Prof. Ajayan Vinu, FRSC, FRACI, FWAC, FFMAS

Global Innovation Chair Professor and Director
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Academic Highlights and Work Experience

From Oct 18 2017 **Global Innovation Chair Professor and Director,** Global Innovative Center for Advanced Nanomaterials, University of Newcastle, NSW, Australia

2015 to Oct 2017 **Full Professor of Nanomaterials,** Future Industries Institute, University of South Australia, Mawson Lakes, Australia

2011 to 2015 **Full Professor and ARC Professorial Level (FT3) Future Fellow,** Australian Institute for Bioengineering and Nanotechnology, The University of Queensland, Brisbane, Australia

2011 to 2011 **Alexander Humboldt Wilhelm Friedrich Bessel Award Fellow,** Max Planck Institute, Potsdam, Germany

2011 to 2011 **Visiting Professor,** Fudan University, China

2009 to 2011 **Research Director,** NIMS-India Materials Research Center, World Premier International Research Center, National Institute for Materials Science, Japan

2007 to 2011 **Senior Scientist,** International Center for Materials Nanoarchitectonics, World Premier International Research Center, National Institute for Materials Science, Japan

2006 to 2007 **Senior Scientist,** Fuel Cell Materials Center, National Institute of Materials Science, Japan

2004 to 2006 **International Young Scientist Fellow,** National Institute of Materials Science, Japan

2003 to 2004: **Post-doctoral Researcher,** Technical University of Kaiserslautern, Kaiserslautern, Germany

2000 to 2003: **Doctor of Philosophy** in Chemistry (June 2003); Title: 'Pore size engineering and characterization of modified SBA-1, SBA-15, MCM-41 and mesoporous carbon molecular sieves: A study of protein adsorption' Anna University, Chennai, India (in collaboration with the **University of Kaiserslautern, Germany** under the exchange programme)

2001 to 2003: **Research Scientist,** Technical University of Kaiserslautern, Kaiserslautern, Germany

1999 to 2001: **Junior Research Fellow,** BRNS project, Anna University, India

1998 to 1999 **Honors Diploma in Computer Applications,** Computer Software Centre, Chennai, India

1996 to 1998: **Master of Science** in General Chemistry from Manonmaniam Sundaranar University, Tirunelveli, India

1993 to 1996: **Bachelor of Science** in Chemistry from Manonmaniam Sundaranar University, Tirunelveli, India

Awards/Fellowships

My contributions in the field of nanoporous materials are well recognized by chemical and materials research societies across the world. The details of some of these awards are given below:

- Medal, Chemical Research Society of India (2018)
- KY NIEM CHUONG Award and Medal, Vietamese Academy of Sciences, 2018
- Fellow, World Academy of Art and Science, 2018 (FWAAS)
- Fellow, World Academy of Ceramics, 2017 (FWAC)
- Fellow, Royal Australian Chemical Institute, 2017 (FRACI)
- Fellow of Royal Society of Chemistry (FRSC)
- Foreign Fellow of Maharashtra Academy of Science, India (FFMAS)
- Scopus Young Researcher Award 2014 for physical sciences by ELSEVIER
- Senior JSPS Invitation Fellowship Award for the year 2014 by the Japan Society for the Promotion of Science
- IUMRS–MRS Singapore Young Researcher Award 2014 Finalist
- Wilhelm Friedrich Bessel Award for the year 2010 by the Alexander von Humboldt foundation
- Australian Future Fellowship (FF) Award (Top Level) for the year 2010 by the Australian Research Council (The youngest person who received the top level FF from Australia in the field of Nanomaterials)
- Indian Society of Chemists and Biologists Award for Excellence, 2010
- Catalysis Society of India Award for the year 2010 by the Catalysis Society of India
- Chemical Society of Japan Award for Young Chemists for the year 2008 by the Chemical Society of Japan (The first Indian and the first foreigner who received this award from CSJ, Japan)
- Khwarizmi International Award Iranian Top Science Prize for the year 2008 for the applied research in nanotechnology, "Laureate of KIA" by UNESCO, UNHO, IROST and WIPO. The award was given by the H.E., the President of Iran. Prof. CNR Rao has also been awarded the same for the year 2008.
- Asian Excellent Young Researcher Lectureship Award, 2008, by the President of the Chemical Society of Japan (Prof. Nakanishi, President of CSJ, Japan)
- ICYS Fellowship award, which is the world's most prestigious fellowship by the National Institute for Materials Science, Tsukuba, Japan (2004-2006)
- Best paper award from STAM journal for the year 2010.
- Junior Research Fellowship (JRF, Department of Atomic Energy, India) to pursue Doctoral studies at Anna University, India

Honors

In response to my research performance and international standing, many top institutions have honored me with adjunct professor or director appointments. I have been also a committee member for reviews of several universities around the world and some of them are listed here:

- Editor, Science of Advanced Materials (Since 2015)
- Australian Editor, Journal of Nanoscience and Nanotechnology (Since 2015)
- Editor, Emerging Materials, Springer (Since 2017)
- Editor-in-Chief, Advanced Porous Materials (Since 2014)
- Editor/Editorial Board Member, Scientific Reports, Nature Publishing Journal (Since 2013)
- Associate Editor, Journal of Nanoscience and Nanotechnology (2010-2015)
- Associate Editor, Nanosystems in Engineering and Medicine (ISSN 2167-5813)
- Editor/Editorial Board Member, Journal of Nanomaterials
- Member, Industry Engagement Working Group, UniSA's Research Leadership Committee (RLC)
- NIMS Ambassador to India (2006-2010).

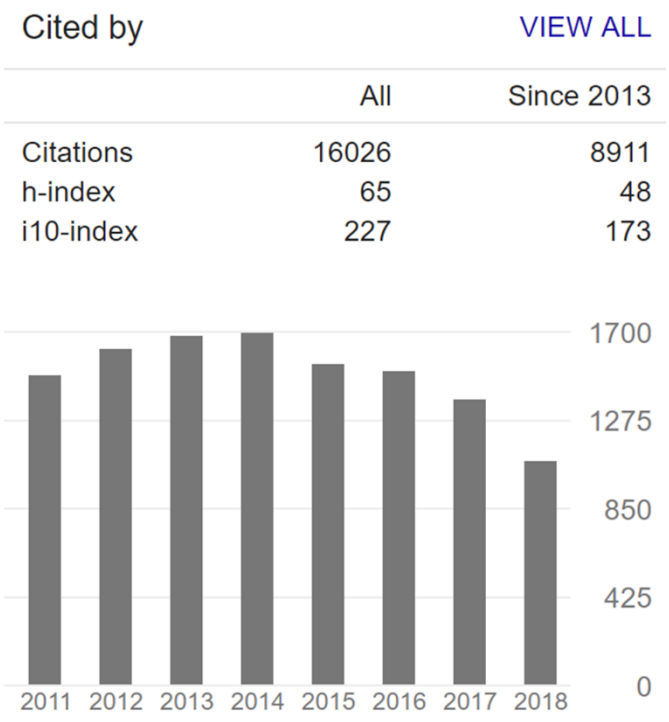
- Adjunct Professor, Yonsei University, South Korea
- Adjunct Professor, Kyungpook National University, South Korea
- Adjunct Professor, EWHA Womans University, South Korea
- Adjunct Professor, Anna University, India
- Adjunct Associate Professor (2007 to till date), Hokkaido University, Hokkaido, Japan
- Adjunct Principal Researcher (2007 to till date), Korean Research Institute of Chemical Technology, Daejeon, South Korea
- Guest Professor of Jilin University, China
- Visiting Professor of Sichuan University and Fudan University, China
- PhD thesis examiner of IIT, Kharagpur, India
- PhD thesis examiner of the University of Western Australia, Australia
- PhD thesis examiner of the University of Wollongong, Australia
- Thesis examiner of Cairo University, Egypt
- PhD thesis examiner of the University of Pune, India
- PhD thesis examiner of Acharya Nagarjuna University, India
- PhD thesis examiner of Visva-Bharati, Santiniketan, India
- PhD thesis examiner of Anna University, India
- PhD thesis examiner of St. Josheph's College, India
- PhD thesis examiner of Bharathidasan University, India
- International Selection Committee Member for Future Fellowship, ARC, Australia
- International Project Advisory Board member of ICBIN, Yonsei University, South Korea
- International Project Advisory Board member of Kent State University, USA
- Evaluation committee member of staff promotion of Qatar University, 2016
- Evaluation committee member of staff promotion of King Saud University, 2014
- Evaluation committee member of staff promotion of Kuwait University, 2014
- Evaluation committee member of staff promotion of the University of Jordan, 2014
- Project Review committee member of National Foundation for Science and Technology Development, Vietnam (NAFOSTED)
- Project review committee member of Czech Science Foundation
- Project review committee member of King Fahd University of Petroleum & Minerals, Saudi Arabia
- Project review committee member of Chile Science and Technology, Chile
- Selection Committee Member of Shanti Swarup Bhatnagar Prize of India, which is the Top Science Prize in India
- Poster award selection committee member, APEnergy 2014
- Poster award selection committee member, AIBN conference, 2011
- Poster award selection committee member, International Conference on Advanced Materials 2008, BARC, Mumbai
- Poster award (Young Scientist award) selection committee member, IUMRS-2008, Nagoya, Japan
- Gave several invited lectures in well-reputed universities and national institutes in America, Australia, Canada, Germany, The Netherlands, Belgium, Italy, South Korea, South Africa, China, Czech Republic, India, Iran, Saudi Arabia, and Japan
- Given a chance to meet and interact with the Nobel Laureates on a personal basis in the 52nd Nobel Laureates meeting held at Lindau, Germany, July 2002
- Selected as an Excellent P&G Intern Fellow for the European Research Programme 2002 held at Schwalbach Technical Centre, Procter & Gamble, Germany (One among the total of 12 students were selected from all over the Europe)
- Visited as a Guest Scientist at the National Chemical Laboratory, Pune, November, 2002, India

Membership in Professional Bodies

Fellow, World Academy of Art and Science
Fellow, World Academy of Ceramics (FWAC)
Fellow, The Royal Australian Chemical Institute (FRACI)
Fellow, The Royal Society of Chemistry (UK) (FRSC)
Foreign Fellow, Maharashtra Academy of Science
Member, Australian Ceramic Society
Member, Chemical Society of Japan
Lifetime Member, Catalysis Society of India
Member, Mesoporous Materials Association

Publication Records: papers, patents and book chapters

Papers, Citation and Awards



My contribution in the field of nanoporous materials is clearly reflected by the international ranking by Science Watch as one of the top 15 researchers in the field. During the last 18 years, I have made a significant contribution in the field of nanoporous materials and their applications in fuel cells, adsorption, separation, and catalysis. I have also introduced a new field of research on nanoporous nitrides and developed novel methods for making new nanoporous materials with different textural parameters and multiple functions. ***This research has led to 340 papers in high impact factor journals with ca 16,200 citations and an H-index of 65 and 30 patents.*** My research has been published in top journals like Angew. Chemie, Nano Letters, J. Am. Chem. Soc, Adv. Mater, Adv. Funct. Mater, Chem. Eur. J, Chem. Mater, etc. with an average of 850 citations per year. At least 40 of my papers have been cited mor e than 100 times (18 papers have been cited more than 200 times) and 70 papers have been cited more than 50 times. I have also been invited to write several chapters by esteemed publishers including Wiley, Elsevier and American Scientific. This numerical data reveals the high quality of my research, innovative ideas and creativity.

Editorial Board and Panel of Reviewers

I am Editor-in-Chief of Advanced Porous Materials. I was also recently appointed as an Editor of Science of Advanced Materials. I am also an Australian Editor of the Journal of Nanoscience and Nanotechnology and an Associate Editor of Nanosystems in Engineering and Medicine (ISSN 2167-5813). I am also the member of American, Royal, and Japan chemical societies. I am a reviewer for more than 70 top journals in the fields of Chemistry and Materials Science including Angew. Chemie, JACS,

Chem. Eur. J, Adv. Mater., Adv. Funct. Mater., and Chem. Mater. and get review requests for more than 120 papers per year.

