Science and Technology in CO_2 Conversion

November 5 th to 23 rd 2016 at Anna University, Chennai

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Overview

Carbon Dioxide Capture and Utilization-(CCU) is a technology that will step away from the Linear Carbon Economy-(LCE) towards a Circular Carbon Economy-(CCE). CCU in a sense mimics nature, recycling carbon and building a Man-Made Carbon Cycle-(MMCC) that will complement the Natural Carbon Cycle-(NCC), elaborated in million years. MMCC may result more intensive than the more extensive NCC. The course will make the state of the art of our knowledge and expertise in CO2 conversion and will discuss potential routes to large volume CO2 for a correct CO2 utilization.

Modules	**Course Start Date :** 05 th November to 23 rd November 2016 • Co-ordination to metal centres and reactivity • Reaction with electron rich species • Sources of CO_2 and Separation technologies • Catalytic conversion: – thermal processes – Fixation of the entire molecule – Reduction to other molecules – electrochemical processes – photochemical and photoelectrochemical processes • Integration of Chemical Catalysis and Biotechnology for enhanced CO_2 conversion • Microalgae for enhanced CO_2 fixation • Technical aspects of CO_2 conversion and application on a large scale.
You Should Attend If…	The course is open to all Faculty/Researchers from Academia and Private Companies and for students (M.Sc/M.Tech/PhD) with adequate knowledge of chemistry, material science, and spectroscopy.
Fees	• Industry/Research Organizations : Rs. 8000/- • Academic Institutions : Rs. 2000/- The participants will have to take care of their travel, accommodation and food. For any queries regarding registration or other practical information, please contact the Coordinator/Local Coordinator. Number of participants for the course will be limited to fifty.

The Faculty

Prof. Michele Aresta, is the president of the Scientific Council of the Interuniversity Consortium on Chemical Reactivity and Catalysis, Italy; IMM chair at the Department of Chemical and Biomolecular Engineering-NUS, Singapore; David Parkin Professor at the University of Bath-UK; Honorary Chair at the Chemical Engineering Faculty, University of Tianjin, Tianjin, China. His Scientific interests are in the fields CO2 chemistry; CO2 as building block for chemicals and carbon source for fuels; Photocatalysis; Utilization of biomass; Conversion of polyols. He is an author of over 250 papers in peer reviewed high Impact Factor international journals and of 12 books on CO2 and Biomass valorization. He is the founder and Honorary Chair of the International Conference on Carbon Dioxide Utilization-ICCDU. Representative of Italy in the Boards of TEMPUS EU Programme, IEA-Paris GHG Programme, IPCC Panel on CO2 emission control. He received an award of the Italian Chemical Society for the "Pioneering work on Carbon Dioxide Activation (and utilization)" 1990 and award of the Tianjin University, Tianjin China, for Green Chemistry 2002. He got several recognitions from the American Chemical Society for the dissemination of "CO2 Utilization".

Prof. K. Palanivelu, is the director of Centre for Climate Change and Adaptation Research, Anna University, Chennai. His area of specialization is Environmental Analytical Chemistry and area of interest also includes Trace analysis of pollutants, Waste Treatment by chemical methods: Sorption process, Solidification/Stabilization, AOPs-Fenton's process, Electro-Chemical methods,Liquid Membranes and pervaporation; and Carbon dioxide Sequestration.

Course Co-ordinator

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https://www.annauniv.edu/EnvironmentCentre/Faculty/Kpalani.pdf

For Registration:

http://www.gian.iitkgp.ac.in/GREGN

and

http://www.annauniv.edu/gian/course.html