



Faculty Development Program



VIT[®]
Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)

Event Outcome

Title : Computational Chemistry and Sustainable Energy Technology

Date : 2025-08-18 - 2025-08-22

Time : 10:00 - 17:30

Venue : CO2 SEMINAR HALL (TENTATIVE)

- Faculty members will learn new theory and computational practices in chemistry
- Faculty members will learn updates in sustainable energy technologies
- Practical experience in computational topics and teaching techniques
- Hands on experience in computational topics
- Faculty members will learn updates in sustainable energy technologies

**Resource Person 1 - Details****Name :** M Palaniandavar**Designation :** Professor of Eminence and INSA Honorary Scientist, School of Chemistry**University/ Company :** Bharathidasan University, Tiruchirappalli**Address :** India, 620024.**Resource Person 2 - Details****Name :** Shanmugam R**Designation :** Assistant Professor Sr. Grade 2, CO2 Research and Green Technologies Centre**University/ Company :** VIT, Vellore**Address :** India, 632014.**Resource Person 3 - Details****Name :** Vijayaraghavan R**Designation :** Professor Higher Academic Grade, School of Advanced Sciences**University/ Company :** VIT, Vellore**Address :** India, 632014.**Resource Person 4 - Details****Name :** Velvizhi G**Designation :** Associate Professor Sr., CO2 Research and Green Technologies Centre**University/ Company :** VIT, Vellore**Address :** India, 632014.**Resource Person 5 - Details****Name :** Mudit Dixit**Designation :** Senior Scientist, CLRI**University/ Company :** CLRI, Chennai**Address :** India, 600020.**Resource Person 6 - Details****Name :** Gunasekar G H**Designation :** Scientist, Catalysis**University/ Company :** CSIR IICT, Hyderabad**Address :** India, 500007.**Resource Person 7 - Details****Name :** Rajendiran V**Designation :** Associate Professor, Department of Chemistry**University/ Company :** Central University of Tamil Nadu, Tiruvarur**Address :** India, 610101.**Resource Person 8 - Details****Name :** G Ranga Rao**Designation :** Professor, Department of Chemistry**University/ Company :** IIT MADRAS, Chennai**Address :** India, 600036.

**Resource Person 9 - Details****Name :** S M Senthil Kumar**Designation :** Principal Scientist, CLRI CECRI**University/ Company :** CLRI CECRI, Karaikudi**Address :** India, 630003.

Resource Person's Profile :

1. Profile of M Palaniandavar

Professor Dr. M. Palaniandavar has authored several publications (180) in widely read and high-impact journals like Inorganic Chemistry, Dalton Transactions, etc., which have received more than 10000 citations and have strong impact on the current research scenarios in India. The pioneering work initiated by him on metal-DNA interaction is now taken up by more than 50 researchers in India and many other countries.

2. Profile of Shanmugam R

Dr. R. Shanmugam is an Assistant Professor at VIT CO₂ Research and Green Technologies Centre. He holds a Ph.D. in Chemistry from Madurai Kamaraj University and completed postdoctoral research in South Korea and at IIT Madras. His expertise includes CO₂ activation, catalysis, H₂ production, and materials chemistry. He has received multiple awards and published extensively in high-impact journals.

3. Profile of Vijayaraghavan R

Dr. Vijayaraghavan R is a Professor-HAG in Chemistry at the School of Advanced Sciences at VIT. With a Ph.D. from IISc Bangalore, his expertise lies in materials chemistry, nanomaterials, and energy and biomedical research. He has international postdoctoral experience, patents, funded projects, and over 5000 citations. His work spans electrochemical synthesis, nanocomposites, and water remediation technologies.

4. Profile of Velvizhi G

Dr. G. Velvizhi is an Associate Professor in CO₂RGTC at VIT. With a Ph.D. from CSIR-IICT, her research focuses on CO₂ sequestration, bioenergy, and biorefinery processes. She has over 25 publications, several funded projects, a patent, and international collaborations. Her expertise spans bioelectrochemical systems, green energy, and ecological restoration.

5. Profile of Mudit Dixit

Dr. Mudit Dixit is a Senior Scientist at CSIR-CLRI with a Ph.D. in Theoretical and Computational Chemistry. His research focuses on computational catalysis, electrochemical energy storage, and enzyme catalysis. He has extensive postdoctoral experience, over 4000 citations, and an h-index of 25. He is skilled in DFT, ab-initio methods, and machine learning for materials discovery.

6. Profile of Gunasekar G H

Dr. G. H. Gunasekar is a Scientist at CSIR-IICT and Assistant Professor at AcSIR. He specializes in catalysis, CO₂ valorization, and green chemical processes. With 25 publications, 5 patents, and an h-index of 17, his research includes CO₂-to-formic acid conversion and sustainable fuel synthesis. He holds a Ph.D. from Kookmin University, Korea, and has postdoctoral and industrial Research experience.

7. Profile of Rajendiran V

Dr. Venugopal Rajendiran is an Associate Professor of Chemistry at the Central University of Tamil Nadu. With a PhD from Bharathidasan University and postdoctoral experience in Taiwan, he specializes in metal-based anticancer agents and nanomedicine. He has over 24 international publications, several awards, and patents. His work includes funded research, invited talks, and active roles in academic committees, with over 13 years of teaching and research experience.

8. Profile of G Ranga Rao

Dr. G. Ranga Rao is a Professor of Chemistry at IIT Madras, specializing in heterogeneous catalysis, nanomaterials, solar fuels, and energy storage. He earned his Ph.D. from IISc Bangalore and has held postdoctoral positions in Italy, Japan, France, and Germany. His research focuses on POM-based ionic liquids, photocatalysis, CO₂ reduction, and supercapacitors.

9. Profile of S M Senthil Kumar

Dr. S. M. Senthil Kumar is a Senior Principal Scientist and Professor at CSIR-CECRI, specializing in electrochemical energy conversion and storage. He holds a Ph.D. in Physical Chemistry and has completed postdoctoral research in the UK and Taiwan. He has published 115 papers, 5 book chapters, and holds 3 international patents. His expertise includes CO₂ reduction, electrocatalysis, and nano-materials for clean energy applications.

Fall 2025-26 sees various changes in teaching chemistry to incoming undergraduate students. VIT adopts new syllabi for different branches of B. Tech. To that end, we have decided to conduct an FDP (Aug. 18 to 22, 2025) to familiarize our faculty members on the new topics and sustainable energy technologies.

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Coordinator's: Prof. LOGESH MATHIVATHANAN 18856 - Associate Professor Grade 1 - SAS
Prof. SHANMUGAM R 18924 - Assistant Professor Sr. Grade 2 - CO2