Editorial Board Member

- Materials Today Nano (Elsevier)
- Emergent Materials (Springer)
- Scientific Reports, a journal of Nature Publishing Group (IF > 5)
- Chemical Record, a Wiley journal (IF > 5)
- Heliyon, an Elsevier journal
- Journal of Nano science and Nanotechnology
- Journal of Nanomaterials
- Advanced Science Letters
- Current Science
- Open Materials Science and Open Biomaterials Journal

Advisee Awards

Travel Grant Award, Hamid Ilbeygi, 5th International Workshop and Seminar on Green Energy Conversion, Japan, 31st of August to September 2nd 2016.
Travel Grant Award, Wang Soo Cha, 5th International Workshop and Seminar on Green Energy Conversion, Japan, 31st of August to September 2nd 2016.
NIMS Internship Award, Wang Soo Cha, NIMS, Japan (August 15 to 30th 2016)
NIMS Internship Award, Arun Vijay, NIMS, Japan (Feb 1st to April 31st 2017)
Best Poster Award, Ms. Mercy Benzigar, 4th International Workshop and Seminar on Green Energy Conversion, August 26-27, 2015, Japan
NIMS Internship Award, Mr. Geoffrey Lawrence, NIMS, Japan 2015.
Best Poster Award, Mr. Geoffrey Lawrence, 9th International Mesoporous Materials Symposium, Brisbane, Australia, August 17-21, 2015
Travel Grant Award, Mr. Kripal Lakhi, 4th International Workshop and Seminar on Green Energy Conversion, August 26-27, 2015, Japan
Travel Grand Award, Ms. Mercy Benzigar, 4th International Workshop and Seminar on Green Energy Conversion, August 26-27, 2015, Japan
Travel Grant Award, Mr. Stalin Joseph, 3rd International Workshop on Green Energy Conversion, August 24-27, 2014, Japan
Best Poster Award, Ms. Mercy Benzigar, 3rd International Workshop on Green Energy Conversion, August 24-27, 2014, Japan
Travel Grant Award, Mr. Kripal Lakhi, 2nd International Workshop and Seminar on Green Energy Conversion, September 2-4, 2013, The University of Yamanashi, Japan
Best Poster Award, Mr. Geoffrey Lawrence, 2nd International Workshop and Seminar on Green Energy Conversion, September 2-4, 2013, The University of Yamanashi, Japan
Best Poster Award, Mr. Geoffrey Lawrence, 2nd International Workshop and Seminar on Green Energy Conversion, September 2-4, 2013, The University of Yamanashi, Japan
Best Oral Presentation Award, Mr. Geoffrey Lawrence, 21st International Conference on Materials and Technology, Slovenia, November 13-15, 2013
Best Poster Award Finalist, Dr. C. Anand, International Conference on Emerging Advanced Nanomaterials, October 22-25, 2012
Encouragement of Research in Materials Science Award, Dr. Pavuluri Srinivasu and Dr. Ajayan Vinu, IUMRS International Conference in Asia 2008

Teaching and Courses Taught

- Graduate Courses at Hokkaido University

- Advanced Nanostructured Materials (2009 and 2010)
- Characterization of Nanomaterials (2009 and 2010)

International Advisory Board Member

- International Advisory Committee, International Conference on Engineering Materials and Renewable resources during January 4-5 2018. Anna University, India.
- International Advisory Committee, International Conference on Nanomaterials for Energy Conversion and Storage Applications (NESCA), January 29th to 31st 2018.
- International Advisory Committee, 6th International Symposium on Advanced Ceramics and Technology for Sustainable Energy Applications toward a Low Carbon Society (ACTSEA 2017), October 31st-Nov 3rd 2017.
- Advisory Board Member, International Symposium on Relations between Homogeneous and Heterogeneous Catalysis, 22-25th July 2018.
- International Advisory Board Member, International conference on nanotechnology, biotechnology and medical science during 9-11, November 2017.
- International Advisory Board Member, the International Conference on Nanoscience and Nanotechnology (ICONN-2015), February 4-6, 2015
- International Advisory Board Member of NANO-7, 22-25 June, 2014, Niagara Falls, Canada
- International Conference on Functional Materials, 5-7 February, 2014, IIT Kharagpur, India
- International Mesostructured Materials Symposium, Awaji Island, Japan 20-24 May, 2013
- International Conference on Advanced Nano Materials (ANM 2012), IIT Chennai, 29 February to 2 March, 2012
- ICPMMDF Conference, Shivaji University, India, 17-19MISSING MONTH 2012
- The Sixth International Symposium on Nanoporous Materials (NANO-6), Banff, AB, Canada, 21-24 August, 2011
- 15th ISCBC-2011, Saurashtra University, Rajkot, India, 5-7 February, 2011
- International Workshop & Symposium on the Synthesis and Characterization of Glass/Glass-Ceramics (IWSSCGGC-2010), Pune, India, 7-10 July, 2010
- 3rd International Conference on Nanostructures, Kish Island, 0-12 March, 2010
- NANOMEET-2010, Anna University, Chennai, India
- International Workshop on Advances in Nanoscience and Nanotechnology, Anna University, Chennai, India, 28-30 October, 2009
- The Seventh International Symposium Effects of Surface Heterogeneity in Adsorption and Catalysis on Solids, Kazimierz, Poland, 4-11 July, 2009
- 3rd International Symposium on Advanced Materials, Daegu, South Korea, 5-6 February, 2009
- International Symposium on Nanocomposites and Nanoporous Materials, South Korea, 4-16 May 1, 2008
- International Conference on Nanomaterial and its Applications (ICNA-2007), India
- International Symposium on Nanostructure and Nanoporous Materials, South Korea, February, 2006

Project Track Record - Funding Secured

The innovative nature and commercial potential of research from my group are shown by the 18 national and international patents. I have received more than $9 Million Dollars from both industry and government funding agencies. Funding includes:

Industry funding and consultancy include:

- 160K, Yokogawa Australia Limited, Future Industries Accelerator Programme (2017-2018 - Submitted)
- 22.4K, Minotaur Exploration Limited, Future Industries Infrastructure Access scheme (2017-2018)

- 100K, Minotaur Exploration Limited, Commonwealth Innovation Connection grant (2017-2018)
- $2.6 Million, Petrocom (2017-2020) submitted to Petrocom
- $1.7 Million, SABIC (2015-2018)
- Ca. 0.7 Million Dollar grant, Highly Cited Research Project (KSU, Saudi Arabia – 2015)
- Ca. $100,000 Consultancy grant from KSU, Saudi Arabia (2015)
- Ca. $100,000 Grant from Solvey-EWHA Joint Project (2015)
- Ca. $72,000 Consultancy grant from KSU and Qatar University, Saudi Arabia (2014)
- $100,000, KACST, Saudi Arabia
- Consultancy grant, Dia33, Dubai, 30,000 AUS dollar
- Consultancy grant, ZnO Australia, Australia, 11,000 AUS dollar
- KFUPM, Saudi Arabia (48,200 AUS dollar)
- Kurita Water Industries and Taiyo Kagaku funding (20,000 USD)
- KFUPM, Saudi Arabia project grant 40,000 USD for 2010 & consultancy grant (150,000 USD– 2009-2012)

Academic Grants

- Discovery Grant, 2017-2019 (286,000) (Prof Vinu, Dr. Devaraju and Dr. Honma)
- PEGS Proposal, 2016-2017, $40,000 (Prof. Vinu, Prof. Krasimir Vasilev, Dr. D. Park, Dr. S. Arumugam, Dr. Alex-Anthony Cavallaro, Dr. Romeo Marian, Dr. Elizabeth Smith, and Prof. Mahfuz Aziz)
- RTIS Funding, 2016-2020 ($125,000) (Prof. Vinu, Prof. S. Garg, Dr. Sivanesan Arumugam, and Dr. Paul Monis)
- Synchrotron Soft-X-ray proposal, 2016 (Prof. Vinu, Prof. W. Skinner, Dr. D. Park and Dr. I.Y. Kim)
- Synchrotron Hard X-ray proposal, 2016 (Prof. Vinu, Prof. W. Skinner, Dr. D. Park and Dr. I.Y. Kim)
- $324,700, DP150104828 (2015-2017) ARC Discovery grant for the project entitled: "Design of Functionalized Mesoporous Fullerenes for Clean Energy" - Prof. Ajayan Vinu (CI) and Prof. Mietek Jaroniec (PI)
- $100,000 AUS dollar, KACST-Technical Innovation Centre 2012
- ARC Future Fellowship Grant ca. 1 Million AUS dollar (2011-2016)
- $1 Million US dollar grant from the Ministry of Education, Culture, Sports, Science & Technology (MEXT) in 2007 for three years under the Asian research and development programme in the field of fuel cells
- Kakenhi (30,000 USD (2010-2011); 30,000 USD (2007-2009)), JSPS, Japan
- MANA (180,000 USD – 2008; 150,000 USD – 2009; 120,000 USD – 2010)
- NIMS Instrument competition fund NIMS (100,000 USD – 2008)
- NIMS fellowship grant of 60,000 USD pa from 2007 to 2010
- Nanoionic materials group, NIMS (180,000 USD – 2006; 150,000 USD – 2007; 50,000 USD – 2010)
- I have also established a NIMS-India materials research center in Indian Institute of Chemical Technology with the help of MEXT and NIMS, and Japan through Indo-Japan research collaboration (100,000 USD – 2009-2011)

Conference Organization/Chairing

- Symposium co-Chair, ICMAT 2017, Singapore June 17-23, 2017
- Symposium Co-Chair, IUMRS Japan 2017, Kyoto, Japan August 27 to September 1, 2017.
- Chair, International Symposium on Emerging Advanced Nanomaterials, 27th June 2016, Adelaide, University of South Australia

- Co-Chair, IMMS 2015, 18-21 August, 2015, Brisbane, Australia
- Chaired session in the 6th PCGMR-NCKU Symposium Nano-Technology/Materials for Future Devices & Bio/Medical Applications, 2-5 September, 2014, Taiwan
- One of the organising committee members of MANA/ICYS Reunion Workshop 2014, 2-4 March, 2014, Japan
- Organized 1st International Conference on Emerging Advanced Nanomaterials ICEAN 2012, October 2012, Brisbane, Australia that had attracted more than 650 participants from ca. 25 different countries including 550 researchers from abroad
- Organized International Workshop on Advanced Functional Nanomaterials in Anna University, India from 21-24 February, 2011
- Organized NIMS-EWHA workshop in NIMS, Japan, 27 August, 2010
- Organized International Workshop on Advanced Nanoporous Materials, IWANA-2009 at NIMS Japan, 7 August, 2009
- Organized NIMS-Indo workshop on Advanced Materials (INWAM-09), 22-23 December, 2009 at Hyderabad, India
- Chaired a session in the **IUMRS-2008** conference, Nagoya, Japan in December 2008
- Chaired a session in an international conference, Yonsei University, Korea in November 2008
- Chaired a session in the **IMMS 2008** conference, Namur, Belgium, September 2008
- Chaired a session in the **International Conference on Recent Progresses and Perspectives in Nanoporous and Mesoporous Materials**, South Korea, July 2008
- Chaired a session in the **International Conference on Nanoporous and Nanocomposite Materials 2008,** South Korea, May 2008
- Chaired a session in the **Nanopore V Conference,** Vancouver, Canada, May 2008
- Chaired a session in the International Conference on Advanced Materials, NEERI, India, October 2007
- Chaired a session in the **IMMS 2006 Conference,** Shanghai, China, August 2006
- Chaired a session in the **ICONN 2006 Conference,** Brisbane, Australia, July 2006
- Chaired a zeolitic materials session in the **3rd FEZA International Conference on Micro and Mesoporous Materials**, Praha, Czech, August 2005
- Chaired a nanoporous carbon session in the **International Conference on Nanoporous Materials**, Niagra Falls, Ontario, Canada, June 2005
- Chaired a complete nanotechnology session in the **International Conference on Advanced Materials and Processing**, IIT Kharagpur, India, December 2004
- Chaired a complete biomaterials session in the **First International Japan-UK Symposium on Nanotechnology,** Tsukuba, NIMS, Japan, September 2004.

