Dr. P. Manoj
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Academic Qualifications: M.Sc. M. Phil. Ph.D

Professional Experience:

- Research Fellow at National University of Singapore (NUS), Singapore.
- Research Fellow at Institute of Materials Research and Engineering (IMRE), Singapore.
- Visiting Fellow at Tata Institute of Fundamental Research (TIFR), Mumbai, India.
- Visiting Fellow at Pohang University of Science and Technology (POSTECH), Pohang, South Korea.
- Research Scholar at Mahatma Gandhi University, Kottayam, India.
- Visiting Research Scholar at Bhabha Atomic Research Centre (BARC), Mumbai, India.
- Visiting Research Scholar at National Centre for Ultra Fast Processes (NCUFP), Chennai, India.

Research Interests:

- Organic Electronics, Alternate Renewable Energy
- Photophysical Properties of Conjugated Polymers and Metal Nanoparticles
- Charge Transfer Dynamics in DNA
- Radiation and Photochemical Studies of Substituted Purines and Pyrimidines
- Degradation of Triazines using Advanced Oxidation Processes
- *J*-Aggregates Exciton Dynamics

Research Projects:

- A project entitled “Investigations of the Photophysical Properties of Semiconducting Organic Materials for Electronic Applications” funded by the **University Grants Commission (UGC)**, India ***(Total Grant: Rs. 11,60,800/-*** *for three years, 2012-2015).*

- A project entitled “Optical Characterization and Charge Transport Properties of Conjugated Oligomers and Polymers for Organic Photovoltaics” funded by the **Department of Science and Technology (DST)**, India ***(Total Grant: Rs. 31,85,000/-*** *for three years, 2013-2016)*

- Two Junior Research Fellows are working under my guidance.

Awards:

- University first rank in Master of Science, Mahatma Gandhi University, Kerala, India.
- Best Teacher, St. Michael’s College, Cherthala, 2014

Membership in Professional Bodies:

Life Member of the Indian Society for Radiation and Photochemical Sciences

Extension/Outreach Programmes

- Resource Person for National Seminars at MES College Nedumkandam and Newman College Thodupuzha.
- Subject Expert, Cluster Meeting for Higher Secondary School Teachers, Kottayam District.
- Judge for Science Seminar conducted by Revenue District Science Club Association, Alappuzha.
- Judge for Science Exhibition conducted by Revenue District Science Club Association, Alappuzha.
- Question Paper setter for the subject ‘Research Methodology’ at Cochin University of Science and Technology (CUSAT), Kochi.
- External Examiner for the subject ‘Research Methodology’ at Cochin University of Science and Technology (CUSAT), Kochi.

- Invited Talk at CMS College Kottayam, SD College Alappuzha, NSS College Kottiyam.
- External Examiner for M.Sc. Applied Chemistry, Mahatma Gandhi University, Kottayam.
- Director, Research Promotion Council, St. Michaels College, Cherthala.
- Member, College Development Council, St. Michael's College, Cherthala.
- Member, Academic Monitoring Committee, St. Michael's College, Cherthala.
- Member, IQAC, St. Michael's College, Cherthala
- Member, Planning Board, St. Michael's College, Cherthala

List of Publications (Selected)

1. Manjumol Mathew, S. Sreedhanya, **P. Manoj,** C. T. Aravindakumar, and Usha K. Aravind, Exploring the Interaction of Bisphenol-S with Serum Albumins: A Better or Worse Alternative for Bisphenol A? ***J. Phys. Chem. B*****, 2014,** *118*, 3832.
2. Sruthi C. Sasidharan, P. Rajagopal and **P. Manoj**, Perylene Diimides: A Versatile Alternative to Fullerene in Organic Photovoltaics, ***New Numbers and Letters***, **2013**, *4(1)*, 8.
3. Yeru Liu, James R. Jennings, **Manoj Parameswaran** and Qing Wang, An organic redox mediator for dye-sensitized solar cells with near unity quantum efficiency, ***Energy Environ. Sci.***, **2011***, 4*, 564.
4. Md. Anower Hossain, Guangwu Yang, **Manoj Parameswaran**, James Robert Jennings, and Qing Wang, Mesoporous SnO_2 Spheres Synthesized by Electrochemical Anodization and Their Application in CdSe-Sensitized Solar Cells, ***J. Phys. Chem. C***, **2010**, *114,* 21878.
5. Ganapathy Balaji, **Manoj Parameswaran**, Chellappan Vijila, Tan Mein Jin, Zhu Furong and Suresh Valiyaveetil, Synthesis and Characterization of Highly Fluorescent Dithieno pyrrole oligomers. ***J. Phys. Chem. C,*** **2010**, *114*, 4628.
6. **Manoj Parameswaran**, Ganapathy Balaji, Tan Mein Jin, Chellappan Vijila, Sajini Vadukumpully, Zhu Furong and Suresh Valiyaveettil, Charge Transport Studies in Fluorene - Dithieno[3,2-*b*:2',3'-*d*]pyrrole Oligomer using Time-of-Flight Photoconductivity Method, ***Org. Electron.*** *10,* **2009**, 1534.

