

Ms. Saranya Babu

Assistant Professor of Physics

International Publications – 9

Conferences (International – 04) (National – 01)

<u>Citation indices</u>	<u>All</u>	<u>Since 2017</u>
Citations	27	27
h-index	02	02
i10-index		

ADMINISTRATIVE DISTINCTION

- Awarded the prestigious UGC, Junior Research Fellowship (JRF), Government of India in 2013. (Selected through an all India competitive examination - national fellowship for carrying out research)
- Participated as Resource Person in the One – day Online Seminars titled “ A brief historic note on Science Day” in connection with National Science Day on 01/03/2025.



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QUALIFICATION

M.Sc.,NET.

DATE OF JOINING

22.01.2016

EXPERIENCE IN YEARS

10 years

AREA OF RESEARCH

Organic Electronics,
Crystal Growth,
Optoelectronic devices,
Supramolecular Materials

PUBLICATIONS

1. Effect of Ultrasonication on the Crystal structure of perovskites. Saranya Babu, T.A.Shahul Hammed and P.Predeep, AIP Proceedings, *AIP Conf. Proc.* 2287, 020033 (2020)
2. Effect of Solution and Dry Processing Techniques on the Optical and Transport Properties of Inorganic CsPbBr₃ Perovskite Films. P Sujith, M Pratheek, M Aiswarya, S Babu, SR Parne... - Journal of Physics: Conference Series, 2022, P Sujith *et al* 2022 *J. Phys.: Conf. Ser.* **2357** 012019
3. A novel citric acid facilitated supramolecular Zinc(II)-metallogel: Toward semiconducting device applications. Subhendu Dhibar , Saranya Babu , Aiswarya Mohan , Goutam Kumar Chandra b, Subham Bhattacharjee c,Kripasindhu Karmakar , Priya Karmakar , S.K. Meheubub Rahaman , Padmanabhan Predeep b,Bidyut Saha (IF= 6.633), Volume 375, 1 April 2023, 121348
4. A semiconducting supramolecular novel Co(II)-metallogel based on 5-aminoisophthalic acid gelator Toward efficient microelectronic device application. Subhendu Dhibar, Saranya Babu, Kripasindhu Karmakar , Aiswarya Mohan ,Subham Bhattacharjee , Sk. Meheubub Rahaman , Ganesh Chandra Nayak , Ratnakar Saha ,Padmanabhan Predeep b, Bidyut Saha. (IF= 2.719), Volume 829, 16 October 2023, 140777
5. Novel supramolecular luminescent metallogels containing Tb(III) and Eu(III) ions with benzene 1,3,5-tricarboxylic acid gelator: advancing semiconductor applications in microelectronic devices† Subhendu Dhibar,Aiswarya Mohan, Kripasindhu Karmakar, Bijneswar Mondal,Arpita Roy, Saranya Babu, Padmanabhan Predeep and Bidyut Saha (IF = 3.9), *RSC Adv.*, 2024, 14, 12829–12840
6. Fabrication of a supramolecular metallogel from citric acid and Mn(II) ions for improved Schottky barrier diode performance in semiconductor devices. Subhendu Dhibar, Aiswarya Mohan, Saranya Babu · · Padmanabhan Predeep · Bidyut Saha, *Discover Molecules Research Open access*, Published: 13 May 2025 Volume 2, article number 13, (2025)
7. Development of two semiconducting supramolecular metallogels of Cd(II)- and Hg(II)-ions from 5-aminoisophthalic acid gelator for high-performance Schottky diodes and advanced microelectronic applications, Subhendu Dhibar, Aiswarya Mohan, Saranya Babu, Padmanabhan Predeep & Bidyut Saha, *Discover Molecules, Research Open access* Published: 12 May 2025 Volume 2, article number 11, (2025)
8. Electrochemical impedance spectroscopy of a novel ZnA- CA(Zinc Acetate - Citric acid) Supramolecular Metallogel : *International journal of Modern Physics B* .
9. Materials Modeling for Macro to Micro/Nano Scale systems
Chapter : Nanocrystalline perovskites: From Materials to Modeling , Hard ISBN: 9781774630198

Papers presented in International Conferences

1. Presented a poster in International Conference on Advanced Nanostructures(ICAN 2018) organized by Post Graduate and Research Department of Physics ,Catholicate College Pathanathitta(12-14th March 2018).
2. Presented a poster in International Conference on Energy and Environment (ICEE 2019) organized by T.K.M College of Arts and Science, Kollam (12-14th December 2019).
3. Presented a poster in International Conference on Light Matter Interaction & Ultrafast Processes (ICLMIUP 2024), March 1-4, 2024.
4. Oral presentation given in the third international conference on Functional Materials and Applied Physics (FMAP-2024) organised by Sardar Vallabhbhai National Institute of Technology during 18-19 October 2024

National Conferences

1. Presented a poster in National Conference on Functional Materials and Applications (NCFA-2024), organized by Department of Physics, Cochin University of Science and Technology on 18-19th January 2024.

ORIENTATION/REFRESHER/SHORT TERM COURSES ATTENDED

- Participated in UGC sponsored Orientation Course (OP-132) at HRDC Shimla, April 2019.
- Refresher Course in Quantum Mechanics, Bishop Moore College, Mavelikara, 14 days (1/5/2017-14/5/2017), Indian Academy of Sciences, Bengaluru, Indian National Science Academy, New Delhi, National Academy of Sciences India, Allahabad.
- Refresher Course on Astronomy and Astrophysics, IUCAA, Pune, 1 month (11/05/2020- 12/06/2020), MHRD, PMMMNMNTT.
- Refresher Course on Astronomy and Astrophysics, IUCAA, Pune, 1 month (16/05/2022-17/06/2022), MHRD, PMMMNMNTT.
- Refresher Course on Astronomy and Astrophysics, IUCAA, Pune, 1 month (15/05/2023-16/06/2023), MHRD, PMMMNMNTT.
- National Education Policy Orientation & Sensitization Programme 16 - 30 September, 2024, organised by the Malaviya Mission Centre of the Astronomy Centre for Educators of IUCAA.