Reviewer of the Following Journals

Angewante chemie international; The journal of American chemical society; Advanced materials; Advanced functional materials; Chemistry: a European journal; European journal of inorganic chemistry; Chemical Communications; Inorganic Chemistry; Chemistry of materials; Langmuir; Physical chemistry and chemical physics; Crystal growth and design; Environmental science and technology; Industrial engineering and chemical research; Soft matter; Journal of physical chemistry B; Carbon; Applied physics letter; Journal of materials chemistry; Chemistry- an Asian journal; Journal of materials research; Solid state communications; Journal of chemical technology and biotechnology; Journal of molecular catalysis A: Chemical; Applied catalysis A General; Applied catalysis B Environmental; Journal of Nanoscience and Nanotechnology; Catalysis communications; Catalysis letters; Catalysis today; Chemistry letters; Microporous and mesoporous materials; Studies in surface science and catalysis; Physiological magazine letters; Food hydroloids; Czechoslovak chemical communications; Materials research bulletin; Journal of American ceramic society; Journal of photochemistry and photobiology; International journal of nanotechnology; Journal of alloys and compounds; Brazilian journal of chemical engineering; Journal of Biomedical Materials Research Part B: Applied biomaterials; Materials Chemistry

and Physics; Chemical society reviews; Journal of applied physics; Chemical physics letters; Applied clay science; Solid state sciences; Encyclopedia of Industrial biotechnology; AIChE Journal; Journal of the American ceramic society; Materials science and engineering C; Applied surface science; Materials Letters, Advanced Synthesis and Catalysis; Nanoscale; Arabian Journal of Chemical Engineering, Journal of Hazardous Materials, Open Catalysis Journal, Journal of Nanoparticle Research; Journal of Membrane Science; Polish Journal of chemical technology, Collection of Czechoslovak Chemical Communications; International Journal of Nanotechnology; ChemSusChem; Journal of physical chemistry C; Bulletin of chemical society of Japan; Journal of biomedical research; Journal of brazillian chemical society; International journal of molecular science; Journal of nanoparticle research;

Selected Plenary and Invited Lectures at International Conferences

I have developed a new area of research including the discovery of mesoporous carbon nitride, boron carbon nitride and boron nitride, carbon nanocage, carbon nanocoop, etc. I have been invited to deliver presentations at numerous international conferences, workshops and seminars and chaired sessions of several international conferences. I have visited institutes in more than 40 countries to deliver lectures and gave ca. 210 lectures including 31 plenary and 28 keynote lectures at international conferences as well as ca. 150 invited talks.

Recent plenary and keynote lectures are given below:

2006 International Symposium on Nanostructure and Nanoporous Materials, South Korea **(Plenary)**
2006 Pre ZMPC2006, Japan; (**Keynote)**
2008 CSJ conference, Rikko University, Japan (**Award Lecture)**
2008 International Symposium on Nanocomposites and Nanoporous Materials, South Korea **(Plenary)**
2008 41st Symposium on Catalysis, Prague, Czech Republic **(Plenary)**
2008 18th Annual Saudi-Japan symposium, Dhahran, Saudi Arabia (**Keynote)**
2008 Workshop on Emerging Materials & Active Polymer Patterning, Yonsei University, S. Korea. (**Keynote)**
2008 International Symposium on Materials Chemistry (ISMC-2006), BARC, India (**Keynote)**
2009 3rd International Symposium on Advanced Materials, Daegu, South Korea (**Keynote)**
2009 3rd Workshop on Renewable Energy: Advances in Fuel Cell Technology, KFUPM, Saudi Arabia **(Plenary)**
2009 Polish Zeolite Forum, Poznan **(Plenary)**
2009 ISSHAC meeting, Poland (**Keynote)**
2009 Pre-ZMPC 2009, Inha University, South Korea (**Keynote)**
2009 International Workshop Advances in Nanoscience & Nanotechnology, Chennai, India (**Keynote)**
2010 3rd International Conference on Nanostructures, Kish Island (**Keynote)**
2010 Nanomeet, Anna University, India **(Plenary)**
2010 International Mesoporous Materials Conference, Italy (**Keynote)**
2010 International workshop on Indian Society for Chemists and Biologists (**Award Lecture**)
2010 University of Erlangen, Germany (**Colloquium** Lecture)
2010 7th International Conference on Mesostructured Materials, Italy (**Keynote**)
2010 5th International Workshop on Emerging Functional Materials, France (**Keynote**)
2010 Indo-Italian Advanced Level Workshop on Semiconductor Nanostructures, India (**Keynote**)
2010 20th National Symposium on Catalysis, India (**Award Lecture**)
2011 15th ISCB Conference, India (**Plenary**)
2011 International Conference on Advanced Functional Nanomaterials, India (**Keynote**)
2011 23rd German Zeolite Meeting, Germany (**Plenary**)
2011 Nanokat, Germany (**Plenary**)
2012 International Symposium on Physics and Technology of Sensors, India (**Plenary**)
2012 ICMST 2012, India (**Keynote**)
2012 SPIE, Nanosystems in Engineering and Medicine Nanoengineering, South Korea (**Keynote**)
2012 International Conference on Emerging Advanced Nanomaterials, Australia (**Keynote**)

2013 Second International Workshop on Advanced Functional Nanomaterials (SIWAN-2013), India (**Keynote**)
2013 International Workshop on Advanced Materials for Energy and Environment, Kyunpook National University, South Korea (**Plenary**)
2013 Nanomeet, Anna University, India (**Plenary**)
2013 Clay and Composite Conference, South Korea (**Plenary**)
2014 International Workshop on Nanogrid Materials, S. Korea **(Plenary)**
2014 International Conference on Applications of Advanced Materials on Sustainable Development, India (**Plenary**)
2014 International Conference on Chemistry, Abha, Saudi Arabia, (http://www.nature.com/natureevents/science/events/23321-5th_International_Chemistry_Conference) **(Keynote)**
2014 Nanoporous 7, Niagra Falls, Canada (**Keynote**)
2014 6th PCGMR/NCKU Symposium on Nanotechnology/Materials for Future Device, Taiwan (**Plenary**)
2014 2nd International Conference on Global Trends in Pure and Applied Chemical Sciences, Hong Kong, China (**Keynote**)
2015 International Conference on Advanced Materials and Manufacturing Processes for Strategic Sectors (ICAMPS 2015), Kovalam, India (**Plenary**)
2015 Korean Clay Society Conference, Seoul, Korea (**Plenary**)
2015 International Workshop on Graphene and C_3N_4-based Photocatalysts (IWGCP) (**Keynote**)
2015 ICMAT-2015, Singapore (**Keynote**)
2015 International Symposium on Advanced Functional Materials, Daegu, Korea (**Plenary**)
2015 Corrosion and Protection of Materials (CPM 2015), Hanoi, Vietnam (**Plenary**)
2016 Nanos-2015, International Conference on Nanoscience, nanotechnology and Advanced Materials, Gitam University, India, 14-17 December, 2015.
2016 Ceramic and Advanced Materials for Energy and Environment, India, (**Plenary**)
2016 3rd International Workshop on Nanoscience and Nanotechnology, Anna Uni. India (**Plenary**).
2016 Cochin Nano 2016, Cochin, India (February 20-23rd, 2016) **(Plenary)**
2016 ICNS6, Kish Island, March 7-10th 2016 **(Plenary)**
2016 National Seminar and Workshop on Functional Nanomaterials for Energy, Environment and Health, March 21-22, 2016, Mangalore, India **(Plenary)**
2016 Solvey, EWHA Womans University, Seoul, South Korea, 24th of May 2016 **(Plenary).**
2016 KCC, EWHA Womans University, Seoul, South Korea, 25th of May 2016 **(Keynote)**
2016 1st International Conference on Nanoscience and Nanotechnology (ICNAN'16), VIT University, 19-21st of October 2016 **(Plenary)**
2016 National Conference on Emerging Biomaterials (NCEB-2016), Bharathiar University, 20th of October 2016 **(Plenary)**
2016 ICSEM 2016, RV College of Engineering, Bangalore, 22nd of October 2016 **(Plenary)**
2016 International Conference on Material Sciences (SCICON' 16) December 19-21, India **(Plenary)**

Details of My Present and Past Group Members

I have supervised more than 30 post doc fellows and guided ca. 25 PhD students including the students who worked in my lab for a long period through collaboration from several countries. More than 90% of these students have taken up postdoctoral positions at leading academic institutions including RPI, USA, ISU, USA, CNRS, France, AIST, Japan, Nagoya University, Japan or are employed in industry including GE, India. I have also been a PhD thesis examiner for Max Planck Institute, Postdam, Germany, University of Pune, India, Acharya Nagarjuna University, India and Cairo University, Egypt.

Post docs at FII, UniSA: Dr. B. Rajesh, Dr, Daehwan Park, Dr. M.K. Devaraju, Dr. Inyoung Kim, Dr. Kavitha Ramadass, Dr. A. Sivanesan, Dr. T. Siddulu Naidu, Dr. Aswathy, Dr. Sai Anandan Gopalan, Dr. K.S. Lakhi

Present PhD Students: Miss. Mercy Benzigar, Mr. Wang Soo Cha, Mr. Stalin Joseph, Mr. Jebum Choi. Mr. Hamid Ilbeygi, Mr. Arun Vijay Baskar, Mr. Gurwinder Singh, (Ms. Steffi, Ms. Alcina, and Mr. Mink-Kyu Kim will be joined soon as a PhD Student)

Present Visiting students and researchers: Dr. S.B. Halligudi, Dr. G.D. Mane, Dr. Y. Sugi, Mr. Sunho Kim, Miss M. Sujanya, Ms. D. Radhakrishnan, and Miss. Van, Mr. Min-Kyu Kim

Former Post Doctoral Researchers: Dr. Murugulla A. Chari; Dr. Ulka B Suryavanshi; Dr. S. Anandan; Dr. S.K. Mondal; Dr. P. Karandhigar; Dr. N. Gokulakrishnan; Dr. M. Murugan; Dr. V.V. Balasubramanian; Dr. P. Srinivasu; Dr. D.P. Sawant; Dr. R. Logudurai; Dr. P. Kalita; Dr. Chandrabose; Dr. Velmathi; Dr. J. Ramkumar; Dr. Lichao Jia; Dr. Tanaji Gujar; Dr. Sher Alam; Dr. Rajashree Chakravarthi; Dr. C. Anand; and Dr. Lung-Ching Sang, Dr. M.A. Wahab, Dr. C. Seubert, Dr. D. Dhawale, Dr. Priya Anand, Dr. Lin Zhong, Dr. Sugi, Dr. Suresh, Dr. Zaidi, Dr. Raghu.

Former PhD Students and the students who visited my lab: Miss. Mercy Rose; Miss. Padma, Mr. Chokkalingam. Anand; Mr. Jebum Choi, Miss. Geradin, Miss. Merisa, Mr. Tamil Selvan; Mr. Balaraman Satyaseelan; Mr. Pradeep Kumar; Mr. Jeonghun Kim; Mr. Hee Joon Jung; Mr. H. Oveisi; Mr. Leila Samie; Ms. Xin Jin; Mr. Chokkalingam Anand (Second time); Mr. L. Kumaresan; Mr. P. Azhagapillai; Mr. Lung-Ching (Michael) Sang; Mr. Shetty; Mr. Balamurugan; Mr. Dutta; Miss. Kalyani; Miss. Vinila; Mr. Seogjae Seo; Mr. Jinwoo Sung; Mr. Byeong Gwan Kim; Mr. Yeon-sik Choi; Miss. Stacy, Mr. Siddulu Naidu; Mr. Gurudas Mane; Mr. Saravanan; Mr. Satheesh; Miss. Shipra Chuhan; Mr. S. Varghese; Miss. Malar, Miss. Zhang, Mr. Stalin Joseph, Mr. Fahad, Mr. S. Prasad, Mr. Kripal L. Singh, Mr. N. Okamoto, Mr. Venkat.

