics, RSC-Indian Institute of Technology (ISM) Dhanbad Symposium, IIT Dhanbad, December 11, 2019
- Need and Progress Towards Fast Photography, 'Winter School in Basic Sciences', Kannur University, Thavakkara, December 4, 2019
- Ultrafast Processes in Chemical and Biological Systems, Krishna Menon Memorial Government College for Women, Kannur, December 4, 2019
- Emerging Methods in Science Education, Victoria College, Palakkad, October 30, 2019
- Fundamentals of Ultrafast Spectroscopy, St. Paul's College, Kalamassery, October 16, 2019
- Colourful Science, St. Joseph's College, Irinjalakuda, Trichur, August 22, 2019
- Opportunities for Higher Education in Science, St. Joseph's College, Irinjalakuda, Trichur, August 22, 2019
- How to Write a Scientific Manuscript? Department of Chemistry, University of Kerala, Kariyavattom Campus, Thiruvananthapuram, August 3, 2019
- Ultrafast Processes in Chemical and Biological Systems, Bridge Course for First Year B.Sc. and M.Sc. Chemistry Students, Mar Ivanios College, Thiruvananthapuram, July 17, 2019
- Ultrafast Excited Dynamics in Twisted Aromatics, Department of Chemistry, IIT Palakkad, June 12, 2019
- Ultrafast Processes in Chemical and Biological Systems, One Day National Seminar on Recent Trends in Chemistry, Sree Krishna College, Guruvayur, March 12, 2019
- Ultrafast Excited Dynamics in Twisted Aromatics, First Indian Materials Conclave and 30th Annual General Meeting of MRSI, IISc Bangalore, February 12-15, 2019
- Recent Developments in Chemical Science, '31st Kerala Science Congress', Fatima Mata College, Kollam, February 3, 2019

- Femtosecond Spectroscopy, 'Innovations in Chemical Research (ICR-2019)', Vivekanandha College, Tiruchengode, February 2, 2019
- Current Developments in Science, 'Sasthrapadham', Samagra Shiksha Keralam, Higher Secondary Education Department, Catholicate College, Pathanamthitta, January 27, 2019
- Exciting Science, 'Sasthrapadham 2018-2019', Samagra Shiksha Keralam, Higher Secondary Education Department, Sir Syed College, Thaliparamba, Kannur, January 19, 2019
- Effect of Light on DNA, 'INSPIRE-A Programme Motivating Young Talents Towards Science', St. Mary's College, Bathery, December 26, 2018
- Ultrafast Processes in Chemical and Biological Systems, 'INSPIRE-A Programme Motivating Young Talents Towards Science', Central University of Kerala, Kasaragod, December 25, 2018
- Modulating the Charge Recombination in DNA, 'National Bioorganic Chemistry Conference', NISER Bhubaneswar, Orissa, December 22-24, 2018
- Femtosecond Spectroscopy, 'UGC Refresher Course in Nano Science', HRDC, Calicut University Campus, Calicut, December 6, 2018
- Need and Progress Towards Fast Photography, 'ALL CHEMY-Effective Teacher Programme', Mahatma Gandhi University, Kottayam, December 1, 2018
- Femtosecond Spectroscopy, 'Beyond Syllabi', ORICE, Meghnad Saha Center for Content Development, Government Sanskrit College, Thiruvananthapuram, November 29, 2018
- Ultrafast Processes in Chemical and Biological Systems, 'INSPIRE-A Programme Motivating Young Talents Towards Science', Government Arts College, Ooty, November 24, 2018
- Ultrafast Processes in Chemical and Biological Systems, 'National Seminar on Recent Trends in Chemistry', Government College, Kattappana, November 13-14, 2018
- Need and Progress Towards Fast Photography, 'Winter School in Basic Sciences', Kannur University, Thavakkara, November 10, 2018
- Ultrafast Processes in Chemical and Biological Systems, 'JNCASR-FCBS Workshop for College Chemistry Students and Teachers', Hotel Residency Tower, Trivandrum, October 25-27, 2018
- Ultrafast Processes in Chemical and Biological Systems, 'Quality Higher Education through Teacher Empowerment (FLAIR)', KDFTC Conference Hall, Vazhuthacaud, October 26, 2018
- Strategies to Reduce the Rate of Charge Recombination, 'Neoteric Advances in Chemical Sciences, NACS 2018', University of Kerala, Trivandrum, October 11, 2018
- Strategies to Reduce the Rate of Charge Recombination, 'Fourteenth JNC Research Conference on Chemistry of Materials', Vivanta by Taj, Kovalam, October 3-5, 2018
- Strategies to Reduce the Rate of Charge Recombination, 'Neoteric Advances in Chemical Sciences (NACS 2018)', University of Kerala, September 15, 2018
- Strategies to Reduce the Rate of Charge Recombination, 'The Frontiers in Chemical Biology', CSIR-NEIST, June 26-28, 2018
- Colourful Science, 'Crafting Young Scientists for Tomorrow (CRYSTAL)', Kerala Science Council for Science Technology and Environment, Thiruvananthapuram, May 14, 2018
- Strategies to Reduce the Rate of Charge Recombination, 'Innovations in Frontier Chemistry', IISER-Pune, May 8-9, 2018
- Ultrafast Processes in Chemical and Biological Systems, 'Seminar Series', M. G. College, Thiruvananthapuram, March 6, 2018
- Introduction to Mass Spectrometry, 'Science Academies' Workshop on Spectroscopic Techniques as Effective Characterization Tools, Mar Athanasius College, Kothamangalam, February 23-24, 2018
- Colourful Science, 'National Level Research Orientation Programme in Sciences (ROP2018)', Maharajas College, Ernakulam, February 17, 2018
- Strategies to Reduce the Rate of Charge Recombination, 'National Seminar on Current Trends in Chemistry (CTric 2018)', Cochin University of Science and Technology, February 16-17, 2018
- Ultrafast Processes in Chemical and Biological Systems, 'National Seminar on Recent Trends in Materials Science and Technology', St. Berchmann's College, Changanassery, February 7-9, 2018
- Ultrafast Processes in Chemical and Biological Systems, 'INSPIRE-Innovation in Science Pursuit for Inspired Research', Mar Ivanios College, Thiruvananthapuram, January 3-7, 2018

