


Name of Faculty	Dr. Marepally Bhanu Chandra	
Designation	Associate Professor	
Nature of Job/Appointment	Regular	
Date of Joining	01-12-21	
E-mail & Phone	bhanuchandram_ece@cbit.ac.in ; mbhanu.home@gmail.com +91 7675824181	
Education Qualifications	Name of the Degree	Class
Ph.D.	Erasmus Joint Doctorate (Nano Technology) 1) University of Claude Bernard, Lyon, France 2) University of Messina, Italy	Awarded (Full Time - Erasmus Mundus)
PG	M. Tech (Nano Technology) Vellore Institute of Technology, Tamil Nadu, India.	Distinction (Gold Medallist)
UG	B. Tech (ECE) International Institute of Information Technology, IIIT-Hyderabad, Telangana, India.	First
Work Experience	12.5 Years	
Teaching / Research / Industry	6 / 3.5 / 3 Years	
Others	Scientific Consultant with STRL Bio systems	
Area of Specialization	Nano Technology, Solar Cells & Hydrogen Energy, Fuel Cells and Photonics. Bio-materials, Nano Materials, Graphene, CNTs, CO ₂ Capture, Waste-2-Energy	
Academic Identity	Scopus: 56940935700 Researcher: C-5755-2018 Orcid: 0000-0001-5836-856X https://scholar.google.co.in/citations?user=BJg3Y5kAAAAJ&hl=en	
Professional Memberships	IEEE (ID: 98529210) ; EAI ; Erasmus Mundus Association (EMA)	
Responsibilities held at Institution Level	i. Associate Dean, R&D, K L University, Hyderabad (KLH) ii. Erasmus Mundus Assembly, Program Representative, Italy iii. Doctoral Committee Member, Anna University	
Responsibilities held at Department Level	Research Progress Assessment Committee (RPAC) Chair & Member, KLH R&D Coordinator & Co-Committee, CBIT, Hyderabad	
Research Guidance	Ongoing - PhDs: 1	
Awards Received	<ul style="list-style-type: none"> i. <i>i2E Lab Start-Up Awardee, TSIC & Make Room India</i> – 2022. ii. <i>STRL BIO Systems – Consultancy Grant</i> – 2021. (3 Lakhs) iii. <i>DST SERB – Core Research Grant, India</i> – 2019. (56.3 Lakhs) iv. <i>Start-Up India competition, India, Awarded in Top-200</i> – 2019. v. <i>Erasmus Mundus Fellowship-Joint PhD on Sustainable Industrial Chemistry (SINCHEM)</i> – 2013. (75 Lakhs) vi. <i>High Distinction certification on Fundamentals of Nano-Electronics by NanoHub, 'Purdue University'</i> – 2012. vii. <i>CSIR NET'12 - JRF Fellowship (AIR-100) and GATE'13 (AIR-257)</i> – 2012. viii. <i>GOLD medallist and Honor's club member, M. Tech Nanotechnology. (2011-13)</i> ix. <i>Gate Fellowship from DST, India in Nano Tech. (2011-13)</i> x. <i>Mr. Susee Soundararajan Endowment Award and Meritorious scholarship at VIT University. (2011-13)</i> xi. <i>IIT-JEE – AIR 900 in Screening AIR 3100 in Mains; AIEEE - AIR 759 - 2005.</i> xii. <i>National Science Olympiad - Ranked 1st in Hyderabad and AIR 97th - 2004.</i> xiii. <i>Mathematics and Chemistry Olympiad - selected for state 2003.</i> 	

Courses Handled at Under Grad. / Post Grad. Level.	Electromagnetics and Transmission Lines and Applications, Principles and Applications of AI, Electrical Circuit Theory, Analog Electronics and Circuit Design, Electronics system design, Solar Photovoltaic Cells and Power arrays.	
