



Department of Freshman Engineering

Faculty Profile

Name : Dr. Botta Bhavani
Designation : Assistant Professor (Chemistry)
Qualification : M.Sc., Ph.D.
Total Experience : 01years
JNTUH ID : 3106-240807-120016



AICTE ID : ---
E-Mail : bhavanibotta.1@gmail.com

Linked In : www.linkedin.com/in/dr-bhavani-botta-529b02290

YouTube Channel :-----

Thesis Title: “Construction of self-assembled nanostructures from semiconducting macrocyclic derived donor acceptor systems.”

Publications:

1. **Botta Bhavani**, Madoori Mrinalini, Jonnadula Venkata Suman Krishna, Pratyay Basak, Lingamallu Giribabu and Seelam Prasanthkumar, “*Conducting Nanofibers: Diagonal Scrolling of 2D Nanosheets into 1D Nanostructures via In Situ Self-Assembly*”, ACS Appl. Electron. Mater. Vol.3, No.1, (2021), 176–183. **(SCI Indexed Journal)**
DOI: <https://doi.org/10.1021/acsaelm.0c00656>
2. Narra Vamsi Krishna, **Botta Bhavani**, Madoori Mrinalini, KS Srivishnu, Lingamallu Giribabu, Seelam Prasanthkumar, “*Bulk electrolysis of Zn-phthalocyanine unveils self assembled nanospheres via anion binding*”, Current Applied Physics, Vol.20, No.6, (2020), 777-781. **(SCI Indexed Journal)**
DOI: <https://doi.org/10.1016/j.cap.2020.03.017>

3. **Botta Bhavani**, Nageshwarrao Chanda, Vishal Kotha, Govind Reddy, Pratyay Basak, Lingamallu Giribabu, Seelam Prasanthkumar “*1D alignment of Co (ii) metalated porphyrin–naphthalimide based self-assembled nanowires for photocatalytic hydrogen evolution.*” *Nanoscale*, Vol.14, (2022), 140-146. (**SCI Indexed Journal**)
DOI: <https://doi.org/10.1039/D1NR06961F>
4. Seelam Prasanthkumar, Yelukala Rama Krishna, Madarapu Naresh, Botta Bhavani “Crystalline 2d Nanoflakes from Self-Assembled Photo Driven Zn (Ii) Porphyrin–Dibenzothiophene: High Conductivity and Catalytic Activity for Hydrogen Production” *SSRN Electronic Journal*, 4163689,2022
DOI: <http://dx.doi.org/10.2139/ssrn.4163689>
5. Yelukala Ramakrishna, Madarapu Naresh, **Botta Bhavani**, Seelam Prasanthkumar. “Conducting 1D nanostructures from light-stimulated copper-metalated porphyrin–dibenzothiophene”. *Physical Chemistry Chemical Physics*, Vol. 25, No. 36, (2023) 24539-24546
DOI: <https://doi.org/10.1039/D3CP02990E>
6. Md Soif Ahmed, Chinmoy Biswas, **Botta Bhavani**, Seelam Prasanthkumar, Dipanjan Banerjee, Vipin Kumar, Prabhakar Chetti, Lingamallu Giribabu, Venugopal Rao Soma, Sai Santosh Kumar Raavi. “Metalated porphyrin-naphthalimide based donor-acceptor systems with long-lived triplet states and effective three-photon absorption”. *Journal of Photochemistry and Photobiology A: Chemistry*. Vol. 435, (2023) 114324.
DOI: <https://doi.org/10.1016/j.jphotochem.2022.114324>
7. Yelukula Ramakrishna, Madarapu Naresh, Madoori Mrinalini, Nagadatta Pravallika, Priti Kumari, **Botta Bhavani**, Lingamallu Giribabu, Seelam Prasanth Kumar. “Narcissistic self-sorting in Zn (ii) porphyrin derived semiconducting nanostructures”. *Nanoscale* Vol. 16, No. 19 (2024) 9392-9399.
DOI: <https://doi.org/10.1039/D4NR00991F>
8. Md Soif Ahmed, Sudhanshu Kumar Nayak, **Botta Bhavani**, Dipanjan Banerjee, Seelam Prasanthkumar, Lingamallu Giribabu, Venugopal Rao Soma, Sai Santosh Kumar Raavi “Hot carrier dynamics in metalated porphyrin–naphthalimide thin films” *Physical Chemistry Chemical Physics* Vol. 26, No. 21 (2024) 15681-15692.
DOI: <https://doi.org/10.1039/D4CP00359D>
9. Sudhanshu Kumar Nayak, Md Soif Ahmed, Rahul Murali, **Botta Bhavani**, Seelam Prasanthkumar, Lingamallu Giribabu, Sai Santosh Kumar Raavi. “All-optical modulation

and photonic diode based on spatial self-phase modulation in porphyrin–naphthalimide molecules” Journal of Materials Chemistry C. Vol. 12, No. 26 (2024) 9841-9852.

DOI: <https://doi.org/10.1039/D4TC00600C>

Book Chapter:

- 1) Seelam Prasanthkumar, Botta Bhavani, Madoori Mrinalini, Lingamallu Giribabu. “Design and construction of arlene diimide based self-assembled nanostructures” Academic Press, 81-104. **(SCI Indexed Journal)**

DOI: <https://doi.org/10.1016/B978-0-323-90984-6.00015-5>

Conference Journal:

1. Md Soif Ahmed, Chinmoy Biswas, Dipanjan Banerjee, **Botta Bhavani**, S Prasanthkumar, Lingamallu Giribabu, Venugopal Rao Soma, Sai Santosh Kumar Raavi. “*Ultrafast Photoexcited Molecular Dynamics of Metalated Porphyrin–Naphthalimide Based Donor-Acceptor Systems*”. CLEO: Applications and Technology. (2022), 15–20

(SCI Indexed Journal)

DOI: https://doi.org/10.1364/CLEO_AT.2022.JW3B.4

2. Md Soif Ahmed, Chinmoy Biswas, **Botta Bhavani**, Lingamallu Giribabu, Venugopal Rao Soma, and Sai Santosh Kumar Raavi. “Excited State Dynamics and Nonlinear Optical Responses of Metalated Porphyrin - Naphthalimide Based Donor-Acceptor Systems” Conference on Lasers and Electro-Optics/Pacific Rim 2022

DOI: https://doi.org/10.1364/CLEOPR.2022.P_CM2_08

Awards:

- **Prathibha Award -2016**