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Sanjay Ghosh, MSc, NET, SET, PhD-University of Pune, India,
Postdoc-University of St Andrews, UK.

EDUCATION

- Jul 2008 – Jun 2013* **Savitribai Phule Pune University**
PhD, Physics (Organic Photovoltaics)
Pune, India
Thesis: **On morphology Control in bulk-heterojunction for polymer based solar cells**
- Jul 1999 – Jun 2001* **Sant Gadge Baba Amravati University**
MSc, Physics,
Amravati, India

RESEARCH EXPERIENCE

- Feb 2005 – present* **Assistant Professor**
North Maharashtra University, Physics
Jalgaon, India
- Jan 2014 – Dec 2014* **Postdoctoral Research Fellow (group of Prof. Ifor D. W. Samuel)**
University of St. Andrews, Physics and Astronomy
St. Andrews, United Kingdom
- Jul 2008 – Jun 2013* **Ph. D. Research Scholar**
University of Pune, School of Energy Studies, Department of Physics
Pune, India
- Research Interest* **Organic Photovoltaics(OPV), Organic Light Emitting Diode(OLED), Perovskite Solar Cell**

TEACHING EXPERIENCE

- Feb 2005 – present* **Assistant Professor**
Department of Physics, North Maharashtra University
Jalgaon, India
- Dec 2004 – Feb 2005* **Assistant Professor**
Department of Physics, Vidnyan Mahavidyalaya
Malkapur, India
- Aug 2005 – Dec 2005* **Assistant Professor**
Department of Physics, Vidyabharati Mahavidyalaya
Amravati, India

PROFESSIONAL AFFILIATIONS

- Life member of Indian Physics Association (IPA)
- Life member of India Association of Physics (IAP)
- Editorial board member of Journal: International Journal of Scientific Research in Knowledge, Malaysia (ISSN: 2322- 4541)

AWARDS AND ACHIEVEMENTS

- Jan 2014* One year Study Leave from North Maharashtra University for postdoctoral research at the University of St. Andrews, UK.
- Jan 2014 to Dec 2014* Worked as a postdoctoral research fellow on EPSRC funded international project at the University of St. Andrews, UK.
- Dec 2003* Qualified National Eligibility Test (NET) for Lectureship in Physics.
- Mar 2004* Qualified State Eligibility Test (SET) for lectureship in Physics (Maharashtra and Goa).
- Feb 2003* Qualified Graduate Aptitude Test for Engineers (GATE).
- Feb 2001* Qualified Joint Entrance Screening Test (JEST).
- Nov 2011* 1st prize in the University Level Research Festival 'Avishkar' in the teacher's category held at North Maharashtra University, Jalgaon.
- Nov 2000* Member of the team obtaining 1st prize in the Intercollegiate quiz competition held at Chalisgaon, India.

Jan 2001

1st prize in the Faces of the Century competition held at Vidyabharati Mahavidyalaya, Amravati, India.

PUBLICATION HIGHLIGHTS (Total Publications – 21)

1. **S. S. Ghosh**, A. P. Zerwal, G. G. Bisen, G. S. Lonkar, J. V. Sali, V. S. Waman, S. R. Jadkar; *Why specific mixed solvent composition leads to appropriate film formation of composite during spin coating?*; APPLIED PHYSICS LETTERS; 102; 051918 (2013)
2. Shuyu Zhang, Dobroslav Tsonev, Stefan Videv, **Sanjay Ghosh**, Graham A. Turnbull, Ifor D. W. Samuel and Harald Haas; *Organic solar cells as high-speed data detectors for visible light communications*; OPTICA; 2(7); 607 (2015)
3. **Sanjay S. Ghosh**, Ganesh S. Lonkar, Mrunal S. Mahajan, Sandesh R. Jadkar, Vaishali S. Waman, Mahesh M. Kamble, V. Ganesan, Jaydeep V. Sali; *Bulk-heterojunction morphology control during spin coating: Modelling diffusion assisted phase separation*. APPLIED PHYSICS LETTERS; 101; 173305 (2012)
4. Ganesh. S. Lonkar, Mrunal. S. Mahajan, **Sanjay. S. Ghosh**, Jaydeep V. Sali; *Modeling thin film formation by Ultrasonic Spray method: A case of PEDOT: PSS thin films*. ORGANIC ELECTRONICS; 13; 2575 (2012)
5. Mrunal S Mahajan, Ganesh S Lonkar, **Sanjay S Ghosh**, Mahendra B Patil, Dipak S Dalal, Jaydeep V Sali; *Formation of P3KHT:PCBM bulk-heterojunction using orthogonal solvents by ultrasonic spray method*; JOURNAL OF PHYSICS D: APPLIED PHYSICS;; 48; 265105 (2015)
6. **Sanjay S Ghosh**, Luis A. Serrano Bernd Ebenhoch Vincent M. Rotello Graeme Cooke Ifor D. W. Samuel; *Organic solar cells based on acceptor-functionalized diketopyrrolopyrrole derivatives*; JOURNAL OF PHOTONICS FOR ENERGY; 5 057215 (2015)
7. Adam F. Henwood, Yue Hu, Muhammad T. Sajjad, Gopala K. V. V. Thalluri, **Sanjay S. Ghosh**, David B. Cordes, Alexandra M. Z. Slawin, Ifor D. W. Samuel, Neil Robertson, and Eli Zysman-Colman; *Unprecedented Strong Panchromatic Absorption from Proton-Switchable Iridium(III) Azoimidazolate Complexes*; CHEM. EUR. J. 21; 1-9 (2015)
8. Eli Zysman-Colman, **Sanjay S. Ghosh**, Guohua Xie, Shinto Varghese, Mithun Chowdhury, Nidhi Sharma, David B. Cordes, Alexandra M. Z. Slawin, and Ifor D. W. Samuel; *Solution-Processable Silicon Phthalocyanines in Electroluminescent and Photovoltaic Devices*; ACS APPLIED MATERIALS AND INTERFACES, 8, 9247 (2016)
9. Mrunal S Mahajan, D. M. Marathe, **Sanjay S Ghosh**, V. Ganesan, Jaydeep V Sali; *Changes in in-plane electrical conductivity of PEDOT:PSS thin films due to electric field induced dipolar reorientation*; RSC ADVANCES; 5; 86393 (2015)