- Femtosecond Spectroscopy, 'INSPIRE-A Programme Motivating Young Talents Towards Science', Central University of Kerala, Kasaragod, December 26-31, 2017
- Chemical Kinetics, 'In-service Training Programme for Kendriya Vidyalaya School Teachers', Kendriya Vidyalaya, Pattom, Thiruvananthapuram, December 26, 2017
- Strategies to Reduce the Rate of Charge Recombination, 'National Seminar on Chemistry and Physics at the Excited States', National Institute for Interdisciplinary Science and Technology, Thiruvananthapuram, November 24, 2017
- Ultrafast Processes in Chemical and Biological Systems, 'Recent Advances in Nano and Supramolecular Chemistry', Assumption College, Changanassery, November 16-17, 2017
- Femtosecond Spectroscopy, 'Advances in Photoresponsive Materials-2017 (APM-2017)', Maharajas College, Ernakulam, November 14-15, 2017
- Ultrafast Processes in Chemical and Biological Systems, St. Teresa's College, Ernakulam, November 14, 2017
- Ultrafast Processes in Chemical and Biological Systems, 'JNCASR-FCBS Workshop for College Chemistry Students and Teachers', Hotel Residency Tower, Trivandrum, October 26-28, 2017
- Atomic Force Microscopy, 'Science Academies' Workshop on Spectroscopic Techniques and Applications', Bishop Moore College, Mavelikkara, October 12-13, 2017
- Strategies to Reduce the Rate of Charge Recombination, 'Organic Molecules for Material Applications', Government College for Women, Thiruvananthapuram, September 19-22, 2017
- Physical Organic Chemistry, 'Short Term Course on CSIR/UGC-JRF Exam in Chemical Sciences', National Institute of Technology, Tiruchirappalli, September 2, 2017
- Ultrafast Processes in Materials Science, 'Inter Disciplinary Refresher Courses in Material Sciences', Kannur University Campus, Thavakkara, July 29, 2017
- Ionic Equilibrium, 'In-service Course of Post Graduate Teachers of Kendriya Vendriya Schools', Kendriya Vidyalaya, Pattom, Thiruvananthapuram, May 26, 2017
- Time Correlated Single Photon Counting Techniques and Applications, 'HORIBA Optical School Workshop', JNCASR, Bangalore, May 24, 2017
- Ultrafast Processes in Chemistry and Biology, 'Science Academies' Workshop on Advancement in Supramolecular Chemistry and Nanoscience', St. Joseph's College, Irinjalakkuda, March 3-4, 2017
- Strategies to Reduce the Rate of Charge Recombination, 'National Symposium on Radiation and Photochemistry (NSRP-2017)', Manipal University, Manipal, March 2-4, 2017
- Strategies to Reduce the Rate of Charge Recombination, Department of Chemistry, IIT Mandi, February 17, 2017
- Strategies to Reduce the Rate of Charge Recombination, 'National Conference on Chemistry Interfacing with Biology and Physics (CIBP2017)', IISER Kolkata, January 27-28, 2017
- Ultrafast Processes in Chemical and Biological Systems, 'GIAN Course on Supramolecular Photochemistry', National Institute of Technology, Tiruchirappalli, January 7, 2017
- Strategies to Reduce the Rate of Charge Recombination, 'New Horizons in Chemical Sciences (NHCS-2017)', Vivekhananda College, Tiruchengode, January 6-7, 2017
- Femtosecond Spectroscopy, 'INSPIRE-A Programme Motivating Young Talents Towards Science', Sree Narayana College, Kannur, December 25-30, 2016
- Femtosecond Spectroscopy, 'National Seminar on Advanced Analytical Techniques (NSAAT2016)', Mar Ivanios College, Thiruvananthapuram, May 2016
- Strategies to Reduce the Rate of Charge Recombination, Department of Chemistry, IISER-Pune, March 26, 2016
- Femtosecond Spectroscopy, 'Transcending Topics in Chemistry', Government Arts College, Thiruvananthapuram, March 14-15, 2016
- Strategies to Reduce the Rate of Charge Recombination, 'Modern Trends in Electron Transfer Chemistry: From Molecular Electronics to Devices', ICTS, Bangalore, January 28-29, 2016
- Instrumentation Techniques for Pollination Studies, 'Pollination of flowers by insects: from ecology to chemistry and behaviour', TBGRI, Palode, January 11, 2016

