CURRICULUM VITAE OF DR. SUBRATA SINHA

NAME: DR. SUBRATA SINHA
DESIGNATION: Associate Professor
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ACADEMIC QUALIFICATIONS:

Ph. D.: Jadavpur University (work done at the Indian Association for the Cultivation of Science), India (1998), Title*: Photophysical studies on nonradiative transitions resulted from intermolecular quenching reactions between several donor and acceptor systems by steady state and time resolved spectroscopic techniques*

M. Sc.: Physics, Ist class, Jadavpur University, India (1993)

B. Sc.: Physics Honours, Ist class (Gold Medalist), Tripura University, India (1990)

PROFESSIONAL EXPERIENCES:

May 31, 2012 - till date: Associate Professor in ISERC, Visva-Bharati, Santiniketan, India

May 31, 2009 - May 31, 2012: Reader in Integrated Science Education & Research Centre (ISERC), Visva-Bharati, Santiniketan, India

November 21, 2005 - May 29, 2009: Assistant Professor in Physics, Banaras Hindu University, Varanasi, India

April 01, 2005 - November 19, 2005: Assistant Professor in Physics, Bidhan Chandra College, Asansol, India

February 17, 2004 - March 31, 2005: Post-doc Research Assistant, Lund University, Lund, Sweden

August 01, 2001 - June 30, 2003: Post-doc Research Assistant, University of Durham, Durham, England

January 24, 2000 - January 19, 2001: JSPS (Japan Society for the Promotion of Science) Fellow, Kyoto University, Kyoto, Japan

January 11, 1999 - December 28, 1999: COE (Centre of Excellence) Researcher, National Institute of Advanced Industrial Science and Technology, Tsukuba, Japan

September 16, 1998 - January 08, 1999: Research Associate – I, Indian Association for the Cultivation of Science, Kolkata , India

February 21, 1995 - September 16, 1998: Junior & Senior Research Fellow, Indian Association for the Cultivation of Science, Kolkata , India

PRESENT RESEARCH INTERESTS:

Molecular Spectroscopy:

- Photoluminescence of conjugated polymers and their nanocomposites
- Photophysics of organic dyes
- Photoinduced electron and energy transfer in organic donor-acceptor systems

PUBLICATIONS:

Papers published in refereed journals: **36**
Papers published in conferences: **33**

INVITED TALKS: 09

STUDENTS AWARDED FOR Ph.D.: 02
Mihir Ghosh, Biswajit Roy

STUDENTS REGISTERED FOR Ph.D.: 03
Sandip Layek, Koushik Majhi, Rijia Khatun

SUPERVISION OF M. Sc. DISSERTATIONS: 09

PROJECTS COMPLETED: 01
Dye sensitized solar cell: photoinduced electron transfer in porphyrin based donor-acceptor dyads attached to nanostructured films (DAE-BRNS, Sanction No: 2010/37P/12/BRNS, dated: 08.11.2010)

PROJECTS ON-GOING: 01
Investigation of polyaniline based nanocomposites by steady state and time-resolved spectroscopic techniques (CSIR, Sanction No.: 03(1365)/16/EMR-II, dated: 11.05.2016)

MEMBERSHIP OF PROFESSIONAL BODIES:
- Indian Photobiology Society
- Indian Physical Society
- Indian Association for the Cultivation of Science
- Indian JSPS Alumni Association
- Laser and Spectroscopy Society of India
- Indian Society for Radiation and Photochemical Sciences
- Institute of Science, Education and Culture

PUBLICATIONS IN REFEREED JOURNALS:
36. Sandip Layek, Mihir Ghosh, Karuka Siddarth Reddy, Sudipta Senapati, Pralay Maiti, Subrata Sinha.
    Optical studies of poly(9,9-di-(2-ethylhexyl)-9H-fluorene-2,7-vinylene) and its nanocomposites.
    J. Appl. Spectrosc., *82*, 868-874, 2015.
35. Mihir Ghosh, Biswajit Roy, Koushik Majhi, Aruna K. Mora, Sukhendu Nath, Subrata Sinha.
    Fluorescence quenching of 9-cyanoanthracene by metallo-octaethylporphyrins in cyanobenzene.
    J. Porphyrins Phthalocyanines, *19*, 1063-1071, 2015.
34. Mihir Ghosh, Subrata Sinha.
    Solvatochromic Stokes shift and determination of excited state dipole moments of free base and zinc octaethylporphyrin.
    Spectrochim. Acta Part A: Mol. Biomol. Spectrosc., *150*, 959-965, 2015.
33. Mihir Ghosh, Aruna K. Mora, Sukhendu Nath, P. Hemant Kumar, Prakriti Ranjan Bangal, Subrata Sinha.
    Photoinduced electron transfer from zinc tetraphenylporphyrin to 2-nitrofluorene in polar solvent acetonitrile.
    J. Photochem. Photobiol. A: Chem., *306*, 55-65, 2015.

