

List of publications

2D Materials

1. **A. S. Sarkar**, A. Mushtaq, D. Kushavah and S. K. Pal,
Liquid exfoliation of electronic grade ultrathin tin(II) sulfide (SnS) with intriguing optical response,
In Press, npj 2D Materials and Applications, 2019.
2. R. Ray, **A. S. Sarkar**, and S. K. Pal,
Improving Carrier Transport in Polymer Films by Incorporating MoS₂ Nanosheets,
Under review, 2019.
3. R. Ray, **A. S. Sarkar**, and S. K. Pal
Improving Performance and Moisture Stability of Perovskite Solar Cells through Interface Engineering with Polymer-2D MoS₂ Nanohybrid
Solar Energy, 2019, 193, 95-101.
4. S. Dutt*, T. Vats*, **A. S. Sarkar***, S. K. Pal and P. F. Siril,
Electrical and Optical properties of Polyaniline-Graphene nanocomposites synthesized using swollen liquid crystals as soft templates,
*Under review. (*Equal contributions)*
5. **A. S. Sarkar**, A. D. Rao, A. K. Jagdish, A. Gupta, C. K. Nandi, P. C Ramamurthy and S. K. Pal,
Facile embedding of gold nanostructures in the hole transporting layer for efficient polymer solar cells,
Org. Electron. 2018, 54, 148-153.
6. **A. S. Sarkar** and S. K. Pal,
Phonon Shift in Chemically Exfoliated WS₂ Nanosheet,
AIP Conf. Proc., 2018, 1942, 090046.
7. **A. S. Sarkar** and S. K. Pal,
A van der Waals p-n Heterojunction based on Polymer-2D Layered MoS₂ for Solution Processable Electronics,
J. Phys. Chem. C, 2017, 121, 21945-21954.
8. A. Mushtaq, S. Ghosh, **A. S. Sarkar** and S. K. Pal,
Multiple Exciton Harvesting at Zero-Dimensional/Two-Dimensional Heterostructures,
ACS Energy Lett., 2017, 2, 1879-1885.
9. **A. S. Sarkar** and S. K. Pal
Electron-Phonon Interaction in Organic/2D-Transition Metal Dichalcogenide Heterojunctions: A Temperature Dependent Raman Spectroscopic Study,
ACS Omega, 2017, 2, 4333-4340.
10. **A. S. Sarkar** and S. K. Pal,
Exponentially Distributed Trap-Controlled Space Charge Limited Conduction in Graphene Oxide Films,
J. Phys. D: Appl. Phys., 2015, 48, 445501.

Others

12. Q. Shi*, S. Ghosh*, **A. S. Sarkar**, P. Kumar, Z. Wang, S. K. Pal, T. Pullerits, and K. J. Karki
Variation in the Photocurrent Response due to Different Emissive States in Methylammonium Lead Bromide Perovskites,
*J. Phys. Chem. C, 2018, 122, 3818-3823. (*Equal contributions)*
13. S. Ghosh, M. Ghosh, P. Kumar, **A. S. Sarkar**, and S. K. Pal,
Quenching of the Excitonic Emission of ZnO Quantum Dots Due to Auger-Assisted Hole Transfer to CdS Quantum Dots,

J. Phys. Chem. C, **2016**, *120*, 27717-27723.

14. **A. S. Sarkar**, V. Kalyani, K. E. Gonsalves, C. P. Pradeep and S. K. Pal,
Ion mediated Charge Carrier Transport in a Novel Radiation Sensitive Polyoxometalate-Polymer Hybrid,
RSC Adv., **2016**, *6*, 44838. (Communication)

15. V. Kalyani, V. S. V. Satyanarayana, **A. S. Sarkar**, A. Kumar, S. K. Pal, S. Ghosh, K. E.
*Radiation Sensitive Hybrid Polymer Based on Mn-Anderson Polyoxometalate Cluster and a UV Active
Organic Monomer: Synergistic Effects Lead to Improved Photocurrent in Photoresponse Device*,
RSC Adv., **2015**, *5*, 36727-36731. (Communication)