



VIT[®]
Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)

ICNAN '19

2nd International conference on
Nanoscience and Nanotechnology

4 - 6 December 2019



Organised by

Centre for Nanotechnology Research



Meet The Nobel Laureate

Dr. ADA E. YONATH
Nobel Laureate in Chemistry
(2009)



ABOUT VELLORE INSTITUTE OF TECHNOLOGY

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. From its humble beginning, the institution has grown to a premier educational institution with modest student strength of 39000 from 29 states and 7 union territories of India and 50 countries across the world. 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 in the year 2016 and in 2017. VIT has gone for accreditation by NAAC [India], IET [UK], and ABET [USA] and follows world class academic processes. VIT is the first and only in India to get 4 star rating from QS, the world universities ranking organization. The Industry consortium FICCI, has declared VIT as the "University of the Year 2016", in India. VIT has also been ranked in the top 201-250 in QS BRICS Ranking in 2016 and in the top 251-300 in Times Higher Education (THE), Asia Ranking. With its strong academic partnerships with over 200 Universities around the globe, VIT excels in academics and research.

ABOUT CENTRE FOR NANOTECHNOLOGY RESEARCH

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. The M.Tech. Nanotechnology programme was initiated in 2006 by VIT. VIT provided a generous support of about INR 13 million in setting up state-of-art Nanomaterial characterization and synthesis facilities for the Nanotechnology Lab. The M.Tech. Nanotechnology programme also received financial support of INR 29.4 million 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 inline 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 150 research articles in International Journals. The centre has recently extended its facilities for external researchers on a consultancy basis.

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

RESEARCH THRUSTS OF THE CENTRE

- Uplifting various Nanofabrication and Nano-patterning techniques for creating functional nano-structures and devices.
- Development of functional nanomaterials for optoelectronics, energy devices, sensor, biomedical and environmental related applications.
- Patterning and Scanning probe-based nanolithography for graphene towards device applications.
- Magnetic Nano-materials and Nano-composites for biomedical and catalysis applications. Modelling and Simulations of Atomic and Nano-Scale devices for RF/Microwave/Photonics applications.
- First principle and semi-empirical modelling and simulation of graphene and Graphene Nano Mesh (GNM) based devices.

ABOUT ICNAN '19

ICNAN '19 is organised by the Centre for Nanotechnology Research, VIT, Vellore, India 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 Nanoscience and Technology. The conference covers broad theme in this area to accommodate wide range of interests and to facilitate interdisciplinary collaboration/interaction in both academia and industry. Applications of Nanotechnology are enormous and hence this conference will be a right platform to bring in experts and researchers across the globe to discuss the current trends and future aspects of Nanoscience and Nanotechnology. Most of the practical applications of Nanoscience and Nanotechnology will be given importance in this conference. ICNAN '19 will provide an international forum for the exchange of technical information through plenary lectures, invited talks, presentations by researchers and scientists. Many senior experts, academicians and researchers across the globe will be delivering special lectures at ICNAN '19.

THEMES

- Synthesis/Fabrication of Advanced 0D/1D/2D Nanostructures
- Thin Film Deposition Techniques
- Advanced Nanomaterial Characterization
- Molecular Nanoscience, Catalysis and Applications
- Nanomaterials for
 - Energy Harvesting, Storage and Conversion
 - Environment (Water purification, Adsorbents, CO₂ remediation)
 - Sensors
 - Agriculture, Food and Health care
- Hydrogen Energy using Nanostructured materials
- Magnetic Nanomaterials and Applications
- Biomedical-related devices and methods at the micro- and nano-scale
- Nanocoatings
- Nanofluids
- MEMS/NEMS
- Modelling and Simulation of Nanomaterials
- Nanophotonics and Plasmonics
- Nanoelectronics : Modelling, Simulation and Fabrication
- Quantum computing/ Quantum information processing
- Industrial Nanotechnology

CALL FOR PAPERS

The participants are requested to submit the extended abstracts including manuscript title, author(s), affiliation(s) and contact details, with a clear indication of research work, methodology, major results and conclusion. For further details refer the conference web page.