- Femtosecond Spectroscopy, 'National Conference on Emerging Research Trends in Chemistry (NCERTC-2016)', Payyanur College, Payyanur, January 6-8, 2016
- Ultrafast Techniques in Materials Science, 'Seminar on Current Developments in Materials Sciences', Government College for Women, Thiruvananthapuram, January 6-7, 2016
- Strategies to Reduce the Rate of Charge Recombination, 'Inter-IISER Chemistry Meeting 2015', IISER Thiruvananthapuram, Thiruvananthapuram, December 11-13, 2015
- Effect of Light on DNA, 'State Level Seminar on Chemistry of Light Science and its Applications', St. Xavier's College for Women, Kochi, December 4, 2015
- Ultrafast Processes in Chemical and Biological Systems, 'FCBS-Lectures in Chemistry', Catholicate College, Pathanamthitta, November 30, 2015
- UV-Vis Spectroscopy, 'Science Academies' Workshop on Spectroscopic Techniques and Applications', Bishop Moore College, Mavelikkara, November 11-13, 2015
- Strategies to Reduce the Rate of Charge Recombination, 'Recent Advances in Chemistry (RAC-2015)', Central University of Kerala, Padnekkad Campus, November 4-5, 2015
- Nobel Prize in Chemistry-2015, 'Lecture Series on Nobel Prize', IISER-Thiruvananthapuram, October 27, 2015
- Ultrafast Processes in Chemical and Biological Systems, 'JNCASR-FCBS Workshop for College Chemistry Students and Teachers', Hotel Residency Tower, Trivandrum, October 15-17, 2015
- Strategies to Reduce the Rate of Charge Recombination, 'Chemical Frontiers 2015', Majorda Beach Resort, South Goa, August 15-18, 2015
- Scientific Writing, Department of Chemistry, The Cochin College, August 12, 2015
- Ultrafast Reactions, Department of Chemistry, The Cochin College, August 12, 2015
- (Wo)Man Who Did Not Get the Prize, 'Lecture Series on Nobel Laureates in Science and Literature', Vimala College, Trichur, March 5, 2015
- Science for Nation Building, 'Science Fest in Connection with National Science Day celebration', Sree Sankara College, Kalady, February 12, 2015
- Strategies to Reduce the Rate of Charge Recombination, 'Department of Chemical Sciences (DCS) seminar series', Tata Institute of Fundamental Research (TIFR) Mumbai, February 2, 2015
- Colourful Chemistry, 'INSPIRE-A Programme Motivating Young Talents Towards Science', Sacred Heart College, Cochin, January 15, 2015
- Effect of Light on DNA, 'Program for Motivation in Science-SPEED Sponsored by KSCSTE', NIIST Thiruvananthapuram, December 29, 2014
- Effect of Light on DNA, 'Science Talent Enrichment Programme (STEP) Sponsored by KSCSTE', IISER-Thiruvananthapuram, Thiruvananthapuram, December 16, 2014
- Modern Tools in Scientific Research, 'Special Winter School for College/University Teachers', Dr. John Matthai Centre, Thrissur, December 12, 2014
- Photonic Crystals, 'New Materials in Chemistry (NMC)', Government College, Kattappana, November 27-28, 2014
- Effect of Light on DNA, 'Rev. Dr. Mathew Thottiyil Memorial Endowment Lecture', Nirmala College, Muvattupuzha, November 8, 2014
- Femtosecond Spectroscopy, 'Short Term Course on Innovative Methods in Chemical Sciences', National Institute of Technology, Tiruchirappalli, May 8, 2014
- Decreasing the Speed Limit of Charge Recombination, 'National Seminar on Frontiers in Chemistry', University of Calicut, Calicut, March 20-21, 2014
- Effect of Light on DNA, 'Refresher Course in Chemistry for College Teachers', UGC-Academic Staff College, University of Kerala, March 17, 2014
- Understanding Biological Processes in Femtosecond Timescale, 'Kerala Science Day Lecture-2014', KSCSTE, February 28, 2014
- Dynamics of Charge Recombination in Superstructured Organic Materials, 'LCMB2014', IIT Kharagpur, February 24-25, 2014
- Understanding Biological Processes in Femtosecond Timescale, 'Kerala State Young Scientist Award Lecture-2013', KVASU, Wayanad, January 28-31, 2014