Researchers (except students and post docs) visited my group

1. Dr. Rajiv Kumar, Tata Chemicals, India, 2. Dr. S.B. Halligudi, NCL, India, 3. Dr. Velmathi, NIIT, India, 4. Dr. J.-C. Chang, KRICT, Korea, 5. Dr. Y.-K. Hwang, KRICT, Korea, 6. Dr. V. Murugesan, Anna University, India, 7. Dr. A.K. Tyagi, BARC, India, 8. Dr. J. Cejka, J.H. Institute of Physical Chemistry, Prague, Czech Republic, 9. Dr. J.R. Lee, KRICT, S. Korea, 10. Dr. C. Satyanarayana, NCL, Pune, India, 11. Dr. TPD Rajan, RRL, Trivandrum, India, 12. Lakshmi Kantam, IICT, Hyderabad, India; 13. Dr. K.V.R. Chary, IICT, Hyderabad, India, 14. Dr. A. Neimark, Rutgers University, USA; 15. Dr. T. Mukherjee, BARC, India, 16. Dr. M.O. Coppens, RPI, Troy, USA, 17. Dr. S.B. Halligudi (May 2008), NCL, Pune, India, 18. Dr. S. Reddy, IICT, Hyderabad, India. 19. Dr. M. Jaroniec, Kent State University, Ohio, USA, 20. V.Y. Lin, Iowa State University, USA. 21. Dr. S. Ernst, Technical University of Kaiserslautern, Germany, 22. Dr. M. Hartmann, University of Erlangen, Erlangen, Germany, 23. Dr. A. Sayari, University of Ottawa, Canada, 24. Dr. D. Srinivas, NCL, Pune, India, 24. Dr. M. Thomass, Quantachrome, USA, 25. Dr. J. Cejka, Prague, Czech Republic (second visit), 26. Dr. S.-E. Park, Inha, S. Korea, 27. Dr. E. Kim, Yonsei, Yonsei University, S. Korea, 28. Dr. C. Park, Yonsei, Yonsei University, S. Korea, 29. Dr. J.R. Lee, KRICT, S. Korea, 30. Dr. L. Kantam, IICT, Hyderabad, India, 31. Dr. J.S. Yadav, IICT, Hyderabad, India, 32. Dr. R. Jayavel, Anna University, India, 33. Dr. S.B. Halligudi, C-MET, India (third visit). 34. Dr. J.V. Zaidi (KFUPM), Saudi Arabia. 35. Dr. K.N. Ganesh, IISER, Pune, India, 36. Dr. Ajay Ghosh, NIIST, Trivandrum, India, 37. Dr. Nitin, NEERI, India, 38. Dr. Chandrabose (two times). 39. Dr. Ganesh, Anna University, India, 40. Dr. Vivekanandan, Anna University, India. 40. Dr. Arivuoli, Anna University, India, 41. Dr. P. Selvam, IIT Chennai, India, 42. Dr. Chennupati Jagadish, ANU, Australia, 43. Dr. Choy, EWHA, S. Korea, 44. Dr. Fabrice, CNRS, France, 45. Dr. Attias, Marie Curie, France, 46. Dr. Gennady Gorr, USA, 47. Dr. Hideaki, YNU, Japan, 48. Dr. Inagaki, Toyotta R&D, Japan, 49. Dr. D. Zhao, Fudan, China, 50. Dr. Nagarajan, Annamalai University, India, 51. Dr. Subba Reddy, IICT, India (second visit), 51. Dr. M. Derownshky, Crackow, Poland, 52. Dr. Nagarajan, Anna Malai University, India. Prof. Dong-Soo Shin, Prof. KN Ganesh, Prof. R. Jayavel,

Initiation of MOU with Universities and Institutes around the World

I have developed an extensive network of collaborations with researchers in more than 15 countries from five continents. These include; RPI, USA, Kent State Uni. Ohio USA, Max Planck Stuttgart, Univ. Kaiserslautern, Germany, UQ Australia, ANU Australia, Yonsei Univ. Korea, Fudan Univ. China, JNCASR, IICT, Anna Univ, and NCL, India.

- Indian Institute for Science and Education Research, Pune, India (Dr. Ganesh)
- Yonsei University, Korea (Prof. E. Kim)
- Rensselaer Polytechnic Institute, Albany Troy, USA (Prof. M.O. Coppens)
- Kent State University, Ohio, USA (Prof. Mietek Jaroniec)
- Anna University, Chennai, India (Prof. V. Murugesan)
- National Chemical laboratory, Pune, India (Prof. C. Satyanarayana)
- Jawaharlal Nehru center for Advanced Scientific Research, Bangalore, Jakkur, India (Prof. CNR Rao)
- Australian National University, Canberra, Australia (Prof. Jagadeesh)
- Korean Research Institute of Chemical Technology, South Korea (Prof. J.S. Chang)
- National Institute of Technology, Trichy, India (Prof. S. Velmathi)
- "Joint Graduate School Programme" with Anna University, Chennai, India (Prof. Jayavel)
- "Joint Graduate School Programme" with JNCASR, Bangalore (Prof. CNR. Rao)
- "Joint Graduate School Programme" with Yonsei University, South Korea (Prof. E. Kim)
- MOU with IICT, Hyderabad, India
- NIMS-IICT center agreement with IICT, Hyderabad, India
- MOU with NEERI, India
- MOU with National Center for Catalysis, IIT Chennai, India
- MOU with King Saud University, Riyadh, Saudi Arabia
- MOU with University of Erlangen, Erlangen, Germany
- MOU with EWHA University, Seoul, South Korea
- MOU with Pusan National University, South Korea

Details of Research Collaboration around the World

Prof. M. Terrones, Advanced Materials Department IPICyT, San Luis Potosi, SLP, Mexico; **Prof. J. Cejka,** Czech Republic; **Prof. M.O. Coppens,** RPI, USA; **Prof. B. Sels,** University of Leuven, Belgium; **Prof. J. Michalik,** Institute of Nuclear Chemistry and Technology, Poland; **Prof. J.-S. Chang, Prof. J.-R. Lee, Prof. Y.-K. Hwang,** KRICT, South Korea; **Prof. R. Brzozowski,** Industrial Chemistry Research Institute, Poland; **Prof. A. Bose,** University of Rhode Island, USA; **Prof. Ramnath,** RPI. Troy, USA; **Dr. S. B. Halligudi, Dr. Rajiv Kumar, Dr. C.S. Gopinath, Dr. Satyanarayana** from NCL, Pune, India; **Prof. S. Ram,** Indian Institute of Technology, Kharagpur, India; **Prof. A.K. Tyagi,** BARC, Mumbai, India; **Prof. W. Bohlmann, Dr. Uma and Dr. A. Poeppl,** University of Leipzig, Germany; **Prof. M. Hartmann,** University of Erlangen, Germany; **Prof. V. Murugesan, Prof. R. Jayavel, Prof. Arivuoli, Prof. M. Palanichamy, Prof. A. Pandurangan,** Anna University, Chennai, India; **Prof. Max Lu,** UQ, Australia; **Prof. J. Drennan,** UQ, Australia; **Prof. S. Jagadeesh,** ANU, Australia; **Dr. A. Beitulla,** IUST, Iran; **Dr. E. Kim, Dr. C. Park,** Yonsei University, Korea; **Dr. S.-E. Park,** Inha University, Korea; **Prof. M. Jaroniec,** KSU, USA; **Dr. C.-S. Ha,** Pusan University, Korea; **Dr. J. Zaidi,** KFUPM, Saudi Arabia; **Dr. L. Kantam, Prof. J.S. Yadav, Prof. S. Reddy, Prof. B.M. Reddy, Prof. Manorama, Prof. K.V.R. Chary,** IICT, India; **Prof. C.N.R. Rao,** and **Prof. I. Eswaramoorthy,** JNCASR, India; **Dr. Bose and Dr. Velmathi,** NIT, Trichy, India; **Dr. S. Rayalu and Dr. N. Labhsetwar,** NEERI, India; **Dr. Salem,** KSU, Saudi Arabia; **Dr. Choy,** EWHA, Seoul, Korea; **Dr. Suresh Bargawa,** RMIT, Australia; **Prof. Thomas Bein,** LMU, Germany; **Prof. Markus Antonittee,** MPI Colloids and Interfaces, Potsdam, Germany; **Prof. Stefan Kaskel,** TUD, Germany.

Research Facilities in Vinu's Group in Australia

- CV - CH instruments - 760 D - Electrochemical workstation

- 8-Channel Battery Cycler for electrochemical measurements
- 100 Channel Battery Cycler from wonatech
- 3 Oxygen Reduction Research test unit
- High pressure parallel reactors – Two Nos.
- 3A Class Solar Simulator with QE/IPCE Kit
- Four-port glove box with oxygen and moisture sensing
- Homemade water and CO_2 splitting photocatalytic setup with online GC – 8 systems
- Micromeritics ASAP 2420 - 6 Port
- BEL- Chemisorption analyser, TPD, TPO, and TPR with breakthrough system
- Elemental Analyzer (CHNS&O) FLASH 2000 for both solid and liquid
- GC with autosampler (Shimadzu GC-2010 Plus) - 150 Sample port
- GC with manual sampler (Shimadzu GC-2010 Plus)
- Hot air ovens (Isotherm) - 5 numbers
- LABEC Hot air ovens - 1 number
- LABEC high-temperature tubular furnaces - 3 numbers
- Microwave-Elthos EZ Microwave digestion system (Milestone) -high temperature 20 to 300 ℃ with rotation mode
- Ozone cleaner for photo functionalization (Filgen)
- LABEC Muffle furnace - 2 numbers
- Vacuum oven – 2 number
- Vacuum evaporator
- Electronic magnetic stirrers - 30 numbers
- Stainless steel autoclaves with Teflon lining -25 numbers
- PARR autoclaves - 120 ml and 23 ml
- PARR reactor with controller and autoclave (4848)
- Parallel reactor with 12 reactor port
- Chino reactor and autoclave for high temp reaction - 4 numbers
- Aspirator (Eyela) - 2 numbers
- Julabo Water circulator
- Rota vapour (Buchi) - 2 numbers
- Tablet machine for electrode pressing
- Weighing/analytical balance (Shimadzu) - 4 numbers
- Microcentrifuge machine
- pH meter
- Automated melting point system (Stanford Research System)
- UV chamber (UVP)
- Sonication and shaking baths with temperature and time controller (Unisonic)
- Refrigerator
- Perfect lab for the synthesis of nanoporous materials with 5 fume hoods

Areas of Interest

Nanomaterials: Nanoporous materials including silicas, metallosilicates, polymers, fullerenes and carbides; Nanocarbons including graphenes, carbon nanocages, CNTs, and porous carbons; Nanoporous semiconductors including nitrides (CN, BCN, GaN, AlN), metal chalcogenides, transition metal oxides and phosphides, etc.; Nanoporous biomolecules, Nanoporous conducting polymers, and Nanohydrbid systems.
Applications: Energy storage and conversion (supercapacitors and fuel cells), magnetism, photoelectrochemical conversion (water splitting and CO_2 reduction), CO_2 capture and conversion, adsorption and separation (toxic compounds and fine chemicals), heterogeneous catalysis, and sensing using nanoporous materials.

Research Achievements

- Discoverer of carbon nanocage, cage-type mesoporous carbon materials
- Inventor of mesoporous carbon nitride, carbon nitride nanocage molecular sieves
- Inventor of mesoporous BN and BCN materials
- Inventor of mesoporous fullerenes
- Discoverer of carbon nanocoops and silica nanocoops
- Developed the procedure for creating nanoporosity in a biomolecule

List of Papers, Books, and Patents Published/Communicated Books

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6. **A. Vinu,** Mesoporous Non-Siliceous Materials and Their Functions, Advances in Nanoporous Materials, Editor: S. Ernst, Elsevier, Vol. 1, pp. 151-229 (2009).
7. **A. Vinu,** T. Mori, K. Ariga, Fabrication of Mesoporous Materials with Novel Designs by New Strategies, BOTTOM-UP NANOFABRICATION: Supramolecules, Self-Assemblies, and Organized Films Editor: K. Ariga and H. S. Nalwa Publisher: American Scientific Publishers, Los Angeles, 2009, Vol. 6, Chapter 20, p. 375-397.
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10. **A. Vinu,** N. Gokulakrishnan, T. Mori, K. Ariga, Immobilization of Biomolecules onto Mesoporous Structured Materials, Bio-Inorganic Hybrid Nanomaterials, Editor: Eduardo Ruiz-Hitzky, Ariga K and Lvov Y, Publisher: Wiley-VCH, Weinheim, (2007), pp. 113-157.
11. K. Ariga, K.Z. Hossain, **A. Vinu,** and M. Hartmann, Biomaterials in Mesoporous Media: From Open Space to Confined Space, Hand Book of Nanostructured Biomaterials and their Applications in Nano-Biotechnology, Editor: Dr. Nalwa, American scientific Publishers, 2005, 1, 331.