PUBLICATIONS & PROCEEDINGS

ICNAN '19 encourages original and unpublished work. Selected extended abstracts will be published in digital proceedings with online ISBN number. The full papers submitted to ICNAN'19 will be evaluated by the technical committee for its originality and subjected to the regular peer-review process. Based on the scope and quality of the work, the accepted full papers will be published in any of the following journals.

INTERNATIONAL JOURNAL OF HYDROGEN ENERGY (TR IF: 4.229)
(<https://www.journals.elsevier.com/international-journal-of-hydrogen-energy>)

MICROCHIMICA ACTA (TR IF: 5.705)
(<https://link.springer.com/journal/604>)

IET NANOTECHNOLOGY (TR IF: 2.059)
(<https://digital-library.theiet.org/content/journals/iet-nbt>)

(The list of other journals will be updated shortly in Conference Website <http://www.vit.ac.in/ICNAN>)

RSC PRESENTATION AWARD & YOUNG RESEARCHER AWARD

The best posters presented in ICNAN'19 will be selected and awarded Poster Prizes from The Royal Society of Chemistry "Nanoscale and Nanoscale Advances". These awards include a signed certificate and RSC book voucher.

The "Young Researcher Awards" is an initiative with the intention of supporting young researchers (students) in their quest to advance the frontiers of Nanoscience and Nanotechnology. Four best presentations from ICNAN'19 will be given cash award and a certificate of appreciation.

Speakers

Dr. Ada E. Yonath, Weizmann Institute of Science, Israel
 Dr. Abdul Khaliq Rasheed, Sunway University, Malaysia
 Dr. Ajay Kumar Mishra, UNSAI, South Africa
 Dr. Ajayan Vinu, University of Newcastle, Australia
 Dr. Archita Patnaik, IIT Chennai
 Dr. Artem Mishchenko, University of Manchester, UK
 Dr. Arun Chattopadhyay, IIT Guwahati, India
 Dr. S. Balakumar, University of Madras, India
 Dr. Ben Buckley, Loughborough University, UK
 Dr. Bruno D'Aguzzo
 Vellore Institute of Technology, India
 Dr. Carla Melendandri, University of Otago, New Zealand
 Dr. Daniel Thangadurai, Sri Ramakrishna Engineering College, India
 Dr. David Jenkins, Plymouth University, UK
 Dr. Deepak A., Saveetha University, India
 Dr. Dinko Chakarov, Chalmers University of Technology, Sweden
 Dr. Gargi Raina, Vellore Institute of Technology, India
 Dr. M. S. Gaur, Hindustan College of Science and Technology, India
 Dr. Geoffrey I. N. Waterhouse, University of Auckland, New Zealand
 Dr. George Thomas, IISER, Thiruvananthapuram, India
 Dr. Giridhar U. Kulkarni, CeNS, India
 Dr. R. Ilangoan, University of Madras, India
 Dr. M. Jayabalan, Sree Chitra Thirunal Institute, Thiruvananthapuram

Dr. R. Jayavel, Anna University, India
 Dr. Jin Zhang, Peking University, China
 Dr. John Philip, IGCAR, India
 Dr. John V. Kennedy, GNS Science, New Zealand
 Dr. Johnson GOH Kuan Eng, NUS, Singapore
 Dr. Kaliaperumal Selvaraj, CSIR-NCL, India
 Dr. M. Kamruddin, IGCAR, Kalpakam India
 Dr. Keiji Nagai, Tokyo Institute of Technology, Japan
 Dr. Konstantinos Georgarakis, Cranfield University, UK
 Dr. Krishna Ganesh, IISER Tirupathi, India
 Dr. Mani Karthik, ARCI, India
 Dr. A. Manuel Stephan, CECRI, India
 Dr. Manoj Gupta, NUS, Singapore
 Dr. Masahiro Yoshimura, Tokyo Institute of Technology, Japan
 Dr. Mohammad Khalid, Sunway University, Malaysia
 Dr. Myong Yong Choi, Gyeong-sang National University, South Korea
 Dr. T. N. Narayanan, TIFR, India
 Dr. A. Nirmala Grace, Vellore Institute of Technology, India
 Dr. Norman J. Wagner, University of Delaware, USA
 Dr. K. Pandian, University of Madras, India
 Dr. Ponisseril Somasundaran, Columbia University, USA
 Dr. N. Ponpandian, Bharathiar University, India
 Dr. Poonam Singh, Arizona State University, USA
 Dr. T. Pradeep, IIT Madras, India