No. of Papers Published (15)	International Journals – 10	International Conference – 05
Projects Carried out (5)	<p>i. <i>Principal Investigator: DST SERB – Core Research Grant – 56.3 Lakhs</i> Title: Development of Nanofoam based Plasmonic structures towards Photo-Electro-Chemical Water-Splitting and CO₂ reduction.</p> <p>ii. <i>Principal Investigator: STRL BIO Systems, Consultancy – 3 Lakhs</i> Title: Nano-UV based Air Filtration and Bio-Sterilization devices.</p> <p>iii. <i>Principal Investigator: MSME Innovative – Idea Hackathon 2.0 – 15 Lakhs</i> Title: Mycelium Fungi Spores based conversion of Cellulose waste to Graphene Nanomaterial for Hydrogen Fuel Generation.</p> <p>iv. <i>Principal Investigator: Tomato Grand Challenge – 1.5 Lakhs</i> Title: Hybrid Photo-Catalytic Drying for InstaCurry.</p> <p>v. <i>Co-Principal Investigator: MeitY - Chips to Startup (C2S) – 95.9 Lakhs</i> Title: The Design, Fabrication and Development Of Silicon Proven IP Core for High Resolution ADPLL</p>	
Patents (3)	<p>i. Modular Convertible Catalytic Cell, 202241066571, (Granted, 2024)</p> <p>ii. An apparatus for IOT based Healthcare monitoring, diagnosis and treatment using thin client communicating techniques, 202241007808 (Published, 2022).</p> <p>iii. Negative Ion Based Continuous Disinfection System, 202141019111 (Published, 2022).</p>	
Technology Transfer	----	
Invited Speaker (Reviewer)	3 rd SINCHEM Winter School, Bologna, Italy - 2016 (Speaker) <i>Topic: Production of Solar Fuels using CO₂</i>	
No. of Books/Chapter Published with details	<p>i. Book Chapter: Graphitic Carbon Nitrides based Dye Sensitized Solar Cells and Perovskite Solar Cells for Energy Harvesting, "Energy Harvesting Trends for Low Power Compact Electronic Devices", Springer, 2022 (Accepted).</p> <p>ii. Book Chapter: Production of Solar Fuels using CO₂, "Studies in Surface Science and Catalysis", Elsevier, 9780444641274, 2019.</p>	
Details of Short-Term Training Programs/Faculty Development Programs/Seminars/Workshops. Other Trainings (Attended and/or Organized).	<p>i. INUP-i2i Familiarization Workshop, IISc Bangalore, India – 2022.</p> <p>ii. Training program on "Prospects for Start-ups in Solar Energy Technologies", National Institute of Solar Energy (NISE), India – 2020.</p> <p>iii. National Seminar on "Bio Signal Processing for Health Care Applications", Dec. 17-19, 2019.</p> <p>iv. The AI & ML – FDP by NIT Warangal, KLEF, Hyderabad, India - 2018.</p> <p>v. The EPICS – Annual Symposium by Purdue Univ., Hyderabad, India - 2018.</p> <p>vi. The I SINCHEM Autumn Sch. Green phys. Chem., Montpellier, France - 2016.</p> <p>vii. The Ecole de Catalyse - ELITECAT, Lyon, France - 2015.</p> <p>viii. The Biotic CO₂ Workshop and SCOT Workshop, Lyon France - 2014.</p> <p>ix. The Latest Developments in Solar Photovoltaic Technology - Seminar, P.S.G. Institute of Advanced Studies, Coimbatore, India - 2013.</p>	

	Details of Journal Publications/ Conferences
i.	Gengan, S., Gnanamuthu, R.M., Sankaranarayanan, S., Venumbaka, M. R., Marepally, B.C. , Biroju, R.K., "Electrochemical modified Pt nanoflower @ rGO for non- enzymatic electrochemical sensing of glucose." Sensors and Actuators A: Physical , Vol. 353, pp. 114232, (2023). (IF – 4.3)
ii.	Biroju, R.K., Marepally B.C. , Malik, P., Dhara, S., Gengan, S., Maity, D., Narayanan T.N., & Giri, P.K., "Defective Graphene/Plasmonic Nanoparticle Hybrids for Surface-Enhanced Raman Scattering Sensors." ACS Omega , Vol. 8(4), pp. 4344-4356, (2023). (IF – 4.1)