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2. Mercy Benzigar, Stalin Joseph, Hamid Ilbeygi, Dae-Hwan Park, Goutam Chandra, Siva Umapathy, Sampath Srinivasan, Siddulu N. Talapaneni, and **A. Vinu*,** Highly Crystalline Mesoporous C60 with High Surface Area and Ordered and Tuneable Pores, ***Angew. Chem. Int. Ed.*** 2018, 57, 569-573.

3. Mercy Benzigar, Stalin Joseph, Arun V. Baskar, Daehwan Park, Goutam Chandra, Siva Umapathy, Siddulu N. Talapaneni, and **A. Vinu *,** Ordered Mesoporous C_{70} with Highly Crystalline Pore Walls for Energy Applications, ***Advanced Functional Materials***, 2018, In press.
4. Santosh Goskulwad, Duong Duc La, Mohammad Al Kobaisi, Sidhanath V. Bhosale, Vipul Bansal, ***A. Vinu,*** Katsuhiko Ariga, and Sheshanath V. Bhosale, Dynamic multistimuli-responsive reversible chiral transformation in supramolecular helices, ***Nature Scientific Reports,*** 2018, in press.
5. Siddulu Naidu Talapaneni, Kavitha Ramadass, Sujanya J. Ruban, Mercy Benzigar, Kripal S. Lakhi, Jae-Hun Yang, Ugo Ravon, Khalid Albahily, and **A.Vinu*,** 3D cubic mesoporous C_3N_4 with tunable pore diameters derived from KIT-6 and their application in base catalyzed Knoevenagel reaction, ***Catalysis Today,*** 2018, in press.
6. S. Yallappa, M. Shivakumar, K.L. Nagashree, M.S. Dharmaprakash, **A. Vinu,*** and Gurumurthy Hegde, Electrochemical determination of nitrite using catalyst free mesoporous carbon nanoparticles from bio renewable Areca nut seeds, ***Journal of The Electrochemical Society,*** 2018, 165, H614-H619.
7. Kripal S. Lakhi, Gurwinder Singh, Arun V. Baskar, Jebum Choi, Hamid Ilbeygi, Stalin Joseph, Sujanya J. M. Ruban, Van Thi Hai Vu, and Ajayan Vinu*, Mesoporous Cu-SBA-15 with Highly Ordered Porous Structure and its Excellent CO2 Adsorption Capacity, ***Microporous and Mesoporous Materials,*** 2018, 267, 134-141.
8. Gurwinder Singh, Kripal S. Lakhi, Kavitha Ramadass, Sunho Kim, Declan Stockdale, and **A. Vinu*,** A combined strategy of acid-assisted polymerization and solid state activation to synthesize functionalized nanoporous activated biocarbons from biomass for CO2 capture, ***Microporous and Mesoporous Materials,*** 2018, In press.
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11. Gurwinder Singh, Kripal S. Lakhi, Hamid Ilbeygi, Dae-Hwan Park, Prashant Srivastava, Ravi Naidu, and **A. Vinu*,** Facile one pot synthesis of novel nitrogen containing activated biocarbons from biomass and inexpensive urea for CO_2 capture, ***ChemNanoMat, 2018,*** 4, 281-290.
12. S. Supriya, Stalin Joseph, **A. Vinu,** and Gurumurthy Hegde, A cleaner and eco-friendly mesoporous carbon nanosphere for the electrochemical determination of nitrite, ***Sensors & Actuators: B. Chemical,*** 2018, Accepted with revisions.
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14. Wang Soo Cha, Stalin Joseph, Kripal Singh Lakhi, Daehwan Park, Siddulu N. Talapaneni, Abdullah M. Al-Enizi, Devaraju M. Kadampaia, **A. Vinu*,** Excellent supercapacitance performance of 3-D mesoporous carbon with large pores from FDU-12 prepared by microwave method, ***RSC Advances,*** 2018, 8, 17017-17024.
15. V. V. Balasubramanian, B. M. Devassay, S. B. Halligudi, R. Deepika, S. B. Umbarakar and **A. Vinu,** Cyclohexylation of resorcinol with cyclohexanol catalyzed by tungstophosphoric acid supported zirconia catalysts, **Journal of Nanoscience and Nanotechnology,** 2018, 18, 2986–2992.
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19. V. V. Balasubramanian, B. M. Devassay, S. B. Halligudi, R. Deepika, S. B. Umbarakar and **A. Vinu,** Amylation of resorcinol by tert-Amyl alcohol catalyzed by Tungstophosphoric acid supported on zirconia, ***Advanced Porous Materials,*** 2018, Accepted.
20. P Muhammed Shafi, Chandra Bose, **A. Vinu,** Electrochemical Material Processing via Continuous Charge-Discharge Cycling: An Enhanced performance upon Cycling for Porous LaMnO3 Perovskite Supercapacitor Electrode, ***ChemElectroChem,*** 2018, In press
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22. Stalin Joseph, Devaraju M. Kempaiah, Mercy Benzigar, Hamid Ilbeygi, Gurwinder Singh, Siddulu N. Talapaneni, and **A. Vinu*,** Highly ordered mesoporous carbons with high specific surface area prepared from soft-drink beverages via nanotemplating method and their application in supercapacitors, ***Journal of Power Sources,*** 2018, Submitted.
23. S. Supriya, Stalin Joseph, **A. Vinu,** and Gurumurthy Hegde, Activation free synthesis of porous carbon nanomaterials with a high specific surface area from Arecanut kernel for high pressure CO_2 adsorption, ***Nanoscale,*** 2018, Submitted.
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27. Gurudas P. Mane, Siddulu N. Talapaneni, Kripal S. Lakhi, Hamid Ilbeygi, Ugo Ravon, Khalid Al-Bahily, Toshiyuki Mori, Dae-Hwan Park, and **A. Vinu*,** Highly Ordered Nitrogen-Rich Mesoporous Carbon Nitrides and Their Superior Performance for Sensing and Photocatalytic Hydrogen Generation, ***Angew. Chemie International Edition,*** 2017, 56, 8481-8485. (**Very Important Paper**).
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carbon nitrides with a high specific surface area and Cr_2O_3 nanoparticles for CO_2 and hydrogen adsorption, ***Journal of Materials Chemistry A, 2017,*** 5, 21542-21549.

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34. Dae-Hwan Park, Kripal S. Lakhi, Kavitha Ramadass, Min-Kyu Kim, Siddulu N. Talapaneni, Stalin Joseph, Ugo Ravon, Khalid Al-Bahily, and **A. Vinu*,** Energy efficient synthesis of ordered mesoporous carbon nitrides with a high nitrogen content and enhanced CO_2 capture capacity, ***Chem. Eur. J.*** 2017, 23, 10753-10757.
35. Gurwinder Singh, Kripal S. Lakhi, In Young Kim, Sungho Kim, Prashant Srivastava, Ravi Naidu, and **A. Vinu***, Activated Micro and Mesoporous Biocarbons with Extremely High Surface Area for High Pressure CO_2 Adsorption, ***ACS Applied Materials and Interface,*** **2017,** 9 (35), 29782-29793.
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Plenary and Keynote Lectures

1. **Plenary Lecture:** Development of Novel Mesoporous CN, BN, BCN and Carbon Molecular Sieves with Tunable Pore Diameters and their Applications, International Symposium on Nanostructure and Nanoporous Materials, South Korea, February, 2006.
2. **Plenary Lecture:** Development of novel mesoporous materials with tunable pore diameters and their applications in adsorption and catalysis, Tokyo Symposium on Nanoarchitecture of Porous Materials, Pre ZMPC2006, Date: 29-07-2006.
3. **Award Lecture:** Novel nanoporous Materials and their Application, March 28 2008, CSJ conference, Rikko University, Japan.
4. **Plenary Lecture:** Novel nanoporous Materials and their Application, International Symposium on Nanocomposites and Nanoporous Materials, South Korea, 14-16 May, 2008.
5. **Plenary lecture:** Highly acidic nanoporous materials and their application in catalysis, 41st Symposium on Catalysis, 3-6 November, 2008, Prague, Czech Republic.
6. **Keynote Lecture:** Three Dimensional Cage Type Mesoporous Catalysts for Acylation & Alkylation, 16-17 November, 2008, Dhahran, Saudi Arabia.
7. **Keynote Lecture:** Nanoporous carbons and their application in sensing and fuel cells, Yonsei University, 19-22 November, 2008, South Korea.
8. **Keynote Lecture:** Novel Nanoporous Materials for Fuel Cells and Sensing, 2 December, 2008. BARC, India.
9. **Keynote Lecture:** Recent advances in Nanoporous Materials and their Applications; 3rd International Symposium on Advanced Materials, Daegu, South Korea during 5-6 February, 2009.
10. **Plenary Lecture:** Advanced Functional Materials for Energy and Environment, Third Workshop on Renewable Energy: Advances in Fuel Cell Technology, KFUPM, 5 April, 2009, Saudi Arabia.
11. **Plenary Lecture:** Fabrication and catalytic applications of novel mesoporous materials, Polish Zeolite Forum, Poznan, 1 July 2009.
12. **Keynote Lecture:** ACIDIC Nanoporous Materials and their Application in Fine Chemical Synthesis – ISSHAC meeting, Poland – 7 July 2009.
13. **Keynote Lecture:** Nanoporous Carbon Based Materials and their Electro catalytic Applications, Pre-ZMPC 2009, Inha University, South Korea, 30 July-1 August, 2009.
14. **Keynote Lecture:** Structural Control of Novel Nanoporous Materials and their Multiple Functions International Workshop On Advances in Nanoscience and Nanotechnology, Anna University, Chennai, India, 28-30 October, 2009.
15. **Award Lecture:** Multifunctional Nanoporous Materials, 14th International workshop on Indian Society for Chemists and Biologists, Lucknow, 15-19 January, 2010.
16. **Keynote Lecture:** Nanoporous Materials and their multiple Applications, 3rd International Conference on Nanostructures, Kish Island, 10-12 March, 2010.

17. **Plenary Lecture:** Advanced Functional Nanoporous Materials for Multiple Applications, Nanomeet 2010, Chennai, India, 25-26 March, 2010.
18. **Colloquium Lecture:** Novel Advanced Functional Nanoporous Materials for Catalytic Applications, University of Erlangen, Germany, 18-23 May, 2010.
19. **Keynote Lecture:** Applications of Carbon Based Nanoporous Materials, 7th International Conference on Mesostructured Materials, Sorrento, Italy, 4-9 July, 2010.
20. **Keynote Lecture:** Advanced Functional Nanoporous Carbon Based Materials and their Application, 5th International Workshop on Emerging Functional Materials, University of Marie Curie, Paris, France, 22-25 July, 2010.
21. **Keynote Lecture:** Novel Advanced Functional Nanoporous Materials for Catalytic Applications, INDO-ITALIAN advanced level workshop on semiconductor nanostructures, Chennai, India, 7-10 September, 2010.
22. **Invited Special Lecture:** Advanced Nanoporous Materials with Functional Elements and their Catalytic and Electro catalytic Applications, King Saud University, Riyadh, Saudi Arabia, 12 December, 2010.
23. **Award Lecture:** 20th National Symposium on Catalysis, Multiple Applications of Nanoporous Materials with Functional Elements, IIT Chennai, India, 19-22 December, 2010.
24. **Plenary Lecture:** 15th ISCB conference, Fabrication and the Applications of Hierarchically Ordered Nano/Macroporous Films and Powders, Rajkot, Gujarat, 4-7 February,2011.
25. **Keynote Lecture:** International conference on advanced functional nanomaterials, Nanoporous Non-siliceous Materials with Ordered Nanoporous Structure and their Application Possibilities, Chennai, Anna University, 21-24 February, 2011.
26. **Plenary Lecture:** 23rd German Zeolite Meeting, Advanced Functional Nanoporous Non-siliceous Materials and their Application Possibilities, University of Erlangen, Erlangen, Germany, 2-4 March, 2011.
27. **Plenary Lecture:** Nanokat, Advanced Functional Nanoporous materials and their Catalytic Applications, University of Kaiserslautern, Kaiserslautern, Germany, 14 April, 2011.
28. **Plenary Lecture:** Sensing Applications of Nanoporous Materials, International Symposium on Physics and Technology of Sensors, March 8-11, 2012, C-Met, Pune, India, 8-11 March, 2012
29. **Keynote Lecture:** Biomolecule immobilization over nanoporous silica and non-siliceous materials and their application in biosensing, SPIE, Nanosystems in Engineering and Medicine Nanoengineering, Songdo Convensia, Incheon, South Korea 10-13 September, 2012.
30. **Plenary Lecture:** Functional Nanoporous Materials For Selective Sensing And Energy Storage, Workshop on Celebrating 30th Teaching Anniversary of Prof. Ha, Pusan National University, South Korea.
31. **Keynote Lecture:** Second International Workshop on Advanced Functional Nanomaterials (SIWAN-2013), India, 29-31 January,, 2013 – Supported.
32. **Plenary Lecture:** Advanced Functional Nanoporous Materials for Energy Storage Application, International Workshop on Advanced Materials for Energy and Environment, Kyunpook National University, South Korea, 23 August, 2013.
33. **Plenary Talk:** Nanomeet, Anna University, India, September 2013.
34. **Plenary Talk:** Clay and Composite Conference, South Korea, 4-5 December, 2013.
35. **Plenary Talk:** International Workshop on Nanogrid Materials, Pusan National University, 9-10 January, 2014.
36. **Plenary Talk:** International Conference on Applications of Advanced Materials on Sustainable Development, 17-18 January, 2014, Nagpur, India.
37. **Keynote Lecture:** 5th International Conference on Chemistry, Abha, Saudi Arabia, 26-29 April, 2014 (http://www.nature.com/natureevents/science/events/23321-5th_International_Chemistry_Conference).
38. **Keynote Lecture:** Nanoporous Materials 7, Niagra Falls, Canada, 22-25 June, 2014.
39. **Plenary Talk:** 6th PCGMR Conference, Taiwan, 2-5 September, 2014.
40. **Keynote Lecture:** 2nd International Conference on Global Trends in Pure and Applied Chemical Sciences, Hong Kong, 3-4 October, 2014.

