

# International Conference on Advances in Nanomaterials and Devices for Energy and Environment (CANDEE) 19-20 December, 2023

CALL FOR ABSTRACTS

A Joint event of IIITM Gwalior (India) and ENEA (ITALY)

## CANDEE-2023 : Concept

CANDEE--2023 is a joint event of Indian Institute of Information Technology and Management Gwalior and Italian National Agency for New Technologies, Energy and Sustainable Economic Development, being organized with an aim to bring together the scientific and technology community, to share their experience on advancements in the materials synthesis and characterization techniques, its applications in different modern industries, specifically for renewable Energy and clean Environment. Eminent scientists in the respective fields will share their experience and knowledge with the young participants, which in turn are expected to promote research activities on the advanced materials. Owing to the advancements in software and hardware technologies, sophisticated tools have been developed to synthesize, characterize and model smart materials at the length scale with controlled behavior. This ability is transformational for the discovery process and as a result confers a significant competitive advantage. The most spectacular increase in the capability has been demonstrated in high performance computing. This rate of improvement has shown no signs of abating, which has enabled the development of computer simulations and models of unprecedented fidelity. The overwhelming response of participants in the series of workshops and conferences organized by our group from 2009 to 2019 has motivated us to organize this conference on Nanomaterials and Devices for Energy and Environment. The conference will be of great importance in the sense that it will be attended by young chemists, physicists, biologists and engineers making it truly interdisciplinary in nature so as to not only know about the new methods but also to share their research findings on preparation, analysis of materials and devices at nano scale and their possible application in the medicine, automotive, chemical, electronics, electrical engineering and other industries. It is also aimed to sensitize the young participants in the current areas of materials science so as to make them instrumental in pursuing quality research. Since 2008, the Advanced Materials and Nano-electronics Research Group of CNT Lab, of Department of engineering Sciences at ABV-IIITM Gwalior, is actively contributing towards fundamental as well as application specific material and device modeling research. This conference is a celebration of 15 successful years of Advanced Materials Research group at CNT Lab and 25 Years of the establishment of ABV-IIITM, Gwalior.

## SCOPE

The participants will get an opportunity to interact with the scientists from India and abroad on recent trends in material synthesis and characterization tools and techniques for Energy and Environment sectors specifically. The research areas are kept open for the scientific community to promote the interdisciplinary research and development in materials science and technology. CANDEE has planned a Poster session specifically for the young scholars/students with a cash award. The original work in the following areas but not restricted to, will be recommended for this session, divided in four tracks.

### Nanomaterial for Electronic / Magnetic / Optic Applications

Low-dimensional carbon nanostructures and their applications; Fullerenes; Carbon-Nanotubes; Nanodiamonds; Graphene its derivatives and analogues; Magnetic, Metal and Oxidic nanomaterials; Multiferroic and Spintronic Materials; Quantum dots and their applications; Alloys; Nanophotonics; Fluorescent nanomaterials; Memory media; Optical Technologies; LED Technologies.

### Energy / Environmental / Waste

Applications in catalysis; Photocatalysis; Nanocoatings and paints; Thin films; Chemical, Textile and Consumer Industries; Nanofiltration, Water treatment and Environmental Applications; Nanotribology; Energy Harvesting Materials; Energy Devices: Solar cells. Lithium batteries, Supercapacitors, Triboelectric Generators, Thermoelectric Materials; Waste Management, Hydrogen Energy generation and storage,

### Bio-Nano:Nanomaterials in Medicine/Health

Antibacterial Materials and Products; Biosensors and Biocatalysers; Biochemical Applications; Biogenic Nanomaterials; Targeted drug Transport; Tissue Engineering; Molecular Analysis, Intelligent Biomaterials, Nanoimplants; Nanomachines; Nanorobotics.

### Preparation and Characterization of Nanomaterials

Managed functionalization of Nanomaterials Self-assembly; Hybrid multidimensional systems; Cluster Assembled Materials; New methods and approaches to characterization of Nanomaterials; Progress in applications of Electron Microscopy, in Scanning Tunneling Microscopy and in Microscopy of Atomic powers, Study of Chemical reactions; Imaging of Molecules; Nanomechanics; Methods of Nano-manipulation; Advanced spectroscopic and synchrotron methods of study of nanomaterials

### Nano-electronics :Nanodevices and Applications

Memory Devices: NEMS, MEMS; CNTFET; GrapheneFET; NanowireFET; Thin Films and Nanocomposites; Sensors; Actuators; Resonators; Electron and Nuclear spin devices; Smart and Intelligent Materials.

## Special Sessions

Hydrogen Energy: Generation and Storage | Solid Waste Management: | others will be announced soon.

