INTERNATIONAL WINTER COURSE ON

ORGANIC SOLAR CELLS: PRINCIPLES AND PRACTICES

2-10 NOVEMBER 2016

Hosted by

LABORATORY FOR MOLECULAR PHOTONICS & ELECTRONICS (LAMP)
DEPARTMENT OF PHYSICS

राष्ट्रीय प्रौद्योगिकी संस्थान कालिकट

NATIONAL INSTITUTE OF TECHNOLOGY CALICUT

The ever increasing energy requirements of the country place hope on our huge solar radiation harvesting possibilities. This requires large trained manpower and also sophisticated R&D to be developed in the country on an urgent basis. It means getting trained in Solar Photovoltaic science and technology hold high career opportunities for the students and also large potential and scope for researchers and industry. Organic Solar Cells are poised to make Solar Cells cost effective and its large area printability and flexibility opens up unlimited application possibilities that the world hitherto only dreamed about. The course is designed as a first course for those intend to study and or research in the area of Solar Cells.

INTERNATIONAL COURSE FACULTY

The external faculty for this winter course on organic solar cells, Prof. (Dr.) Dr.Jean Chrisitian Bernede is currently professor emeritus at MOLTECH-Anjou, University of Nantes, Nantes France. He is a pioneer in the area of organic solar photovoltaics with a research career spanning more than 4 decades. He had long experience in fabricating organic solar cells, especially small molecule based OPVs and substantial expertise in thermal vapor deposition of small molecules for OPVs and their encapsulation, and devised many innovative techniques for low cost multiple coating techniques without braking vacuum. He had also worked in the area of transparent conducting layers with metal/insulator/metal geometry. Author of 338 publications in international journals with peer review, 4674 citations, h-index 37, four book chapters, and four patents, Prof Bernede had implemented Four European contracts, and 23 Bilateral Projects. Further he had advised 41 students for their PhD theses. In the University of Nantes, he had also officiated as Laboratory director, Member of the board of the University of Nantes, and as Head of Research . Also he served as an expert for project selection of National Research Agencies of France, South Africa, Israel, and Chile. Prof. Christian is currently a Member Board of Editors, Indian Journal of Pure & Applied Physics. He is also one of the founders and Editor in Chief of the international Journal, Technology Letters.

HOW TO APPLY

Applicants have to first register in the GIAN portal at the site http://www.gian.iitkgp.ac.in/GREGN/register.

Using the user id and the password thus generated through this registration you can proceed for Course Registration in the portal. Select this corse from the list of courses available in the portal and follow the instructions to register for it. You also have to email your details to the course coordinator in the mail id opv@nitc.ac.in. You will be intimated about selection by e mail by the course coordinator.

Once selected you have to pay the course fee online by Net Transfer or by Credit/ Debit Card to the following account:

Account Name: Director, NIT Calicut,
Account No: 35909407299 Bank Name: SBI. CREC Branch
Branch Code: 002207,
IFSC Code: SBIN0002207

Selected candidates will be informed before Oct ober 5, 2016. Course will start on Nov. 2, 2016

ABOUT THE LAMP

Laboratory for Molecular Photonics & Electronics (LAMP) at NIT Calicut is one of the few such labs in our country with state of the art experimental facilities for the fabrication of organic Electronic devices and their design simulation.

COURSE MODULES

Module A: Fundamentals Solar Photovoltaics: Solar PV fundamentals, Materials and methods in Silicon PV, Solar cell characterization Lab, Organic Semiconductors, Materials, characteristics, and principles, Charge transport. Tutorial - Problem solving session with examples.

Module B: Conducting polymers- fundamental aspects and parameters, Transparent conductors, Tutorials- Lab sessions on Fabrication and encapsulation of organic solar cells. Various coating techniques- PVD, Plasma, Spin coating, Laser ablation, Sputtering. Testing and evaluation, and analysis of a Solar PV module in the lab., problem solving.

There will be Laboratory, tutorial, and problem solving sessions in each module so that the learners will be exposed to fabrication, and characterisation of organic solar cells.

DATES TO REMEMBER

Online registrations: October 1, 2016
Intimation of selection: October 5
Course fee remittance: October 7

COURSE FEE

Participants from abroad: USD 500
Faculty members from academic institutions
(Internal and external): Rs. 1000
Students :Rs 500
All others: Rs. 2000

The above fee includes, computer use for tutorials and assignments, laboratory equipment usage, and free internet facility.

The participants will be provided accommodation on payment basis (subject to availability and on first come first serve basis) in the institute hostel and guest house. Details about hotel booking facility is available on contact.

WHO CAN PARTICIPATE

Students (UG/PG/PhD) and faculty members from all academic institutions

Scientists/Technologists/Engineers, and others form industry, private/government services, NGOs, research institutions.

ABOUT NIT - CALICUT

Set in a picturesque landscape at the foothills of the Western Ghats, the green campus of NITC is located about 22 kilometers north - east of Calicut City. It stretches over a length of about 1.5 Kilometers along the Calicut-Mukkam road. The nearest airport is Calicut, which is approximately 45 km away from the campus. The fully residential NITC campus houses academic buildings, hostels, residences and other amenities among its infrastructure. The Institute is presently offering 10 UG programs with a total intake of 1030 and 25 PG programs including MBA with a total intake of 495. The Doctoral level research has remarkably increased in the recent times, and there has also been a substantial increase in sponsored research and consultancy

HOST FACULTY & COURSE CO-ORDINATOR

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