One Day Open Seminar

On

Opportunities in post-graduate studies in Solar Energy at PDPU

19th March, 2020

Organized by

Department of Solar Energy

Solar Research & Development Center

Pandit Deendayal Petroleum University

Raisan, Gandhinagar, Gujarat-382007

About the University

Pandit Deendayal Petroleum University is located in Gandhinagar, which is the capital city of Gujarat and located 23 km north from a well-developed city called Ahmedabad with a population of 8 million. The city is famous for its remarkable cultural development and social life. Pandit Deendayal Petroleum University (PDPU) has been established as a Private University through the State Act enacted on 4th April, 2007. The University has been offered graded autonomy by University Grant Commission (UGC) and 'A' grade from NAAC accreditation with CGPA 3.9/4 .

About the Department

The Department of Solar Energy at Pandit Deendayal Petroleum University (PDPU) aims to impart education, training and services, perform cutting-edge research and development,enable discrete as well as interdisciplinary technologies, accelerate the deployment of renewable energy for a sustainable growth, foster a clean environment to enhance human standards of living and develop a skilled workforce and empower a young generation of leaders. The Department of Solar Energy at PDPU conducts teaching and research in the technologies needed to harness and supply solar energy efficiently and economically.

About Solar Research and Development Center

The Solar Research and Development Center (SRDC) at PDPU was established as a center of excellence by the government node in 2013 has been working on the following mandates:

- Develop and contribute over fundamental and applied research capabilities solar photovoltaic, solar fuel and energy storage
- Providing experimental and various computation facilities to PhD level projects at PDPU.
- Performance monitoring of the 1MW PV power plant at PDPU.
- Knowledge proliferation in Solar Energy through seminars, invited talks and conferences.
- Intellectual property creation

On the other hand, the center has built up a number of capabilities in following aspects:

- New thin film PV, silicon PV, Solar Hydrogen Generation, New Li-ion battery and Supercapacitive energy storage, Fuel cell Technologies, and E-mobilities.
- Skilled manpower provision to industries and organizations

As on date, the center has published more than 100 SCI journal papers in the field of solar energy materials, devices and systems. Apart from this one patent has been filed; one book and 2 book chapters have been published. SRDC has facilitated several PhD students registered in the university on various types of experimental synthesis and characterizations. Six out of eight doctoral alumni are working as post-doctoral fellows in several places abroad including USA, UK, Netherland, Rep. of Korea, and Switzerland. Faculty members working in the center has built up international collaboration with U.S.A., Europe, Japan, Korea etc.

Objectives of the Workshop

The global energy requirement to sustain a significant economic growth is increasing day by day. World' energy demand is expected to increase by over 50% by 2030 (a conservative estimate).

Current sources of energy, particularly the fossil sources, which comprises of approximately 80% of energy requirement, cannot support this demand given the environmental concern of carbon footprints. Therefore, enormous development is underway to over alternative sources of energy.

In this aspect, the energy sector globally provides significant research challenges in the continuous development of new materials, devices and energy systems. Fundamental research contributions are required for the development of cost-effective and sustainable energy systems. It requires fundamental breakthroughs in energy extraction, processing, conversion and utilization. Several innovative research solutions are required to shape the sustainable energy systems and to provide substantial energy security of the future.

So far, solar energy is one of the promising alternative energy sources that can meet new energy demands without degrading and affecting the environment. The Solar Energy, therefore, has a tremendous potential in terms of harvesting it with smart technologies and integrating with existing infrastructures. The M.Tech. (Energy Systems) programme has been designed by looking at the growing need of manpower by the acclaimed industries in Solar Energy sectors as well as the R&D which can make it more efficient and cost effective. Beside the above target, the energy storage also bears great importance where both mobile (such as hybrid electric vehicles) as well as ground based installations are concerned.

The workshop will cover following aspect on the study opportunities:

- Significance of the programme
- Brief activities of the department
- Curriculum and its features
- Career opportunities in Solar energy, energy storage and e-mobility (Electric Vehicles) sectors

Program Schedule

10:00 onwards	Registration
11:00–11:15 AM	Inauguration, Introduction and Program Overview
11:15 – 11:30 AM	Career prospect in solar energy and storage technologies by Prof. Indrajit Mukhopadhyay
11:30-11:50 AM	Energy Systems curriculum and its industrial relevance by Dr. Abhijit Ray
11:50 AM-12:10 PM	Fuel cell technology and its carrier prospects by Dr. Ranjan Kumar Pati
12:15-12:30 PM	Visit at SRDC the Center of Excellence in solar energy
12:30 – 1:30 PM	Lunch
1:30 – 03:00 PM	Visit to 1MW solar PV power plant
3:00 – 03:30 PM	High Tea
3:30-4:00 PM	Opportunities in E-mobilities by Dr. Pankaj Yadav
4:00 – 4:30 PM	Meeting with current students
4:30 PM	Valedictory and group photography

Who can participate

Prospective students in the final year or having obtained degrees in B.E/ B.Tech. in Electrical/ Mechanical/ Electrical &Electronics/ Instrumentation and Control Engineering; *OR* M.Sc. in Physics/ Applied Physics/ Electronics; professionals working in industry wanted to pursue higher studies.

Venue: Department of Solar Energy, PDPU
Raisan, Gandhinagar, Gujarat

Program Committee

Patron:
Prof. Sunil Khanna, Director, School of Technology, PDPU

Convener:
Dr. Abhijit Ray, HoD, Dept. of Solar Energy, PDPU

Supporting Staff:
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Registration Form

Interested person is required to register for attending this symposium
Registration Fees: NIL
No TA/DA will be provided to attend the symposium.

Registration online:
https://docs.google.com/forms/d/1IQ1PCzC7QMQin2ie77h7cLRxHKeQs9FUcUBsJgzBLrY/edit