32. Biswajit Roy, Mihir Ghosh, Subrata Sinha.
Solvent dependent photophysical properties of free base tetrapyridylporphyrin.
J. Mol. Liquids, *200*, 323-328, 2014.

31. Mihir Ghosh, Aruna K. Mora, Sukhendu Nath, Alakananda Hajra, Subrata Sinha.
Photoinduced electron transfer in metallo-octaethylporphyrin (donor) – 2-nitrofluorene (acceptor) systems in polar acetonitrile liquid medium.
J. Photochem. Photobiol. A: Chem., *290*, 94-100, 2014.

30. Subhajit Mishra, Avik Kumar Bagdi, Monoranjan Ghosh, Subrata Sinha, Alakananda Hajra.
Zinc iodide: a mild and efficient catalyst for one-pot synthesis of aminoindolizines via sequential A^3 coupling/cycloisomerization.
RSC Adv., *4*, 6672-6676, 2014.

29. Mihir Ghosh, Biswajit Roy, Abhimanyu Jha, Subrata Sinha.
Ground state charge transfer complex formation of some metalloporphyrins with aromatic solvents.
Chem. Phys. Lett., *592*, 149-154, 2014.

28. Mihir Ghosh, Aruna K. Mora, Sukhendu Nath, Asit K. Chandra, Alakananda Hajra, Subrata Sinha.
Photophysics of Soret-excited free base tetraphenylporphyrin and its zinc analog in solution.
Spectrochim. Acta Part A: Mol. Biomol. Spectrosc., *116*, 466-472, 2013.

27. Mihir Ghosh, Sukhendu Nath, Alakananda Hajra, Subrata Sinha.
Fluorescence self-quenching of tetraphenylporphyrin in liquid medium.
J. Lumin., *141*, 87-92, 2013.

26. Mihir Ghosh, Subrata Sinha.
Re-absorption effect on the fluorescence emission spectra of zinc tetraphenylporphyrin in liquid medium at high concentrations.
Bulletin of Laser and Spectroscopy Society of India, *19*, 57-66, 2012 (ISSN: 2229-3752).

25. Paulami Mandal, Sanat Kumar Tiwari, Tapan Ganguly, Subrata Sinha.
Fluorescence quenching of 9-cyanoanthracene in presence of zinc tetraphenylporphyrin in a polar liquid medium.
J. Lumin., *129*, 958-965, 2009.

24. H. Wolpher, S. Sinha, J. Pan, A. Johansson, M. J. Lundqvist, P. Persson, R. Lomoth, J. Bergquist, L. Sun, V. Sundstrom, B. Akermark and T. Polivka.
Synthesis and electron transfer studies of ruthenium-terpyridine-based dyads attached to nanostructured TiO_2.
Inorg. Chem., *46*, 638-651, 2007.

23. H. H. Billsten, J. Pan, S. Sinha, T. Pascher, V. Sundstrom and T. Polivka.
Excited state processes in the carotenoid Zeaxanthin after excess energy excitation.
J. Phys. Chem. A, *109*, 6852-6859, 2005.

22. S. Sinha and A. P. Monkman.
Delayed recombination of detrapped space charge carriers in poly[2-methoxy-5-(2′-ethyl-hexyloxy)-1,4-phenylene vinylene] based light emitting diode.
J. Appl. Phys., *97*, 114505-1 - 114505-7, 2005.

21. S. Sinha.
Delayed electroluminescence from conjugated polymers.
Recent Res. Devel. Applied Phys., *7*, 2004.

20. S. I. Hintschich, C. Rothe, S. Sinha, A. P. Monkman, P. Scandiucci de Freitas and U. Scherf.
Population and decay of keto states in conjugated polymers.
J. Chem. Phys., *119*, 12017-12022, 2003.

19. S. Sinha, R. Güntner, U. Scherf and A. P. Monkman.
Space charge mediated delayed electroluminescence from polyfluorene thin film.
Appl. Phys. Lett., *82*, 4693-4695, 2003.

18. S. Sinha and A. P. Monkman.
Delayed electroluinescence via triplet-triplet annihilation in light emitting diodes based on poly[2-methoxy-5-(2$^{/}$-ethyl-hexyloxy)-1,4-phenylene vinylene].
Appl. Phys. Lett., *82*, 4651-4653, 2003.

17. S. Sinha and A. P. Monkman.
Effect of electric field, solvent and concentration on the electroluminescence spectra and performance of poly[2-methoxy-5-(2$^{/}$-ethyl-hexyloxy)-1,4-phenylene vinylene] based light emitting diodes.
J. Appl. Phys., *93*, 5691-5700, 2003.

