



Chief Guest



Prof. (Dr.) Ashutosh Sharma
Secretary, DST,
Government of India

VCAN 2020

Conference Date:
17 - 19 June 2020



Special lectures by



Dr. Andre Konstantin Geim
University of Manchester, UK
Nobel laureate in Physics 2010



Dr. Prashant V. Kamat
University of Notre Dame, USA



Dr. Yury Gogotsi
Drexel University, USA

International Virtual Conference on Advanced Nanomaterials & Applications - With an Emphasis on Flexible Electronic Devices

organized by
Centre for Nanotechnology Research (CNR)
Vellore Institute of Technology, Vellore, India



ABOUT VIT

Vellore Institute of Technology (VIT) was established in 1984 as Vellore Engineering College by the Honourable Chancellor **Dr. G. Viswanathan** with the aim of providing quality higher education on par with international standards. VIT is recently recognized as Institution of Eminence by Government of India. Having fully committed to its Vision - "Transforming life through excellence in education and research", VIT is focussing on quality teaching-learning process, research and innovation, which would make the institute distinct from others. Currently VIT has 4 campuses – in Vellore, Chennai, Amaravati (AP) and Bhopal (MP). The National Institutional Ranking Framework (NIRF) of the MHRD, Government of India, has identified VIT as the best Private Engineering Institution in India for 4 years in a row (NIRF-2016 2017, 2018 and 2019 rankings). VIT is Ranked No.1 Private Institution for Innovation (ARIIA 2019 award) by Govt. of India. VIT is the first and only in India to get 4 star rating from QS, the world universities ranking organization. VIT achieved 18th position among the engineering institutions in India by NIRF 2019, Govt. of India. In addition to this, the consortium of industries, FICCI conferred VIT with the "Excellence in Faculty award. VIT has consistently received "A" grade in the past three cycles of NAAC accreditation. In addition, VIT also has received the coveted ABET accreditation, which is widely recognized throughout the world. VIT has already been ranked by the major International rankings such as QS World University Ranking, QS BRICS University Ranking, QS Asia University Ranking, THE World University Ranking, THE Asia University Ranking, THE Emerging Economies University Ranking and US News Ranking. VIT is the first Institution in India to get 4 star rating by QS. VIT has A Grade accreditation from NAAC, Government of India. Further, 14 of its Engineering programmes have ABET- (USA) accreditation.

ABOUT CNR

The Centre for Nanotechnology Research (CNR) at VIT, Vellore was established in June 2008 and its faculties are actively engaged in teaching courses for the "**M.Tech. Nanotechnology**" programme and undertaking research projects for **M.Tech.** and **Ph.D.** Scholars. VIT provided a generous support in setting up state-of-art Nanomaterial characterization and synthesis facilities for the Nanotechnology Lab. The M.Tech. Nanotechnology programme also received financial support from the Department of Science and Technology, Government of India, New Delhi towards further enhancing infrastructure facilities of the Nanotechnology Laboratory and offering student fellowships and contingency grant for their research projects during the course. The centre has received funds from various funding agencies like **DST, DRDO, IEEE** etc. Our research is focused on various niche areas of Nanoscience and Nanotechnology in line with the global needs and to cater the same, the centre is equipped with a team of inter-disciplinary faculty members. The centre has published more than 200 research articles in International Journals. The Centre for Nanotechnology Research is mainly focussed on Flexible Electronic Devices for Energy, Sensors and Health care. The centre has recently extended its facilities for external researchers on a consultancy basis.

For further details: <http://www.vit.ac.in/research/centers/nanotech>

ABOUT THE VIRTUAL CONFERENCE

"International Virtual Conference on Advanced Nanomaterials and Applications" - VCAN 2020 with a special emphasis on Flexible Electronic Devices aims to bring together Indian and International communities (students, scientists, engineers and stakeholders from academia, government laboratories, industry and other organisations) working in the field of nanoscale science and technology to discuss new and exciting advances in the field. Amidst the current pandemic situation, this virtual event will bridge researchers across the globe to a single platform to exchange scientific ideas and knowledge. The conference will also provide an ideal environment to develop new collaborations and opportunities to meet the experts working on various areas of this field. The conference covers broad theme to accommodate wide range of interests and to facilitate interdisciplinary collaboration/interaction in both academia and industry.

The theme covers electronics, photonics, energy, environment, healthcare, sensors, synthesis and characterization but it is not limited to them.