41. **Plenary Talk:** International Conference on Advanced Materials and Manufacturing Processes for Strategic Sectors (ICAMPS 2015), Kovalam, India, 13-15 May, 2015.
42. **Plenary Talk:** Korean Clay Society Conference, Seoul, Korea, 29-30 May, 2015.
43. **Keynote Lecture:** International Workshop onGraphene and C3N4-based Photocatalysts (IWGCP), Wuhan, China, 5-8 June, 2015.
44. **Keynote Lecture:** ICMAT-2015, Singapore, 28 June-3 July, 2015.
45. **Plenary Talk:** International Symposium on Advanced Functional Materials, Daegu, Korea (Plenary), 27-28 August, 2015.
46. **Plenary Talk:** Corrosion and Protection of Materials (CPM 2015), Hanoi, Vietnam, 26-30 October, 2015.
47. **Plenary Talk:** Nanos-2015, International Conference on Nanoscience, nanotechnology and Advanced Materials, 14-17 December, 2015, Gitam University, India.
48. **Plenary Talk:** Ceramic and Advanced Materials for Energy and Environment, 14-17 December, YEAR Bengaluru, India.
49. **Plenary Talk:** Third International Workshop on Nanoscience and Nanotechnology, Anna University, India, 16-18 December,2015.
50. **Plenary Talk,** Cochin Nano 2016, Cochin, India (February 20-23rd, 2016)
51. **Plenary Talk,** ICNS6, Kish Island, March 7-10th 2016
52. **Plenary Lecture,** National Seminar and Workshop on Functional Nanomaterials for Energy, Environment and Health, March 21-22, 2016, Mangalore, India
53. **Marie Curie Lecture,** Solvey, EWHA Womans University, Seoul, South Korea, 24th of May 2016
54. **Keynote Lecture,** KCC, EWHA Womans University, Seoul, South Korea, 25th of May 2016
55. **Plenary Lecture,** 1st International Conference on Nanoscience and Nanotechnology (ICNAN'16), VIT University, 19-21st of October 2016
56. **Plenary Lecture,** National Conference on Emerging Biomaterials (NCEB-2016), Bharathiar University, 20th of October 2016
57. **Plenary Lecture,** ICSEM 2016, RV College of Engineering, Bangalore, 22nd of October 2016

Invited Lectures

1. Development of novel mesoporous silica and carbon based materials and their applications in biomolecule adsorption and catalysis, CMM series of invited lectures, University of Illinois, October 12, 2004, USA. Link: http://cmm.mrl.uiuc.edu/CMMseminar/2004Seminars/VinuA-041012.htm
2. Preparation of novel mesoporous carbon and carbon based materials, Rensselaer Polytechnic Institute, Troy, New York, 15 October, 2005, USA.
3. Synthesis and pore size modification of novel mesoporous silica and carbon molecular sieves and their applications, IIT Kharagpur, 6 December, 2004, India.
4. Immobilization of biomaterials onto mesoporous materials, International symposium on soft-nanotechnology, 20-21 June, 2005, Hokkaido, Japan
5. Novel mesoporous materials and their application in biomolecules capturing, University of Connecticut, USA, December, 2005.
6. Synthesis and application of mesoporous CN, BN, BCN and carbon molecular sieves with tunable pore diameters, Netherlands, January, 2006.
7. Catalytic performances of novel metal substituted mesoporous materials with various porous structures, University of Leuven, Belgium, January 2006.
8. Development of Novel Mesoporous CN, BN, BCN and Carbon Molecular Sieves with Tunable Pore Diameters and their Applications, Seoul National University, South Korea, February 2006.
9. Novel Mesoporous Materials and their Applications in Biomolecules Adsorption and Catalysis, KRICT, South Korea, February 2006.
10. Novel Mesoporous Materials and their Applications in Biomolecules Adsorption and Catalysis, Australian National University, Canberra, Australia.

11. **Plenary Lecture:** Development of Novel Mesoporous CN, BN, BCN and Carbon Molecular Sieves with Tunable Pore Diameters and their Applications, International Symposium on Nanostructure and Nanoporous Materials, South Korea, February, 2006.
12. **Plenary Lecture:** Development of novel mesoporous materials with tunable pore diameters and their applications in adsorption and catalysis, Tokyo Symposium on Nanoarchitecture of Porous Materials, Pre ZMPC2006, Date: 29-07-2006.
13. Novel mesoporous materials and their applications in fuel cells, International Conference on Nanomaterial and its Applications (ICNA-2007), Invited Lecture, Trichy, India.
14. Multifunctional Nanoporous Materials, 15 October, 2007, Colloquium Lecture, Max Planck Institute, Germany.
15. Nanoporous materials and their application in adsorption and fuel cells, Invited Lecture, 18 October, 2007, University of Kaiserslautern, Germany.
16. Nanoporous materials and their application in adsorption and fuel cells, Invited Lecture, 19 October, 2007, University of Augsburg, Germany.
17. Multifunctional Nanoporous Materials, 1 November, 2007, Invited Lecture, NEERI, India.
18. Nanoporous Materials, 25 November, 2007, Invited Lecture, Taiyo Kagaku, Yokkaichi, Japan.
19. Novel Nanoporous Materials and their applications, 3 November, 2007, Invited Lecture, BARC, India.
20. Porous materials and their applications, 13 December, 2007, Invited Lecture, IISC, India.
21. Multifunctional Nanoporous Materials, JNCASR, December 2007, Bangalore, India.
22. Multifunctional Nanoporous Materials, 29 January, 2007, Invited Lecture, Florida, USA International Ceramic Conference.
23. Novel Nanoporous Materials and their Application, 22 January, 2008, RPI, USA.
24. Novel Nanoporous Materials and their Application, 24 January, 2008, KSU, USA.
25. Multifunctional nanoporous materials and their application in adsorption and fuel cells, 6 February, 2008, IROST, Iran.
26. Nanoporous materials and their application in adsorption, catalysis and fuel cells, 6 February, 2008, Tehran University, Iran.
27. Multifunctional Mesoporous Materials, 9 February, 2008, Sharif University, Iran.
28. Nanoporous materials and their application in adsorption, catalysis and fuel cells, 9 February, 2008, Shahid Beheshti University, Iran.
29. **Award Lecture:** Novel nanoporous materials and their application, 28 March, 2008, CSJ conference, Rikko University, Japan.
30. **Plenary Lecture:** Novel nanoporous materials and their application, International Symposium on Nanocomposites and Nanoporous Materials, South Korea, 14-16 May,, 2008.
31. Novel Highly Acidic Nanoporous Cage Type Materials and their Catalysis, International KZA Workshop, Sogang, 19-20 July, 2008, South Korea.
32. Fabrication and application of novel mesoporous carbons and nitrides, International Workshop on Catalysis, Inha University, 21 July, 2008, South Korea.
33. Novel nanoporous carbon materials and their applications, Pusan University, 22 July, 2008, South Korea.
34. Nanoporous carbon and nitrides, Yonsei University, 23 July 2008, South Korea.
35. Fabrication and application of novel mesoporous carbons and nitrides, 23 July, 2008, Sogang University, South Korea.
36. Fabrication and application of novel nanoporous materials, 7^{t} October, 2008, NCL Pune, India.
37. Multifunctional Nanoporous Materials, 6 October, 2008, Tata Chemicals, Pune, India.
38. Novel nanoporous materials and their functions, 10 October, 2008, IICT Hyderabad, India.
39. Novel nanoporous materials for fuel cells and sensing applications, 14 October, 2008, BARC Mumbai, India.
40. Synthesis and applications of novel nanoporous materials, 15 October, 2008, NIIST Trivandrum, India.
41. Novel nanoporous materials and their applications in fuel cells and sensing, 20 October, 2008, NIT Trichy, India.

42. **Plenary lecture:** Highly acidic nanoporous materials and their application in catalysis, 41st Symposium on Catalysis, 3-6 November, 2008, Prague, Czech Republic.
43. **Keynote Lecture:** Three Dimensional Cage Type Mesoporous Catalysts for Acylation & Alkylation, 16-17 November, 2008, Dhahran, Saudi Arabia.
44. **Keynote Lecture:** Nanoporous carbons and their application in sensing and fuel cells, Yonsei University, 19-22 November, 2008, South Korea.
45. Novel Nanoporous Materials and their Applications, 20 November, 2008, Kyung Hee University, Yongin, S.Korea.
46. **Keynote Lecture:** Novel Nanoporous Materials for Fuel Cells and Sensing, 2 December, 2008. BARC, India.
47. **Keynote Lecture:** Recent advances in Nanoporous Materials and their Applications; 3rd International Symposium on Advanced Materials, Daegu, South Korea, February 5-6, 2009.
48. **Invited Lecture:** Novel Nanoporous Materials and their Applications, KSU, Riyadh, Saudi Arabia, 4 April, 2009.
49. **Plenary Lecture:** Advanced Functional Materials for Energy and Environment, Third Workshop on Renewable Energy: Advances in Fuel Cell Technology, KFUPM, 5 April, 2009, Saudi Arabia.
50. **Invited Lecture:** Fabrication and Structural Control of Nanoporous Materials and their Applications, ARAMCO, Saudi Arabia, 6 April, 2009.
51. **Plenary Lecture:** Fabrication and catalytic applications of novel mesoporous materials, Polish Zeolite Forum, Poznan, 1 July, 2009.
52. Novel Nanoporous Materials with Multiple Functions Max Planck Institute, Germany, 2 July, 2009.
53. **Keynote Lecture:** Acidic Nanoporous Materials and their Application in Fine Chemical Synthesis – ISSHAC Meeting, Poland, 7 July, 2009.
54. **Invited Lecture:** Development, Structural Characterization and Application of Nanoporous Materials, Industrial Chemical Research Institute, Warsaw, Poland, 7t July, 2009.
55. **Invited Lecture:** Novel Nanoporous Materials and their Applications, Marie Curie University, Paris, France, 8 July, 2009.
56. **Invited Lecture:** Development, Structural Characterization and Application of Nanoporous Materials, Lyon, CNRS, France, 9 July, 2009.
57. **Invited Lecture:** Development, Structural Characterization and Application of Nanoporous Materials, Strasbourg, CNRS, France, 10 July, 2009.
58. **Invited Lecture:** Structural and Morphological Control of Novel Nanoporous Materials, Institute of Catalysis, Madrid, Spain, 13 July, 2009.
59. **Invited Lecture:** Structural and Morphological Control of Novel Nanoporous Materials, UNED, Madrid, Spain, 14 July, 2009.
60. **Invited Lecture:** Acidic mesoporous materials and their application in fine chemical synthesis, Yonsei University, South Korea.
61. **Keynote Lecture:** Nanoporous Carbon Based Materials and their Electrocatalytic Applications, Pre-ZMPC 2009, Inha University, South Korea, 30 July-1 August, 2009.
62. **Invited Lecture:** Novel Nanoporous Materials and their Multiple Functions, International Workshop on Nanomaterials for Sustainable Development, 13-14 October, 2010, Rome, Italy.
63. **Keynote Lecture:** Structural Control of Novel Nanoporous Materials and their Multiple Functions International Workshop on Advances in Nanoscience and Nanotechnology, Anna University, Chennai, India, 28-30 October, 2009.
64. **Invited Lecture:** Functional Nanoporous Materials, IICT, Hyderabad, India, 22-23 December, 2009.
65. **Award Lecture:** Multifunctional Nanoporous Materials, 14th International Workshop on Indian Society for Chemists and Biologists, Lucknow, 15-19 January, 2010.
66. **Invited Lecture:** Advanced Functional Nanomaterials for Energy and Environment, IUST, 7 March, 2010.
67. **Keynote Lecture:** Nanoporous Materials and their Multiple Applications, 3rd International Conference on Nanostructures, Kish Island, 10-12 March, 2010.
68. **Invited Lecture:** Advanced Functional Nanomaterials for Energy and Environment, IUST, Tehran, Iran, 7 March, 2010.