10. Vaishali S. Waman, Mahesh M. Kamble, **Sanjay S. Ghosh**, Azam Mayabadi, Vasant. G. Sathe, Habib M. Pathan, Shashikant D. Shinde, Kiran P. Adhi, Sandesh R. Jadkar: *Highly conducting phosphorous doped n-type nc-Si:H films by HW-CVD for c-Si heterojunction solar cells*. RSC ADVANCES; 2; 9873 **(2012)**
11. V.S. Waman, M.M. Kamble, **S.S. Ghosh**, A.H. Mayabadi, B.B. Gabhale, S.R. Rondiya, A.V. Rokade, S.S. Khadtare, V.G. Sathe, H.M. Pathan, S.W. Gosavi, S.R. Jadkar: *Evolution of microstructure and opto-electrical properties in boron doped nc-Si:H films deposited by HW-CVD method*. JOURNAL OF ALLOYS AND COMPOUNDS; 585; 523 **(2014)**.
12. G. Conboy, R. G. D. Taylor, N. J. Findlay, A. L. Kanibolotsky, A. R. Inigo, **S. S. Ghosh**, B. Ebenhoch, L. K. Jagadamma, G. K. V. V. Thalluri, M. T. Sajjad, I. D. W. Samuel and P. J. Skabara, *Novel 4,8-benzobisthiazole copolymers and their field-effect transistor and photovoltaic applications*, JOURNAL OF MATERIALS CHEMISTRY C, 5, 11927 **(2017)**.

PATENTS

An improved animal cart J. V. Sali, S. S. Ghosh, D. P. Wagh: (Applied for the Indian Patent) (2011)

CONFERENCE/PRESENTATIONS (Selected)

1. Plenary talk "Organic Solar Cells: Materials and Principles", at Second International Conference on Advanced Polymeric Materials (ICAPL 2017), Kottayam, Kerala, India during 7-9 April, 2017.
2. Invited talk "Organic Solar Cells: A bet for future", at Inter University Consortium (IUC), Indore on 26th December 2016.
3. What happens when diiodooctane is used in small molecule-fullerene organic solar cells?, at 14th International Conference on Electrical and Related Properties of Organic Solids (ERPOS)-2017, St. Andrews, United Kingdom during 9-13th July 2017.
4. Organic photovoltaic meeting at The Burn, Scotland, with collaborators from the University of Glasgow (Prof. Graeme Cooke) and Strathclyde University (Prof. Peter Skabara), June 2014 (Presentation).
5. An organic optoelectronic Visible Light Communication Link Operating in a λ over 20 Mb/s. **S. Zhang**, D. Tsonev, S. Ghosh, S. Videv, P. Manousiadis, M.T. Sajjad, D.C.V. Amarasinghe, J.J.D. McKendry, E. Xie, E. Gu, M.D. Dawson, H. Haas, G.A. Turnbull and I.D.W. Samuel Organic Photonics and Electronics Faraday Discussion, **(2014)** (Poster).

6. Nanoscale morphology control of P3HT:PCBM blends by controlling the ambient during spin coating for solar cell application, **S. S. Ghosh**, S. R. Jadkar, V. Ganesan and J. V. Sali, International conference on, "Advances in Energy Research", at Indian Institute of Technology, Mumbai, India (**2011**), (Poster).
7. A novel approach to model the phase separation in Polymer-Small molecule bulk-heterojunction system, **S. S. Ghosh**, S. R. Jadkar and J. V. Sali, North Maharashtra University, research festival, "Avishkar 2011", at North Maharashtra University, Jalgaon, India (**2012**) (Poster and Presentation). Obtained 1st Prize

PROJECTS

AS PRINCIPAL INVESTIGATOR

1. Title: Synthesis of low cost and environmental friendly organic/inorganic hybrid solar cells and their study.
Funding agency: University Grants Commission of India (UGC).
Duration: May 2009 to April 2011, (Amount-1.5 lakh)
Status: COMPLETED
2. Title: Fabrication and study of Perovskite Solar Cells by Ultrasonic Spray Coating Technique with targeted efficiency ~15%: Research and Technology.
Funding agency: Solar Energy Research Initiative (DERI), DST.
Duration: 2017 to 2020, (Amount-38.58 lakh)
Status: Ongoing
3. Fabrication and study of low cost solution processed TADF-OLEDs by ultrasonic spray coating method.
Funding Agency: DAE-BRNS.
Duration: 2017-2019 (Amount: ~30 lakh)
Status: Ongoing.
4. Study of varied stoichiometry organometallic metal halide perovskite materials to improve their stability: Research and Technology
Funding Agency: UGC-DAE Consortium for Scientific Research.
Duration: 2018-19 (Extendable)
Status: Ongoing.

SUBJECTS TAUGHT AT POST GRADUATION LEVEL

1. Mathematical methods for Physics,
2. Electromagnetic Theory,
3. Statistical Mechanics,
4. Semiconductor Physics,
5. Condensed Matter Physics,
6. Characterization Techniques.