

III. Carbon Sequestration and Emerging Green Energy Technologies :

1. Prof. P. Somasundaran, Columbia University, New York, USA – *"Greener surfactants to stabilize heterogeneous systems at nanoscale for future alternate energies"*
2. Prof. Surendra Saxena, Florida International University, Miami, USA – *"The energy solution for an oxidized planet"*
3. Prof. Joydeep Dutta, Asian Institute of Technology, Bangkok, Thailand – *"ZnO Nanostructures: Environmental Remediation and Energy Generation"*
4. Prof. H. Surya Prakash Rao, Pondicherry University, Puducherry, India – *"Alternate energy sources for chemical reactions: Applications of microwave and ultrasound in organic chemistry"*
5. Prof. K. Jagadish, Center for Sustainable Development Bangalore , RV College of Engineering Bangalore, India – *"Synthesis of Green concepts for Low Energy and Low Emission Buildings"*
6. Dr. Pradeep K. Dadhich, Tata Energy Research Institute (TERI), New Delhi, India – *"CO2 mitigation scenarios in India"*

IV. Wind and Tidal Energy

1. Prof. Alexander Gorlov, Northeastern University, Boston, MA, USA – *"Helical turbines for wind and hydro power, including ocean and low head river applications"*
2. Dr. Luis Vega, University of Hawai'i Manoa, Honolulu, HI – *"Wave and Ocean Thermal Energy Projects at the Hawaii National Marine Renewable Energy Center"*

V. Gas Hydrates Exploitation

1. Dr. Nengyou Wu, Guangzhou Institute of Energy Conversion, Chinese Academy of Sciences, Guangzhou, P.R.China – *"Gas hydrate system and numerical investigation of gas production strategy in Shenhu Area, South China Sea"*

VI. Human Resource Development

1. Prof. G. L. Hornyak, Colorado School of Mines, Colorado, USA – *"Undergraduate and Graduate Education for Emerging Technologies"*

Potential Participants:

Suzlon Pvt. Ltd., Pune, India
Reva Electric Car Company, Bangalore, India
SPIC Foundation Chennai, India
Prof. Astrid Gräslund, Nobel Chemistry Committee, Stockholm University, Sweden

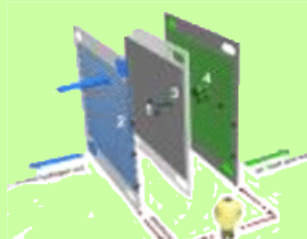


Venue:

Convention Centre
Pondicherry University
Puducherry - 605 014
India

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International Conference

Green Energy Technologies:
Challenges in Research and
Human Resource Development

Technologies de l'énergie verte :
les défis de la recherche et du
développement des ressources humaines

பசுமைப் புரட்சிக்கு வித்திடும் தொழில்
நுட்பங்கள்: மனித வள மேம்பாட்டின்
ஆராய்ச்சிகளுக்குச் சவால்கள்

March 23-25, 2010

Pondicherry University
Puducherry - 605 014
India

Organised by:



Title: Green Energy Technologies : Challenges in Research and Human Resource Development
Venue: Convention Centre, Pondicherry University
City: Puducherry 605014, India
Dates: March 23-25, 2010

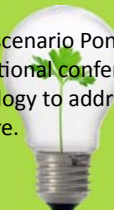


In recent years, India's energy consumption has been increasing at one of the fastest rates in the world due to population growth and economic development. Primary commercial energy demand has grown at the rate of 6% between 1981 and 2001 (Planning Commission 2002). India ranks fifth in the world in terms of primary energy consumption, accounting for about 3.5% of the world commercial energy demand in the year 2003.

Despite increasing dependency on commercial fuels, a sizeable quantum of energy requirements (40% of total energy requirement), especially in the rural household sector, is met by non-commercial energy sources, that included fuelwood, crop residue, and animal waste, apart from human and draught animal power.

Commercial primary energy consumption in India has grown by 700% in the last four decades. The current per capita commercial primary energy consumption in India is about 550 kgoe/ year. This implies that a four-fold increase in India's energy requirement needs to be envisaged over the next 25 years and India faces significant challenges to meet this.