iii.	Marepally, B.C. , Ampelli, C., Genovese, C., Sayah, R. Veyre, L., Dalverny, C., Thieuleux, C., Quadrelli, E.A., Perathoner, S., & Centi, G. "Supported metallic nanoparticles prepared by an organometallic route to boost the electrocatalytic conversion of CO ₂ ." Journal of CO₂ Utilization , Vol. 50, pp. 101613, (2021). (IF – 7.1 ; citations – 2)
iv.	Venumbaka, M. R., Akkala, N., Duraisamy, S., Saravanan, S., Poola, P. K., Rao, D. S., Shrivatsava, A. K., Marepally, B.C.* , "Performance of TiO ₂ , Cu-TiO ₂ , and N-TiO ₂ nanoparticles Sensitization with Natural Dyes for Dye Sensitized Solar Cells." Materials Today: Proceedings , Vol. 49, 2747-2751 (2022). (citations – 3)
v.	Venumbaka, M.R., Raina, J.P.(Late), Marepally, B.C.* , "Plasmonic E-field Enhancements and Coupling Effects of Metallic Structures using FDTD." Materials Today: Proceedings , Vol. 47, 1855-1861, (2021). (citations – 1)
vi.	Marepally, B.C. , Ampelli, C., Genovese, C., Tavella, F. Quadrelli, E.A., Perathoner, S., & Centi, G. "Area Optimization of CMOS Full Adder Design Using 3T XOR." WiSPNET, IEEE , 192-194, (2020). (citations – 16)
vii.	Marepally, B.C. , Ampelli, C., Genovese, C., Tavella, F. Quadrelli, E.A., Perathoner, S., & Centi, G. "Electrocatalytic reduction of CO ₂ over dendritic-type Cu- and Fe-based electrodes prepared by electrodeposition." Journal of CO₂ Utilization , Vol. 35, pp. 194-204, (2020). (IF – 7.1 ; citations – 22)
viii.	Saboo, T., Tavella, F., Ampelli, C., Perathoner, S., Genovese, C., Marepally, B.C. , Veyre, L., Quadrelli, E.A., & Centi, G. "Water splitting on 3D-type meso/macro porous structured photoanodes based on Ti mesh." Solar Energy Materials and Solar Cells , Vol. 178, pp. 98-105, (2018). (IF – 7.3 ; citations – 24)
ix.	Marepally, B.C. , Ampelli, C., Genovese, C., Saboo, T., Perathoner, S., Wisser, F.M., Veyre, L., Canivet, J., Quadrelli, E.A., & Centi, G. "Enhanced formation of >C 1 products in the electroreduction of CO ₂ by adding a carbon dioxide adsorption component to a gas diffusion layer type catalytic electrode." ChemSusChem , Vol. 10, pp. 4442-4446, (2017). (IF – 9.1 ; citations – 52)
x.	Marepally, B.C. , Ampelli, C., Genovese, C., Tavella, F., Veyre, L., Quadrelli, E.A., Perathoner, S., Centi, G. "Ultrafine Cu nanoparticles onto nanocarbon-based electrodes for the electrocatalytic reduction of CO ₂ ." Journal of CO₂ Utilization , Vol. 21, pp. 534-542, (2017). (IF – 7.1 ; citations – 46)
xii.	Ampelli, C., Genovese, C., Marepally, B. C. , Papanikolaou, G., Perathoner, S., & Centi, G. "Electrocatalytic conversion of CO ₂ to produce solar fuels in electrolyte or electrolyte-less configurations of PEC cells." Faraday Discussions , Vol. 183, pp. 125-145, (2015). (IF – 4.0 ; citations – 57)
xiii.	Genovese, C., Ampelli, C., Marepally, B.C. , Papanikolaou, G., Perathoner, S., Centi, G. "Electrocatalytic reduction of CO ₂ for the production of fuels: a comparison between liquid and gas phase conditions." Chemical Engineering Transactions , Vol. 43, pp. 2281-2286, (2015). (citations – 17)
xiv.	Sarkar, Paramita; Parameswaran, Chithra; Harish, C.; Chandra, M. Bhanu ; Grace, A. Nirmala. "Kinetics of silver nanoparticle growth using DMF as reductant – Effect of surfactants." Advanced Materials Research , Vol. 938, pp. 30-35, (2014). (citations – 8)
xv.	Saranya, M.; Garg, Srishti; Singh, Iksha; Ramachandran, R.; Santhosh, C.; Harish, C.; Vanchinathan, T. Mudali Chandra, M. Bhanu ; Grace, A. Nirmala. "Solvothermal Preparation of ZnO/Graphene Nanocomposites and photocatalytic properties." Nanoscience and Nanotechnology Letters , Vol. 5(3), pp. 349-354, (2013). (IF-1 ; cit.–26)