## Submission of Abstracts/papers and Publication:

Those intending to participate and present the work in **CANDEE-2023** should submit the extended abstract as per the prescribed format through conference online submission process at <https://profanurag.in/candee23> latest by 30<sup>th</sup> October, 2023. The abstract submission can also be made via conference email [candee.iitmg@gmail.com](mailto:candee.iitmg@gmail.com). The presented papers, only after a blind peer review, will be recommended for publication in scientific proceeding/Journals (SCI and SCOPUS).

## Important Deadline:

Submission of Extended Abstract: <del>20<sup>th</sup> October 2023</del>	Acceptance notification: <del>30<sup>th</sup> October 2023</del>
Extended Deadline <b>30 October 2023</b>	Acceptance Notification <b>05 November 2023</b>

## Registration and Accommodation

Category	Upto 10 Nov, 2023		After 10 Nov, 2023	
	Indian/ SouthAsia	Other Countries	Indian/ SouthAsia	Other Countries
Industry	INR 10000	USD 350	INR 15000	USD 450
Faculty/Scientist	INR 5500	USD 225	INR 6500	USD 275
Research Scholar	INR 3500	USD 175	INR 4500	USD 225
UG/PG students	INR 2500	USD 125	INR 3500	USD 150
Accompanying Person	INR 2500	USD 125	INR 3500	USD 150

Registration fee will facilitate you with entry to scientific sessions, conference kit, Breakfast, lunch, Tea/drinks, Dinner and one classical musical evening. Prescribed fee is to be paid online at <https://profanurag.in/candee23>.

**Registration Fee Discount: 20% for a group participation of 4-6 candidates from same institution (Indian Institutions).**

**Registration Fee Discount: 10% for a group participation of 2-4 candidates from same institution (Overseas Institutions).**

## Accommodation

Sharing accommodation may be provided on request to the participants on a payment of subsidized rate for Indian students. Guest house and Hotel accommodation can also be arranged on request on discounted price (only for the early bird registration) to foreign nationals. For details visit <https://profanurag.in/candee23>

## ABV-IIITM

Atal Bihari Vajpayee - Indian Institute of Information Technology & Management (ABV-IIITM), a Deemed University, is an apex IT and Management Institute, established by the ministry of HRD, Government of India in 1998 situated at Gwalior - Agra Road. ABV-IIITM Gwalior is the foremost institution providing Technical and Managerial Education in the areas of Information Technology and Management, in India. Besides the IT and Management, the institute has given full freedom to other disciplines like Applied sciences and humanities and progressing on the concept of interdisciplinary R & D and developing the internationally competent and skilled manpower for the society.

## Department of Engineering Science

The Department of Applied Sciences has recently been established in July 2022. However, the Applied Science faculties are teaching UG and PG courses and doing research in the institute since 2006 with a clear motive to equip the engineering students with the fundamental and applied concepts of Physics and Mathematics, useful for the various disciplines of CS, IT and Electronics. The department offers PhD programs in area of Condensed Matter Physics, Computational Nanoscience and Technology, Nanoelectronics, Quantum Computing, Applied Physics, Solid state physics and Industrial Mathematics: Mathematical Modelling and Simulation in Environmental, EMS, Management systems: Financial Mathematics, Fuzzy logic applications, Nonlinear Dynamical Systems, Computational Biology, Control Theory, Fuzzy Mathematics, Soft Computing, Fuzzy Decision Making etc. since 2007 to produce high quality researchers.

## GWALIOR



Gwalior City is a District in Madhya Pradesh State near Agra. Gwalior City was the Capital of the princely State of Gwalior until 1948 and the summer Capital of Madhya Bharat State from 1948 to 1956. When Madhya Bharat became part of Madhya Pradesh, it became separate District. Gwalior's history is traced back to a legend in 8th century AD when a chief captain known as Suraj Sen was struck by a deadly disease and cured by a hermit-saint Gwalipa. As a gratitude for that incidence, he founded this city by his name. The new city of Gwalior became existence over the centuries. The cradle of great dynasties ruled the city Gwalior. With different Dynasty, the city gained a new dimension from the warrior kings, poets, musicians, and saints who contributed to making it renowned throughout the country. The city is also the setting for the memorials of freedom fighters such as Taty Tope and the indomitable Rani of Jhansi. Today the old settings stand side by side with the trappings of modernity.

## Expected Sponsors

SERB, DRDO, CSIR, MOEFCC etc.

## Accommodation and Local Travel

In Campus Guest Houses and Hotels (Details will be Announced Soon)

## Climate

Generally weather found pleasant during this time, where temperature ranges from 14<sup>o</sup>C to 21<sup>o</sup>C.

## Contact Person:

**Prof. Anurag Srivastava (Convener, CANDEE-2023)**

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