In this scenario Pondicherry University is organizing an international conference in the area of Green Energy Technology to address and find ways of meeting challenges of future.



The fast emerging field of Green Technology encompasses a group of methods, materials or processes for environmentally benign techniques from generating energy to its minimal utilization for production of end materials along with utilization of waste products if generated. The goals of this highly interdisciplinary field include i) sustainability - meeting the needs of society in ways without damaging or depleting natural resources, ii) innovation - developing alternatives to technologies to those that have been demonstrated to damage health and environment iii) reducing waste and pollution by changing patterns of production and consumption.

The international work-shop will focus on alternative energy sources, green devices, green chemistry, nanobiotechnology and green management techniques. A team of scientists from industry and academics from India and abroad will address the students, researchers and scientists. Lectures will be followed by group discussions.

About Us:

Pondicherry University, located in the serene surroundings on Coromandel coast and 10 km north of Puducherry is the fastest growing central university in India. About 250 dedicated faculty, 3560 students and scholars make this University highly vibrant in academic pursuits. The University offers more than 40 post-graduate programs leading to M.Sc. M.A. M.B.A, M.Phil. or Ph.D. degrees. Faculties in the departments of Chemistry, Physics, Biotechnology, Biochemistry & Molecular Biology, Environment and Pollution Control and Biowaste Energy have interests in Green Energy Technology program.

Who will benefit :

Faculty and students in Universities / colleges / institutions of higher learning and industry personnel with interests in green technology will benefit from the workshop.

Publication of Papers:

Journal of Bionanoscience (JBNS): bio related
Journal of Nanoscience and Nanotechnology (JNN): others
Nature Materials and Materials Today will present reports on the workshop



Speakers

I. Solar Cell :

1. Prof. K. Kalyanasundaram and Prof. Michael Gratzel, Ecole Polytechnique Fédérale de Lausanne, Lausanne, Switzerland – *"Recent Advances in the Development of Dye Sensitized Solar Cells"*
2. Prof. V. Renugopalakrishnan, Childrens Hospital, Harvard Medical School, Boston, MA and Dr. C.N. Chinnasamy, Electron Energy Corporation, Lancaster, PA, USA – *"Towards Greener Bioinspired Solar Cell"*
3. Prof. Louis Cindrella, National Institute of Technology, Tiruchirapalli, India – *"Wide spectrum responsive Polyaniline based solid state solar cell"*
4. Dr. Chetan Singh Solanki, Dept. of Energy Science & Engineering, Indian Institute of Technology, Bombay, India – *"Si quantum dots for multi-junction solar cell applications"*
5. Prof. Withana Siripala, University of Kelaniya, Kelaniya, Sri Lanka – *"Low cost Solar Cells with Electrodeposited Cuprous Oxide"*
6. Prof. Eric Wei Guang Diao, National Chiao Tung University, Hsinchu, Taiwan – *"Porphyrin-based Solar Cell with High Efficiency"*

II. Fuel Cell, Micro Source of Power, Energy Storage :

1. Dr. Sowmya Viswanathan, Newton Wellesley Hospital, Newton, USA – *"Microsources of power for medical devices"*
2. Prof. Gerald F. Audette, York University, Toronto, Canada – *"Surface Constrained: Protein Nanotubes for Bionanowire Development"*
3. Prof. A M. Kannan, Arizona State University, Arizona, USA – *"Nanocatalytic Low Temperature Fuel Cells"*
4. Prof. Sanjeev Mukerjee, Northeastern University, Boston, USA – *"Meeting Future Challenge for Clean Energy Conversion and Storage via Charge Transfer at an Electrochemical Interface"*
5. Dr. P. Sridhar, Central Electrochemical Research Institute, CSIR Complex, Chennai, India – *"Design and Development of Proton Exchange Membrane Fuel Cell"*
6. Prof. Ashok Kumar Shukla, Indian Institute of Science, Bangalore, India – *"Storage Batteries for Energy Sustainability"*