

International Workshop on Nanomaterials for Energy Conversion, Emerging Photovoltaic and Optoelectronic Technologies

(NEEPO-21)

Venue: Virtual

September 21 – 22, 2021

Organized by: National Centre for Physics, Islamabad



Introduction

Renewable and cost-effective energy supply is one of the biggest challenges impacting global environment and human life. Likewise, optoelectronic devices have significant contribution for energy efficiency. With the innovation in the growth techniques, and the emergence of novel nanomaterials, the solar energy conversion and electronic technologies are entering into a new regime offering the potential of solution processability and flexibility for next-generation smart technologies and IoT. The next generation hybrid solar cells based on nanomaterials and technology are evolving as strong candidates for the cost-effective solutions for smart applications. However, there are several accompanying challenges *vis-a-vis* the scale-up production and commercialization of these technologies.

National Centre for Physics (NCP) regularly organizes the “International Workshop on Nanomaterials for Energy Conversion, Emerging Photovoltaic and Optoelectronic Technologies (NEEPO)”. NEEPO-21 is the fourth in this series and owing to COVID-19, this will be a ‘**Virtual Workshop**’ to be held using ZOOM platform. NEEPO-21 will focus on (1) the basics, (2) the recent developments in the field and challenges associated with the nanomaterials based solar energy conversion and (3) next generation photovoltaic and optoelectronic devices. One session of the workshop will be exclusively organized for young researchers. We also offer a platform for an online poster session during the workshop. As per traditions, the workshop aims to provide the local research students, scientists and engineers a platform to interact with world renowned scientists in the field.

Topics of Workshop

- Recent developments of semiconductor devices for energy conversion
- Third generation solar cells, developments in the field of the perovskite solar cells and optoelectronics
- Nanostructured, 1D, 2D, and 3D materials for energy application
- Water splitting and hydrogen generation using nano-architectures
- Emerging concepts in photovoltaics and optoelectronics
- Printed electronic technology for flexible/wearable electronic and optoelectronic devices

Participation

Research students, post-doctoral researchers, faculty members and scientists/engineers are encouraged to apply. A limited number of slots are available in the oral presentation session for young researchers.

Maximum benefit will be drawn by applicants having prior basic background knowledge of the field; young researchers and research students working in the field will be facilitated on priority.

Registration

There is **no fee for workshop registration**. However, only registered participants will be allowed to attend the workshop. **Online registration** can be access at <http://www.ncp.edu.pk/neepo-2021.php>. Candidates will be shortlisted based on the relevance of their research area to NEEPO-21, and the availability of IT resources. Shortlisted participants will be intimated 1 week before the event.

For Further Information

Activity Secretariat

Collaborations & Academic Activities Department (CAAD)

National Centre for Physics, Quaid-I-Azam University Campus Shahdra Valley Road, Islamabad, Pakistan

Tel: 051-2077363, Fax: 051-2077342, caad@ncp.edu.pk

Advisors

- Dr. Hafeez Hoorani (NCP)
- Dr. Sara Qaisar (NCP)

Speakers

- Mostly international experts of field, to be announced

Technical and Management Committee

- Mr. Rizwan Ali Khan
- Dr. Muhammad Arshad
- Dr. Muhammad Irfan
- Dr. Naila Jabeen
- Dr. Shahzad Abubakr
- Mr. Naveed Imran
- Mr. Muhammad Arshad

Important Dates

Submission of Abstract for Oral/ Poster presentation: **September 5, 2021**

Confirmation of Abstract Oral/Poster: **September 09, 2021**

Video talk/Poster submission: **September 14, 2021**

General Participants Registration Deadline: **September 12, 2021**

Workshop Secretary

Dr. Muhammad Sultan

Email: sultan@ncp.edu.pk

Tel: 051-2077300 Ext. 408, 0345-5893398

Nanoscience and Technology Department, National Centre for Physics