Dr. Pranab Goswami, IIT Guwahati, India
 Dr. Prashant V. Kamat, University of Notre Dame, USA
 Dr. Pratap Kollu, University of Hyderabad, India
 Dr. Raman Vedarajan, ARCI, India
 Dr. R. Ramaraj, Madurai Kamaraj University, India
 Dr. Sabu Thomas, Mahatma Gandhi University, India
 Dr. S. Sakthivel, ARCI, India
 Dr. S. Sampath, IISc, India
 Dr. Sandip Kumar Dhara, IGCAR, India
 Dr. P. Saravanan, DMRL, India
 Dr. M. Sathish, CECRI, India
 Dr. Sebastian Lourduodoss, KTH-Royal Institute of Technology, Sweden
 Dr. Somnath Bhattacharyya, University of the Witwatersrand, South Africa
 Dr. B. Subramanian, CECRI, India
 Dr. Suddhasatwa Basu, IIMT, India
 Dr. Sudhagar Pitchaimuthu, Swansea University, UK
 Dr. Sudip Chakraborty, Uppsala University, Sweden
 Dr. A. K. Tyagi, Bhabha Atomic Research Centre, India
 Dr. V. Uma, Mount Carmel College, India
 Dr. Umananda M Bhatta, Jyothy Institute of Technology, India
 Dr. Vasudevan Pillai, RIES, Japan
 Dr. Vijayamohan K Pillai, CECRI, India
 Dr. V. Vishnukanthan, University of Oslo, Norway
 Dr. Yury Gogotsi, Drexel University

IMPORTANT DATES

Abstract submission – Extended abstract (2 pages; 1000 words) - 30.06.2019 30.07.2019
 Acceptance - 20.07.2019 20.08.2019
 Full paper submission - 30.08.2019 30.09.2019
 Early bird registration - 30.09.2019
 Intimation of paper to Conference proceedings (with ISBN)/Journal - 30.09.2019 15.10.2019
 Final submission as per the Journal's format - 15.10.2019 30.10.2019
 Last date for registration - 30.10.2019
 Conference dates - 4th - 6th December 2019

(For updates, visit: <http://www.vit.ac.in/ICNAN>)

REGISTRATION

Registration Fee	Early Bird	Standard
Faculty/Research Scientist	8000 INR	9000 INR
Students/Scholars	5000 INR	7000 INR
Industry	9000 INR	10,000 INR
Foreign Participants	275 USD	300 USD
Group (Academic) 4 people	25,000 INR	30,000 INR

(REGISTRATION FEE INCLUDES CONFERENCE KIT, LUNCH & DINNER)

ONLINE REGISTRATION / ABSTRACT SUBMISSION VISIT:

<http://www.vit.ac.in/icnan>



THEME SPONSORSHIP

Platinum sponsorship	4,00,000 INR
Gold sponsorship	3,00,000 INR
Silver sponsorship	2,00,000 INR

ADVERTISEMINT IN SOVENIR

Back cover page	1,00,000 INR
Inside Front cover page	50,000 INR
Full page inside	30,000 INR
Half page inside	20,000 INR

CONTACT DETAILS

Dr. A. Nirmala Grace
 Director
 Centre for Nanotechnology Research
 102, Technology tower