Speakers



Dr. Aaron Marshall

University of Canterbury, New Zealand

Title : Electrocatalytic conversion of CO₂ to fuels



Dr. Ajay Kumar Mishra

University of South Africa

Title : Smart composite materials for environmental sustainability



Dr. Andre Konstantin Geim - Nobel laureate in Physics 2010

University of Manchester, UK

Title : 2D Empty Space and its Unusual Properties



Dr. Andrew Wee

NUS, Singapore

Title : Ferromagnetic 2D Materials



Dr. Arunachala Mada Kannan

Arizona State University, USA

Title : Solid Electrolyte for Li-Ion Batteries



Dr. Bablu Mukherjee

National Institute of Materials Science, Tsukuba, Ibaraki, Japan

Title : 2D Materials and VanderWaals Heterostructure based Optoelectronic Devices



Dr. Dipankar Das Sarma

Indian Institute of Science, India

Title : Nature and Origin of the metastable state in chemically exfoliated few-layer MoS₂



Mr. Ershad Abubacker

Assistant Manager, Editorial Development, Royal Society of Chemistry, India

Title : Royal Society of Chemistry: Supporting Chemical Sciences in India



Dr. Genene Tessema Mola

University of KwaZulu-Natal, South Africa.

Title : Flexible electronic device for energy



Dr. Gomaa A.M. Ali

Al-Azhar University, Assiut, Egypt

Title : Nanomaterials for Energy Storage (Supercapacitor) Applications



Dr. Hitesh Vora

Okhalama University, USA

Title : 3D Printed PLA-Stainless Steel Polymeric Composite for Biomedical Applications: A Novel Cost-effective Design of Experiments Methodologies



Dr. Hoe Tan

Australian National University, Australia

Title : Semiconductor Nanostructures for Optoelectronics and Energy Applications

Speakers



Dr. Jia Deng

Binghamton University – State University of New York, USA

Title : Vibration and Heat Assisted Atomic Force Microscope Based Nanomachining



Dr. Jiefang Zhu

Uppsala University, Sweden

Title : Operando XRD used in the study of metal-oxygen batteries



Dr. Mangalaraja Ramalinga Viswanathan

University of Concepcion, Chile

Title : Nanostructured Materials: Potential Applications to Energy and Environment



Dr. Manoj Gupta

NUS, Singapore

Title : Magnesium Based Nanocomposites in biomedical applications



Dr. Muthu Packirisamy

Concordia University, Canada

Title : Nanomaterials for Nanophotonics and Plasmonics



Dr. Nanasahab D. Thorat

Wroclaw University of Science and Technology, Poland

Title : Magnetic and Light active drug delivery and cancer therapeutics using a functional hybrid nanoplatfoms



Dr. Narendra Kurra

Drexel University, USA

Title : Pseudocapacitive MXenes enable high rate energy storage.



Dr. Paulo Cesar Piquini

Federal University of Santa Maria, Brazil

Title : Photophysical and photochemical properties of selected tetrapyrrolic macrocycles.



Dr. Prashant Sonar

Queensland University of Technology, Australia

Title : Organic Transistors: Conjugated Material Design and Evaluation



Dr. Prashant V. Kamat

University of Notre Dame, USA

Title : Semiconductor Nanostructures for Next Generation



Dr. Sagar M. Jain

Cranfield University, UK

Title : The emergence and future of perovskite solar cells, Interface engineering and non-toxic aspect



Dr. Samrat S. Kumar

Country Representative, Euraxess India

Title : Research and Funding Opportunities under the EU's Horizon 2020 Programme

Speakers

**Dr. S. Angappane**

Centre for Nano and Soft Matter Sciences(CeNS), Bangalore, India
Title : Ultrafast Humidity Sensor made of TiO_2 Nanorods

**Dr. Sebastian Lourdudoss**

KTH-Royal Institute of Technology, Sweden
Title : Advanced Photonic Devices Enabled by Hydride Vapour Phase Epitaxy

**Dr. Siddhartha Panda**

IIT Kanpur, India
Title : Enhanced Performance in Ion Selective Field Effect Transistors

**Dr. Sow Chorng-Haur**

NUS, Singapore
Title : The Little Laser That Could: Focused Laser Beam as a useful Tool for Nanomaterials Research

**Dr. Srisaran Venkatachalam**

University of Lille, France
Title : Towards bridging the Terahertz Gap using Carbon-based Materials

**Dr. Sudhagar Pitchaimuthu**

College of Engineering Swansea University, UK
Title : Solar-to-Hydrogen- Opportunities and Challenges

**Dr. Sujit Kumar Barik**

AMS Sensors Asia Pte Ltd, Singapore.
Title : Flexible Electronics of 2D materials

**Dr. Suryanarayana J**

IIT Hyderabad, India
Title : Nano-ionics based RRAM devices - remote control and bio-sensing