- Effect of Light on DNA, 'INSPIRE-A Programme Motivating Young Talents Towards Science', Sacred Heart College, Cochin, January 21-25, 2014
- Light-Harvesting Vesicular Donor-Acceptor Scaffold Limits the Rate of Charge Recombination, 'National Seminar on Recent Advances in Photochemistry', St. Michael's College, Cherthala, December 5-6, 2013
- Effect of Light on DNA, 'NIT Golden Jubilee Year Celebration Workshop in "Recent Trends in Chemistry', National Institute of Technology, Trichy, December 4, 2013
- Characterization by Atomic Force Microscopy, 'National Level Workshop on Characterization of Advanced Materials', Mar Ivanios College, Thiruvananthapuram, November 6-8, 2013
- Effect of Light on DNA, '11th Refresher Course in Chemistry', Academic Staff College, Calicut University Campus, September 21, 2013
- Effect of Light on DNA, 'Recent Progresses in Chemistry (RPC-2013)', Government College Kasaragod, Kerala, October 7-8, 2013
- Colourful Chemistry, St. Thomas School, June 14, 2013
- Spectroscopy-Physical Perspectives, 'Workshop on Applications of Spectroscopy in Inorganic, Organic & Physical Chemistry', NIT Tiruchirapalli, March 29, 2013
- An Overview on Surface Science Spectroscopy, Microscopy and Applications, 'Special Lecture Series', Kannur University, Payyanur Campus, March 22, 2013
- Introduction to Mass Spectrometry, 'India-UK Scientific Seminar', Aquaserene Resort, Kollam, February 21, 2013
- Colourful Chemistry, 'INSPIRE-A Programme Motivating Young Talents Towards Science', Sacred Heart College, Cochin, January 23, 2013
- A Tutorial on Density Functional Theory, 'Prof. K. V. Thomas Endowment Lecture on Computational Chemistry', Sacred Heart College, Kochi, December 5-6, 2012
- An Overview on Thermal Analysis, 'Special Lectures on Thermal Analysis and NMR Spectroscopy', Kannur University, Payyanur Campus, November 29, 2012
- Isothermal Titration Calorimetry, 'One Day Workshop Series on Biothermodynamics and Bioinformatics in Drug Discovery', Kannur University, Thalassery Campus, September 29, 2012
- DNA Donor-Acceptor Conjugates: Towards Understanding Biological Processes in Femtosecond Timescale, 'Eighth JNC Research Conference on Chemistry of Materials', Vivanta by Taj, Kovalam, September 30-October 2, 2012
- Biophysical Chemistry, 'Short Term Course on CSIR/UGC-JRF Exam in Chemical Sciences', National Institute of Technology, Tiruchirappalli, September 2, 2012
- Colourful Chemistry, TIME, Cochin, June 17, 2012
- Ellingham Diagram, 'Lecture Series for St. Thomas School Teachers', St. Thomas School, Thiruvananthapuram, May 22, 2012
- DNA and Protein Based Nanomaterials, 'UGC-SAP One Day Seminar on Chemistry of Advanced Materials', School of Chemical Sciences, M. G. University, March 20, 2012
- Supramolecular Chemistry, 'Science Academies' Workshop on Advancement in Supramolecular Chemistry and Nanoscience', Christ College, Irinjalakkuda, February 23-24, 2012
- Colourful Chemistry, St. Michael's College, Cherthala, January 10, 2012
- Colourful Science, 'Interaction with Young Scientists during Celebrating International Year of Chemistry', Christ Nagar School, Thiruvananthapuram, November 7-11, 2011
- Colourful Chemistry, 'INCULCATE', Cochin University for Science and Technology, CUSAT, September 24, 2011
- Recent Advances in Biomolecular Engineering, St. Thomas School, Thiruvananthapuram, May 24, 2011
- Effect of Light on DNA, 'Science Academies' Workshop on Advances in Molecular Spectroscopy', Sree Neelakanta Government Sanskrit College, Pattambi, March 4-5, 2011
- Structure of Natural and Non-natural DNA, School of Chemical Sciences, M. G. University, Kottayam, February 28, 2011
- Colourful Chemistry, TIME, Mar Theophilus Hall, Trivandrum, February 27, 2011