7. Ganapathy Balaji, Wong Low Shim, **Manoj Parameswaran** and Suresh Valiyaveettil, Thiadiazole Fused Indolo[2,3-*a*]carbazole Based Oligomers and Polymer, ***Org. Lett.*** *11*, **2009**, 4450.
8. Hairong Li, **Manoj Parameswaran**, Muhammad Hanafiah Nurmawati, Qing-Hua Xu and Suresh Valiyaveettil, Synthesis and Structure-Property Investigation of Novel Poly(pphenylene)s with Conjugated Side Chains, ***Macromolecules*** *41*, **2008**, 8473.
9. **P. Manoj**, Chang-Ki Min, C. T. Aravindakumar and Taiha Joo, Ultrafast Charge Transfer Dynamics in 2-Aminopurine Modified Double Helical DNA, ***Chem. Phys.*** *352,* **2008**, 333.
10. Jun Hong Yao, Khine Yi Mya, Xu Li, **Manoj Parameswaran**, Qing-Hua Xu, Kian Ping Loh, Zhi-Kuan Chen, Light Scattering and Luminescence Studies on Self-Aggregation Behavior of Water-soluble Copolymer Micelles, ***J. Phys. Chem. B.*** *112*, **2008**, 749.
11. **P. Manoj**, H. Mohan, V. M. Manoj, J. P. Mittal, and C. T. Aravindakumar, Charge Transfer from 2-Aminopurine Radical Cation and Radical Anion to Nucleobases: A Pulse Radiolysis Study, ***Chem. Phys.*** *331*, **2007**, 351.
12. **P. Manoj**, V. M. Manoj, K. P. Prasanthkumar, Usha K. Aravind, T. K. Manojkumar and C. T. Aravindakumar, Oxidation of Substituted Triazines by Sulfate Radical Anion ($SO_4^{\cdot-}$) in Aqueous Medium: A Laser flash Photolysis and Steady State Radiolysis Study, ***J. Phys. Org. Chem.*** *20*, **2007**, 122.

Seminar/Symposia/Talk

1. **P. Manoj**, Organic Solar Cells: Alternate Renewable Energy Sources, National Seminar on Conducting Materials Probing Methods Novel Properties and Emerging Applications, MES College, Nedumkandam, Kerala **2013 (Invited talk)**.

2. **P Manoj**, An Overview of Ultrafast Spectroscopic Techniques and its Applications, National Seminar on Recent Advances in Spectroscopy: A Chemical and Biological Perspective, Newman College, Thodupuzha, **2013** (**Invited talk**).

3. International Conference on Membranes (**ICM**) - **2013** organized by Centre for Environment and Education and Technology (**CEET**), Kottayam & Advanced Centre for Environmental Studies & Sustainable Development, M.G. University, Kottayam, Kerala.

4. **P. Manoj,** Organic Electronics: Future Low Cost Renewable Energy Source, National Seminar on Climate Change: Challenges and Strategies, Newman College, Thodupuzha, **2012** (**Invited talk**).

5. **Manoj Parameswaran**, Ganapathy Balaji, Tan Mein Jin and Chellappan Vijila, and Suresh Valiyaveettil, Charge Transport and Photovoltaic Properties of Dithieno[3,2-*b*:2′,3′-*d*]Pyrrole Oligomer and Polymer , *Proc. MRS Spring Meeting*, **San Francisco, 2010**

6. **Manoj Parameswaran**, Ganapathy Balaji, Tan Mein Jin and Chellappan Vijila, and Suresh Valiyaveettil, Charge Transport Studies of Dithieno[3,2-b*B*:2′,3′-*d*]Pyrrole Oligomer Using Time-of-Flight Photoconductivity Method, *Proc. Singapore International Conference on Chemistry (SICC-6)*, **Singapore, 2009**

7. Balaji Ganapathy, **Manoj Parameswaran**, Daisy Setyono and Suresh Valiyaveettil, Oligothieno[3,4-d]imidazoles for Electronic and Sensing Applications**,** *Proc. International Conference on Materials for Advanced Technologies* (ICMAT), **Singapore**, **2009**

8. Thirumal Krishnamoorthy, **Manoj Parameswaran** and Suresh Valiyaveettil, Synthesis and Properties of Polyarenes with Cross Conjugated Alkoxythiophenes, *Proc. International Conference on Materials for Advanced Technologies* (ICMAT), **Singapore**, **2009**

9. **P. Manoj**, Chang-Ki Min, C. T. Aravindakumar and Taiha Joo, Investigation of Charge Transfer Dynamics of a Modified DNA by Time Resolved Fluorescence, *Proc. Pune Workshop on Radiation and Photochemistry*, Pune, **India**, **2008** *(**Invited talk**)*.