69. **Plenary Lecture:** Advanced Functional Nanoporous Materials for Multiple Applications, Nanomeet 2010, Chennai, India, 25-26 March, 2010.
70. **Invited Lecture**: Hierarchically Ordered Nano/Macroporous Films and Powder Materials and their Applications in Sensing and Catalysis, Anna University, Visiting Professor Programme, Chennai, India, 25 April, 2010.
71. **Invited Lecture**: Nanoporous materials and their advantages, Polymer Society of India, Trivandrum Chapter, 30 April, 2010.
72. **Colloquium Lecture:** Novel Advanced Functional Nanoporous Materials for Catalytic Applications, University of Erlangen, Germany, 18-23 May, 2010.
73. **Invited Lecture**: Advanced Nanoporous Materials with Functional Elements and their Electrocatalytic Applications, University of Erlangen, Germany, 21 May, 2010.
74. **Keynote Lecture:** Applications of Carbon Based Nanoporous Materials, 7th International Conference on Mesostructured Materials, Sorrento, Italy, 4-9 July, 2010.
75. **Keynote Lecture:** Advanced Functional Nanoporous Carbon Based Materials and their Application, 5th International Workshop on Emerging Functional Materials, University of Marie Curie, Paris, France, 22-25 July, 2010.
76. **Keynote Lecture:** Novel Advanced Functional Nanoporous Materials for Catalytic Applications, Indo-Italian Advanced Level Workshop on Semiconductor Nanostructures, Chennai, India, 7-10 September, 2010.
77. **Invited Special Lecture:** Advanced Nanoporous Materials with Functional Elements and their Catalytic and Electrocatalytic Applications, King Saud University, Riyadh, Saudi Arabia, 12 December, 2010.
78. **Award Lecture:** 20th National Symposium on Catalysis, Multiple Applications of Nanoporous Materials with Functional Elements, IIT Chennai, India, 19-22 December, 2010.
79. **Plenary Lecture:** 15th ISCB conference, Fabrication and Applications of Hierarchically Ordered Nano/Macroporous Films and Powders, Rajkot, Gujarat, 4-7 February, 2011.
80. **Invited Lecture:** Nanoporous Materials and their Role in Adsorption, Separation and Catalysis, CSMCRI, Bhavanagar, Gujarat, 7 March, 2011.
81. **Keynote Lecture:** International Conference on Advanced Functional Nanomaterials, Nanoporous Non-siliceous Materials with Ordered Nanoporous Structure and their Application Possibilities, Chennai, Anna University, 21-24 February, 2011.
82. **Plenary Lecture:** 23rd German Zeolite Meeting, Advanced Functional Nanoporous Non-Siliceous Materials and their Application Possibilities, University of Erlangen, Erlangen, Germany, March 2-4th 2011.
83. **Invited Lecture:** Seminar at AIBN, Advanced Functional Nanoporous Non-siliceous Materials and their Application Possibilities, University of Queensland, Queensland, Australia, 8-12 March, 2011.
84. **Invited Lecture:** Advanced Functional Nanoporous Non-siliceous Materials and their Application Possibilities, J. Heyrovski Institute of Physical Chemistry, Praha, Czech Republic, 1 April, 2011.
85. **Plenary Lecture:** Nanokat, Advanced Functional Nanoporous materials and their Catalytic Applications, University of Kaisersluatern, Kaiserslautern, Germany, 14 April, 2011.
86. **Invited Lecture:** Advanced Functional Nanoporous Non-siliceous Materials and their Multiple Functions, Technical University of Dresden, Dresdan, Germany, 8 April, 2011.
87. **Invited Lecture:** Advanced Functional Nanoporous Non-siliceous Materials and their Multiple Functions, Technical University of Munchen, Muenchen, Germany, 20 April, 2011.
88. **Invited Lecture:** Advanced Functional Nanoporous Non-siliceous Materials and their Multiple Functions, LMU, Muenchen, Germany, 21 April, 2011.
89. **Invited Lecture:** Advanced Functional Nanoporous Non-siliceous Materials and their Multiple Applications, SABIC, Riyadh, Saudi Arabia, 1 May, 2011.
90. **Invited Lecture:** Advanced Functional Nanoporous Non-siliceous Materials and their Multiple Functions, MPI colloids and Interfaces, Potsdam, Germany, 11 May, 2011.
91. **Invited Lecture:** Advanced Functional Nanoporous Non-Siliceous Materials and their Multiple Functions, Center of Research Excellence in Renewable Energy and Center of Excellence in Nanotechnology, KFUPM, Dammam, Saudi Arabia, 5 June, 2011.

92. **Invited Lecture:** Nanoporous Material with Functional Elements for Multiple Applications, Fudan University, Shangai, China, 22 June, 2011.
93. **Invited Lecture:** Multifunctional Nanoporous Carbon Based Materials, Zhejiang, University, Hanzhou, Zhejiang University, Hangzhou, China, 24 June, 2011.
94. **Invited Lecture:** Multifunctional Nanoporous Carbon Based Materials, Shanghai Normal University, Shanghai, China, 1 July, 2011.
95. **Invited Lecture:** Novel Advanced Functional Nanoporous Materials for Catalytic Applications, Fudan University, Shangai, China, 2 July, 2011.
96. **Invited Lecture:** Nanomaterials with Well-ordered Porosity for Selective Applications, International Conference on Functional Nanomaterials (ICFN 2011), Sastra University, Trichy, India, 22-25 September, 2011.
97. **Invited Lecture:** Novel Functional Nanomaterials for Sensing and Energy Storage Application, International Workshop on Advanced Nanomaterials and their Application, King Saud University, Riyadh, Saudi Arabia. 17 October, 2011.
98. **Invited Lecture:** Nanomaterials with Well-ordered Porosity for Selective Applications, Sogang University, Seoul, South Korea, 26 October, 2011.
99. **Invited Lecture:** Nanomaterials with Well-ordered Porosity for Selective Applications, Sogang University, Seoul, South Korea, 26 October, 2011.
100. **Invited Lecture:** Novel Nanoporous Functional Materials for Sensing and Energy Related Applications, 5th International symposium on Advanced Materials: Porous Materials, Daegu, KNU, Daegu, South Korea, 27-28 October, 2011.
101. **Invited Lecture:** Novel Functional Nanomaterials for Sensing and Energy Storage Application, Yonsei University, Seoul, South Korea, 29 October, 2011.
102. **Invited Lecture:** Functional Nanomaterials for Energy and Sensing Applications, Gifu University, Gifu, Japan, 15 December, 2011.
103. **Invited Lecture:** Functional Nanomaterials for Energy and Sensing Applications, Osaka University, Osaka, Japan, 16 December, 2011.
104. **Invited Lecture:** Functional Nanomaterials for Energy and Sensing Applications, Nagoya Institute of Technology, Nagoya, Japan, 19 December, 2011.
105. **Invited Lecture:** Functional Nanomaterials for Energy and Sensing Applications, Toyota Central R&D Lab University, Nagoya, Japan, 19 December, 2011.
106. **Invited Lecture:** Functional Nanomaterials for Energy and Sensing Applications, University of Tokyo, Tokyo, Japan, 21 December, 2011.
107. **Invited Lecture:** Functional Nanomaterials for Energy and Sensing Applications, Yokohoma National University, Yokohoma, Japan, 21 December, 2011.
108. **Invited Lecture:** Nanoporous Materials for Energy and Sensing Applications, 1st International Conference on Physics of Materials And Materials Based Device Fabrication (ICPM-MDF-2012), Shivaji University, Kolahpur, India, 17-19 January, 2012.
109. **Invited Lecture:** Nanoporous Functional Materials for Multiple Applications, AIBN group leader retreat, Peppers Salt Resort and Spa, NSW, Australia, 19-20 January, 2012.
110. **Plenary Lecture:** Sensing Applications of Nanoporous Materials, International Symposium on Physics and Technology of Sensors, 8-11 March, 2012, C-Met, Pune, India, 8-11 March, 2012.
111. **Invited Lecture:** Multifunctional Nanoporous Materials, NIIST, Trivandrum, India, 6 June, 2012.
112. **Invited Lecture:** Advanced Nanoporous Materials for Multiple Applications, University of Kerala, Trivandrum, India, 7 June, 2012.
113. **Keynote Lecture:** Nanoporous Materials for Energy Storage, Sensing and Catalysis, ICMST 2012, 10-14 June, 2012, Kottayam, India. 10-14 June, 2012.
114. **Invited Lecture:** Nanoporous Carbon Based Materials for Supercapacitors, Yonsei University, Seoul, South Korea, 9 July, 2012.
115. **Invited Lecture:** Hierarchically Ordered Meso-macroporous Materials for Sensing Application, Workshop - Challenges in Nanoporous and Layered Materials for Catalysis, Cheju Island, South Korea, 3-5 August, 2012.
116. **Invited Lecture:** Advanced Functional Nanoporous Materials for Various Applications, Changwan National University, Changwan, South Korea, 6 August, 2012.