16. S. Sinha, C. Rothe, A. Beeby, L. E. Horsburgh and A. P. Monkman.
Photophysics of poly (2,5-pyridine diyl).
Synth. Met., *135-136*, 371-372, 2003.

15. S. Sinha, C. Rothe, R. Güntner, U. Scherf and A. P. Monkman.
Electrophosphorescence and delayed electroluminescence from pristine polyfluorene thin film devices at low temperature.
Phys. Rev. Lett., *90*, 127402-1 – 127402-4, 2003.

14. S. Sinha, C. Rothe, A. Beeby, L. E. Horsburgh and A. P. Monkman.
Detailed investigations on the photophysical properties of poly (2,5-pyridine diyl).
J. Chem. Phys., *117*, 2332-2336, 2002.

13. Ryuzi Katoh, Subrata Sinha, Shigeo Murata and M. Tachiya.
Origin of the stabilization energy of perylene excimer as studied by fluorescence and near-IR transient absorption spectroscopy.
J. Photochem. Photobiol. A Chem., *145*, 23-34, 2001.

12. M. Maiti, T. Misra, T. Bhattacharya, S. Sinha and T. Ganguly.
Non-radiative transitions of 2-methylindole and 2-methylindoline in presence of the electron acceptor 2-nitrofluorene at the ambient as well as at liquid N_2 temperatures.
Indian J. Phys., *75A(6)*, 615, 2001.

11. M. Maiti, T. Misra, S. Sinha, S. K. Pal, D. Mukherjee, R. D. Saini and T. Ganguly.
Photoinduced electron transfer (ET) within some novel synthesized derivatives of phenanthrene acting as donors and 9-fluorenone / 9-cyanoanthracene behaving as acceptors.
J. Lumin., *93*, 261-274, 2001.

10. M. Maiti, S. Sinha, C. Deb, A. De and T. Ganguly.
Photophysics of 4-methoxy-benzo[b]thiophene in different environments. Its role in non-radiative transitions both as an electron and as an energy donor.
J. Lumin., *82*, 259-276, 1999.

09. S. Sinha and T. Ganguly.
Investigations on the nature of non-radiative transitions from excited singlet and triplet states of dimethyl substituted phenols in presence of the acceptor 2-nitrofluorene at 77 K.
J. Photochem. Photobiol. A : Chem., *117*, 83-90, 1998.

08. S. Sinha and T. Ganguly.
Investigations on the photophysical properties of 2-methylindole and 2-methylindoline in various environments. Studies on the nature of non-radiative transitions in presence of the electron acceptor 2-nitrofluorene.
J. Lumin., *79*, 201-209, 1998.

07. A. K. De, S. Sinha, S. K. Nandy and T. Ganguly.
Effects of protic and aprotic solvents on quenching mechanisms involving dimethyl-substituted donors and tetracyanoquinodimethane (TCNQ).
J. Chem. Soc. Faraday Trans., *94*, 1695-1700, 1998.

06. S. Sinha, R. De and T. Ganguly.
Photophysical properties of some methylindoles and studies on quenching reactions in their excited singlet and triplet states in presence of the electron acceptor 2-nitrofluorene at 296 K as well as at 77 K.
Spectrochim. Acta Part A, *54*, 145-157, 1998.

05. S. Sinha, R. De and T. Ganguly.
Investigations of excited state quenching reactions between p-toluidine, its N,N-dimethyl derivative and the acceptor dimethylterephthalate at different temperatures.
J. Photochem. Photobiol. A : Chem., *112*, 13-20, 1998.

04. R. De, S. Sinha and T. Ganguly.
Photophysical studies of indole and methylindoles in microheterogeneous medium.
IL Nuovo Cimento, *19D*, 955-965, 1997.

03. S. Sinha, R. De, A. K. De, S. K. Nandy and T. Ganguly.
Studies on quenching reactions in the excited electronic states of tetrahydronaphthols both at the ambient temperature as well as at 77 K.
J. Lumin., *75*, 99-116, 1997.

02. S. Sinha, R. De and T. Ganguly.
Electron transfer reactions in the excited singlet states of dimethyl substituted phenols-2-nitrofluorene systems : Evidence for the Marcus inverted region and concurrent occurrence of energy transfer processes.
J. Phys. Chem. A, *101*, 2852-2858, 1997.

01. S. Sinha, R. De and T. Ganguly.
Role of 3,5-dimethyl anisole (DMA) as an electron donor in photoinduced electron transfer (ET) reactions.
Radiat. Phys. Chem., *49*, 111-114, 1997.