- Structure of Natural and Non-natural DNA, 'Faculty Training and Motivation Programme for College Teachers', NIIST Thiruvananthapuram, February 18, 2011
- Recent Advances in Biomolecular Engineering, 'VIBRANT2010', JIT, Coimbatore, November 12, 2010
- Structure of Natural and Non-natural DNA, 'JNCASR-FCBS Workshop for College Chemistry Students and Teachers', Hotel Residency Tower, Trivandrum, October 25 - 27, 2010
- Effect of Ultraviolet Light on DNA, 'Observance of International Day for Preservation of Ozone Layer 2010', KSCSTE, Thiruvananthapuram, September 16, 2010
- Effect of Light on DNA, 'Emerging Trends in Chemistry for Medical Applications', Christian College, Martandam, March 18-19, 2010
- Structure of Natural and Non-natural Nucleic Acids, Science Club, IISER-Thiruvananthapuram, February 20, 2010
- Structure of DNA, 'CSIR Programme on Youth for Leadership in Science (CPYLS)-2009', National Institute for Interdisciplinary Science and Technology, Thiruvananthapuram, December 22-23, 2009
- Nobel Prize in Chemistry-2009, 'Lecture Series on Nobel Prize', IISER-Thiruvananthapuram, October 22, 2009
- Structure and Self-assembly of DNA, 'National Symposium in Chemistry', Payyanur College, Payyanur, October 22-24, 2009

Voluntary Service

- Volunteer Visitor, Chemists' Community Fund, Royal Society of Chemistry, 2016-

Member of Professional Societies

Royal Society of Chemistry; American Chemical Society; Asian and Oceanian Photochemistry Association; Inter-American Photochemical Society; European Photochemistry Association; International Association of Advanced Materials; Chemical Society of Japan; Japanese Photochemistry Association; Chemical Research Society of India; Materials Research Society of India; Indian Society for Radiation and Photochemical Sciences; Photosciences Research Society of India; Fluorescence Society of India, Indian Society of Nano Medicine; Kerala Academy of Sciences, India

Journal Referee

Chemical Society Reviews; ACS Nano; Journal of the American Chemical Society; Angewandte Chemie, ACS Applied Materials and Interfaces; ACS Applied Nano Materials; Journal of Physical Chemistry Letters/A/B/C; Langmuir; ACS Omega; Energy and Environmental Science; Chemical Science; Nanoscale; Nanoscale Advances; Chemical Communications; Journal of Materials Chemistry; Organic Chemistry Frontiers; Physical Chemistry Chemical Physics; RSC Advances; New Journal of Chemistry; Acta Cryst B; Crystal Growth and Design; CrystEngComm; Faraday Discussion; Photochemical and Photobiological Sciences; Chemistry A European Journal; ChemPhysChem; ChemSusChem; ChemPlusChem; ChemPhotoChem; Chemistry An Asian Journal; Research; Helvetica Chimica Acta; Photochemistry and Photobiology; Scientific Reports; Journal of Photochemistry and Photobiology A/B/C: Chemistry; Chemical Physics Letters; Spectrochimica Acta Part A; Inorganica Chimica Acta; ChemistrySelect; Chemical Papers; Sensors & Actuators: B. Chemical; Luminescence; Journal of Luminescence; Journal of Molecular Graphics and Modelling; Journal of Molecular Structure; Chemistry and Physics of Lipids; Dyes and Pigments; Chemical Engineering Journal; Material Today: Proceedings; Bulletin of Materials Science; International Journal of Energy Research; Journal of Chemical Sciences; Current Organic Chemistry; Indian Journal of Chemistry-Section A; Applied Biochemistry and Biotechnology; JSM Bioinformatics; Genomics and Proteomics