CHIEF PATRON
DR. G. VISWANATHAN
 CHANCELLOR

PATRONS
Mr. SANKAR VISWANATHAN VICE PRESIDENT
Dr. SEKAR VISWANATHAN VICE PRESIDENT
Mr. G.V. SELVAM VICE PRESIDENT
Dr. S. NARAYANAN VICE PRESIDENT

ADVISORS
Dr. ANAND A. SAMUEL Vice Chancellor
Dr. S. NARAYANAN Pro-Vice Chancellor
Dr. K. SATHI

CHAIR PERSON
Prof. (Dr.) A. NIRMALA GRACE Director
 Centre for Nanotechnology Research

CONVENERS

Prof. (Dr.) Bruno D'Aguzzo
 Prof. (Dr.) V. Velmurugan
 Prof. George Jacob
 Prof. (Dr.) C. Krishnamoorthi
 Prof. (Dr.) Raja Sellappan
 Prof. (Dr.) R. Vimala
 Prof. (Dr.) D. Kannad
 Prof. (Dr.) Niroj Kumar
 Prof. (Dr.) P. Sathyanar
 Prof. (Dr.) Penchalaiah
 Prof. (Dr.) J. Sakthi
 Prof. R. Syam Sa

National Advisory Committee

Dr. Ajith James Jose, St. Berchmans College, Changanassery.
 Dr. S. Balakumar, University of Madras, Chennai.
 Dr. R. Jayavel, Anna University, Chennai.
 Dr. John Philip, IGCAR, Kalpakkam.
 Dr. A. Manuel Stephen, CECRI, Karaikudi.
 Dr. T.N. Narayanan, TIFR, Hyderabad.
 Dr. Pratap Kollu, University of Hyderabad.
 Dr. Raman Vedarajan, ARCI, Chennai.
 Dr. R. Ramaraj, Madurai Kamaraj University, Madurai.
 Dr. P. Saravanan, DMRL, Hyderabad.

International Advisory Committee

Dr. David Jenkins, Plymouth University
 Dr. John V. Kennedy, National Institute of Standards and Technology, USA
 Dr. Ki Tae Park, KIER, South Korea
 Dr. Mohammad Khalid, Sunway University, Malaysia
 Dr. Poonam Singh, Arizona State University
 Dr. Soon Kwan Jeong, KIER, South Korea
 Dr. Sudhagar Pitchaimuthu, Swansea University
 Dr. Wu Weiping, City University of Hong Kong

Credentials of VIT - Accreditations / Rankings /

NIRF (National Institutional Ranking Framework)
 No. 18 in Engineering Institution - 2019
 No. 19 in University Category - 2019
 No. 46 in Management Institution - 2019
 No. 1 Among private players for 4 consecutive years

STARS
 4 STAR overall Rating in 2019
 Got 5 STAR Rating for 5 SAs (Teaching, Employability, Inclusiveness)
 First University in India to achieve this

NAAC (National Assessment and Accreditation Council)
 Accredited in 2015 - A grade
 Accredited in 2009 - A grade
 Completed 3 Cycles of Accreditation

ABET (Accreditation Board for Engineering and Technology) USA
 3 Times Accredited
 10 B.Tech Programs - Vellore Campus
 4 B.Tech Programs - Chennai Campus

IET (The Institution of Engineering and Technology), UK
 Accredited in 2005

NBA (National Board of Accreditation)
 Accredited in 2009
 Accredited in 1998

FICCI (Federation of Indian Chambers of Commerce & Industry)
 "Excellence in Faculty" - 2017
 "University of the Year" - 2016

QS 1 GAUGE
 Got DIAMOND University Status

ACBSP (The Accreditation Council for Business Schools)
 VITBS is fully Accredited

THE WORLD AND ASIA UNIVERSITY
 Ranked in the Top 801-1000

THE WORLD Young UNIVERSITY
 Ranked in the Top 201 - 250

QS BRICS UNIVERSITY RANKINGS
 Ranked in the Top 201 - 250