**Dr. Vedran Jovic**

GNS Science, New Zealand
Title : Dirac nodal lines and flat-band surface state in the functional oxide RuO_2

**Dr. Vivian Fang**

GNS Science, New Zealand
Title : 'Dry' plasma syntheses of metal oxide nanostructures and their applications

**Dr. Weiping Wu**

City, University of London, UK
Title : Printable functional materials for electronics, photonics and energy applications

**Dr. Xavier Crispin**

Linköping University, Sweden
Title : Thermoelectric polymers based sensors

**Dr. Yury Gogotsi**

Drexel University, USA
Title : MXenes for wearable technology

CALL FOR PAPERS

Interested participants are requested to submit an extended abstract (2 pages) including manuscript title, author(s), affiliation(s), and contact details with a clear indication of the research work, methodology, major results (one figure), and conclusion. The selected abstracts will be allotted for oral presentations based on the availability of the slots.

VCAN 2020 Publications

VCAN 2020 encourages original and unpublished work. Selected extended abstracts within the scope of the journals will be considered for publication after the regular peer review process as per the journal's policy. The timely submitted full papers to VCAN 2020 will be evaluated by the committee for its **originality and subjected to the regular peer-review process by the assigned journals.**

IET Nanobiotechnology (TR IF:2.059)

<https://digital-library.theiet.org/content/journals/iet-nbt>

Materials Today: Proceedings

<https://www.journals.elsevier.com/materials-today-proceedings>

Only selected extended abstracts considered for publications will be informed to the participants by the 30th June 2020. The selected authors should submit their full papers on or before the 1st of August 2020.

All correspondence should be sent to vcancnr2020@gmail.com



Highlights of VCAN 2020

- 🦋 Special lecture by Nobel Laureate
- 🦋 Speakers from 15 countries
- 🦋 RSC "Nanoscale Advances" 5 Oral Presentation Awards
- 🦋 ACS 10 Oral Presentation Awards from ACS Omega, ACS Energy Letters, Nano Letters, ACS Applied Energy Materials, ACS Applied Nano Materials and ACS Applied Electronic Materials
- 🦋 CNR-VIT Young Researcher Awards
- 🦋 A special Lecture from RSC on 'Royal Society of Chemistry: Supporting Chemical Sciences in India'
- 🦋 A special session on Research and Funding Opportunities under the EU's Horizon 2020 Programme
- 🦋 Oral Presentation opportunities
- 🦋 Publications in Scopus Indexed Journals
- 🦋 Free Registration

Presentation Awards



ACS Best Presentation Awards

Ten best presentations within the scope of following ACS journals will be selected and awarded an ACS journal certificate and one year complimentary ACS membership.

ACS Omega (Five)

ACS Energy Letters

Nano Letters

ACS Applied Energy Materials

ACS Applied Nano Materials

ACS Applied Electronic Materials



Nanoscale Advances



RSC Nanoscale Advances Best Presentation Awards

Five best presentations within the scope of RSC Nanoscale Advances will be selected and awarded an e-certificate from The Royal Society of Chemistry "Nanoscale Advances" journal and a book voucher worth Rs 5000 for each winner.

VIT-CNR Young Researcher Awards

Five best presentations within the scope of the conference will be selected and awarded VIT-CNR Young Researcher certificate.

CHIEF PATRON
Dr. G. Viswanathan
Chancellor

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CONFERENCE CHAIR

Prof. (Dr.) A. Nirmala Grace
Director

Centre for Nanotechnology Research (CNR) VIT, Vellore

CONVENERS

Prof. (Dr). Raja Sellappan
Prof. (Dr). C. Krishnamoorthi
Prof. (Dr). P. Sathyanarayanan

Prof. (Dr). R. Vimala
Prof. (Dr). Niroj Kumar Sahu
Prof. (Dr). Ashutosh Mahajan

Prof. George Jacob
Prof. (Dr). Mangaiyarkarasi

Registration Details

Who Can Attend: UG/PG students, Ph.D/Postdoc and faculties working in the area of Nanoscience and Nanotechnology and other disciplines.

Registration is Free

The virtual conference will be online via ZOOM and Youtube.

Oral Presentations: Selected abstracts can be presented by oral mode

Certificate: e-certificate will be provided to all registered participants who attend a minimum of 15 sessions



Website: <https://vit.ac.in/VCAN2020>

Interested participants can register

<https://tinyurl.com/VCAN2020>

Last date for Registration: 12th June 2020

Last Date for abstract Submission: 12th June 2020

Intimation of Oral presentation: 14th June 2020



For further details

Contact: Dr. A. Nirmala Grace

Email: vcancnr2020@gmail.com