117. **Invited Lecture:** Advanced Functional Nanoporous Materials for Various Applications, Pusan National University, Changwan, South Korea, 6 August, 2012.
118. **Invited Lecture:** Advanced Functional Nanoporous Materials for Various Applications, Ulsan University of Science and Technology, Ulsan, South Korea, 7 August, 2012.
119. **Invited Lecture:** Nanoporous Materials for Catalytic, Sensing and Energy Storage Application, POSTECH, South Korea, 7 August, 2012.
120. **Invited Lecture:** Hierarchically Ordered Meso-macroporous Materials for Sensing Application, Kyungpook National University, South Korea, 8 August, 2012.
121. **Invited Lecture:** Mesoporous Nanoarchitectures, Sungkyunkwan University, South Korea, 9 August, 2012.
122. **Invited Lecture:** Hierarchically Ordered Meso-macroporous Materials for Sensing Application, Seoul Womans University, South Korea, 9 August, 2012.
123. **Invited Lecture:** Advanced Functional Mesostructured Materials, Hankuk University, South Korea, 10 September, 2012.
124. **Keynote Lecture:** Biomolecule immobilization over nanoporous silica and non-siliceous materials and their application in biosensing, SPIE, Nanosystems in Engineering and Medicine Nanoengineering, Songdo Convensia, Incheon, South Korea, 10-13 September, 2012.
125. **Invited Lecture:** Advanced Functional Mesostructured Materials, Kookmin University, South Korea, 12 September, 2012.
126. **Invited Lecture:** Advanced Functional Mesostructured Materials, University of Seoul, South Korea, 12 September, 2012.
127. **Invited Lecture:** Biomolecule Immobilization over Mesoporous Materials, Yonsei University, Wong Ju, South Korea, 13 September, 2012.
128. **Invited Lecture:** Advanced Functional Mesostructured Materials, Seoul National University, South Korea, 14 September, 2012.
129. **Invited Lecture:** Advanced Functional Mesostructured Materials, Inha University, South Korea, 14 September, 2012.
130. **Invited Lecture:** Ordered nanostructured materials with both meso and macropores for sensing, Green Chemical Industry for Environment and Health: Fluorine Compounds, Changwon Pulman Hotel, South Korea, 14-16 November, 2012.
131. **Invited Lecture:** Nanostructured Films for Selective Sensing of Acidic and Basic Molecules, Interdisciplinary Symposium on Materials Chemistry (ISMC-2012), Mumbai, India, 11-15 December, 2012.
132. **Plenary Lecture:** Functional Nanoporous Materials for Selective Sensing and Energy Storage, Workshop on Celebrating 30th Teaching Anniversary of Prof. Ha, Pusan National University, South Korea.
133. **Keynote Lecture:** Second International Workshop on Advanced Functional Nanomaterials (SIWAN-2013), India 29-31 January, 2013 – Supported
134. **Invited Lecture**: Functional Macro-mesoporous Materials for Sensing Application, IICT, India, 27 May, 2013.
135. **Invited Lecture:** Nanoporous Materials: Structure, Properties, and Applications, Intitute of Tropical Technology, Vietnam, 29 May, 2013.
136. **Invited Lectur:,** Nanoporous Materials: Structure, Properties, and Applications, Institute of Chemistry, VAST, Hanoi, Vietnam, 31 May, 2013.
137. **Invited Lecture:** Biomolecule Functionalized Porous Architectures for Sensing, Pusan National University, South Korea, 21 August, 2013.
138. **Invited Lecture:** Functionalized Nanoporous Carbon Based Electrodes for Supercapacitor Application, Changwan National University, South Korea, 22 August, 2013.
139. **Plenary Lecture:** Advanced Functional Nanoporous Materials for Energy Storage Application, International Workshop on Advanced Materials for Energy and Environment, Kyunpook National University, South Korea, 23 August, 2013.
140. **Invited Lecture:** Highly Ordered Porous Films and their Application in Sensing, Ewha Womans University, 26 August, 2013.

141. **Invited Lecture:** Biomolecule Functionalized Porous Architectures for Sensing, Yonsei University, South Korea, 27 August, 2013.
142. **Invited Lecture**: Porous Carbon Based Nanostructures and their Multiple Functions, Seoul National University, South Korea, 27 August, 2013.
143. **Invited Lecture:** Highly Ordered Porous Films and their Application in Sensing, Sogang University, South Korea, 27 August, 2013.
144. **Plenary Talk:** Nanomeet, Anna University, India, September 2013.
145. **Invited Talk:** Novel Functional Nanoporous Catalytic Materials for Adsorption and Catalysis, Qatar University, Qatar.
146. **Invited Talk:** Nanoporous Materials for Disease Diagnosis and Sensing, KSU, Saudi Arabia.
147. **Invited Talk:** Multifunctional Nanoporous Materials for Adsorption and Energy Storage, KSU, Saudi Arabia.
148. **Invited Talk:** Multifunctional Nanoporous Materials and their Applications, KAUST, Saudi Arabia.
149. **Invited Talk (Skype Lecture):** Multifunctional Nanoporous Materials and their Applications, IIT Chennai, India.
150. **Plenary Talk:** Clay and Composite Conference, South Korea, 4-5 December, 2013.
151. **Invited Talk:** Shanghai Normal University, China, 24 December, 2013.
152. **Invited Talk:** Zhejiang University, China, 25 December, 2013.
153. **Invited Talk:** Fudan University, China, 27 December, 2013.
154. **Plenary Talk:** International Workshop on Nanogrid Materials, Pusan National University, 9-10 January, 2014.
155. **Plenary Talk:** International Conference on Applications of Advanced Materials on Sustainable Development, , Nagpur, India, 17-18 January, 2014.
156. **Invited Talk:** Novel Functional Nanoporous Catalytic Materials for Synthesis of Fine Chemicals, Ewha Womans University, South Korea, 13-14 February, 2014.
157. **Invited Talk:** Nanoporous Materials for Energy Storage Application, MANA reunion workshop, Japan, 2-7 March, 2014.
158. **Keynote Lecture:** 5th International Conference on Chemistry, Abha, Saudi Arabia, 26-29 April 2014(http://www.nature.com/natureevents/science/events/23321-5th_International_Chemistry_Conference).
159. **Invited Lecture:** Kyoto University, Japan, 27 May, 2014.
160. **Keynote Lecture:** Nanoporrous Materials 7, Niagara Falls, Canada, 22-25 June, 2014.
161. **Invited Lecture:** 5th Australia-China Symposium on Materials Science, University of Woollongong, NSW, Australia, 20-23 July, 2014.
162. **Plenary Talk:** 6th PCGMR Conference, Taiwan, 2-5 September, 2014.
163. **Keynote Lecture:** 2nd International Conference on Global Trends in Pure and Applied Chemical Sciences, Hong Kong, 3-4 October, 2014.
164. **Invited Talk:** Jilin University, China, 6 October, 2014.
165. **Invited Talk:** China University of Geo Sciences, Beijing, China, 7 October, 2014.
166. **Plenary Talk:** International Conference on Advanced Materials and Manufacturing Processes for Strategic Sectors (ICAMPS 2015), Kovalam, India, 13-15 May,, 2015.
167. **Invited Talk:** KAIST, Daejon, S. Korea, 26 May, 2015.
168. **Invited Talk:** Pusan National University, Pusan, 27 May, 2015.
169. **Invited Talk:** Changwon National University, Changwon, 27 May, 2015.
170. **Invited Talk:** Yonsei University, Seoul, Korea, 28 May, 2015.
171. **Plenary Talk:** Korean Clay Society Conference, Seoul, Korea, 29-30 May, 2015.
172. **Keynote Lecture:** International Workshop on Graphene and C_3N_4-based Photocatalysts (IWGCP), Wuhan, China, 5-8 June, 2015.
173. **Invited Talk:** South Central University for Nationalities, Wuhan, China, 9 June, 2015.
174. **Invited Talk:** Wuhan University, Wuhan, China, 9 June, 2015.
175. **Keynote Lecture:** ICMAT-2015, Singapore, 28 June-3 July, 2015.
176. **Plenary Talk:** International Symposium on Advanced Functional Materials, Daegu, Korea (Plenary), 27-28 August, 2015.

177. **Plenary Talk:** Corrosion and Protection of Materials (CPM 2015), Hanoi, Vietnam, 26-30 October, 2015.
178. **Plenary Talk:** Nanos-2015, International Conference on Nanoscience, nanotechnology and Advanced Materials, Gitam University, India, 14-17 December, 2015.
179. **Plenary Talk:** Ceramic and Advanced Materials for Energy and Environment, Bengaluru, India, 14-17 December, 2015.
180. **Plenary Talk:** Third International Workshop on Nanoscience and Nanotechnology, Anna University, India, 16-18 December, 2015.
181. **Plenary Talk,** Cochin Nano 2016, Cochin, India (February 20-23rd, 2016)
182. **Plenary Talk,** ICNS6, Kish Island, March 7-10th 2016
183. **Invited Talk,** National Taiwan, University, Taichung, May 19th 2016.
184. **Invited Talk,** National Chung Hsing University, Taichung, May 20th 2016.
185. **Plenary Lecture,** National Seminar and Workshop on Functional Nanomaterials for Energy, Environment and Health, March 21-22, 2016, Mangalore, India
186. **Marie Curie Lecture,** Solvey, EWHA Womans University, Seoul, South Korea, 24th of May 2016
187. **Keynote Lecture,** KCC, EWHA Womans University, Seoul, South Korea, 25th of May 2016
188. **Invited Lecture,** EWHA Womans University, Seoul, South Korea, 26th of May 2016
189. **Invited Lecture,** Beijing Institute of Petrochemical Technology, Beijing, China – 9-08-2016
190. **Invited Lecture,** Nanjing Tech University, Nanjing, China – 19-09-2016
191. **Invited Lecture,** Suzhou University of Science and Technology, Suzhou, China – 20-09-2016
192. **Invited Lecture,** North China University of Science and Technology, 22nd of September 2016
193. **Invited Lecture,** ATN Delegation, Indonesia, 26th of September 2016
194. **Plenary Lecture,** 1st International Conference on Nanoscience and Nanotechnology (ICNAN'16), VIT University, 19-21st of October 2016
195. **Plenary Lecture,** National Conference on Emerging Biomaterials (NCEB-2016), Bharathiar University, 20th of October 2016
196. **Plenary Lecture,** ICSEM 2016, RV College of Engineering, Bangalore, 22nd of October 2016
197. **Plenary Lecture,** International Conference on Material Sciences (SCICON' 16) December 19-21, India
198. **Invited Lecture,** DEBEL, India, January 3rd 2017
199. **Plenary Lecture,** International Conference on Advanced Rechargeable Batteries & allied Materials - 2017 in Pune, India from March 8 to 10, 2017.
200. Invited Lecture, Mangalore University, India, March 6th 2017
201. **Plenary Lecture,** International Conference on SUSTAINABLE ENVIRONMENT AND ENERGY (ICSEE'17) to be held in Chennai, India (April 6 - 7, 2017)
202. **Invited Lecture,** Anna University, India, April 5th 2017.
203. **Keynote Lecture,** Ewha Chemistry and Nanoscience International Symposium (ECNIS-2017), Seoul, Korea May 17-18, 2017.
204. **Invited Lecture,** Sichuan University, China, May 14-16th 2017.
205. **Keynote Lecture,** ICMAT-2017, Singapore, June 28-23, 2017.
206. **Invited Talk,** NanoS3-E 2017, QUT, September 27th 2017.
207. **Plenary Lecture,** 2017 Inter-Academy Seoul Science Forum, October 31st to November 2nd 2017
208. **Invited Talk,** EWHA Womans University, November 2nd 2017.
209. **Plenary Talk,** 2017, Korean Clay Society Conference on Advanced Materials, November 3rd 2017
210. **Plenary Talk,** U-Healthcare 2017, December 5-7th 2017, South Korea
211. Invited Talk, Yonsei University, December 8th 2017.
212. Invited Talk, IISC, 26th of December 2017, India
213. Invited Talk, JNCASR, 28th of December 2017, India
214. **Plenary Talk,** International Conference on Recent Advances in Materials Science and Biophysics, Mangalore University, January 23rd to 24th 2018, India.
215. **Plenary talk,** III International Symposium on Nanoparticles/Nanomaterials and Applications, Caparica, Lisbon, Date: 22nd to 25th of January 2018, Portugal.
216. **Invited Talk,** ICONN 2018, University of Wollongong, Jan 29th to Feb 2nd 2018.
217. **Invited Talk,** Defense Australia, University of Wollongong, April 10th 2018.

218. **Invited Talk,** CIMTEC 2018, June 4 to 8th 2018, Perugia, Italy.

A short CV of Prof. Ajayan Vinu, FRSC, FRACI, FWAC, FFMAS

Prof. Vinu is currently working as a Global Innovation Chair Professor and Director of Global Innovative Center for Advanced Nanomaterials at the University of Newcastle. Prior to this, Prof. Vinu was also working as a Full Professor of Nanomaterials, at the Future Industries Institute, University of South Australia, Mawson Lakes, Australia from 2015 to 2017. His previous employment was as a Full Professor and ARC Future Fellow at the University of Queensland, Brisbane, Australia during September 2011-2015. Before moving to Australia, he had been working as a senior researcher at the National Institute for Materials Science (NIMS), Tsukuba, Japan since 2006 after he had successfully completed two years of the ICYS fellowship at the same institute and a few years of research at the Technical University of Kaiserslautern (TUK), Germany. Although Prof. Vinu registered his PhD at Anna University, he performed most of his PhD work at the TUK, Germany (2000-2003). During these 14 years of research, Prof. Vinu has made a significant contribution in the field of nanoporous materials and their application in sensing, energy storage, fuel cells, adsorption and separation, and catalysis.

The quality of his research has been recognised with several international awards including Medal, Chemical Research Society of India (2018), Scopus Young Researcher Award 2014, Friedrich Wilhelm Bessel award by the Humboldt Society (2010), JSPS Senior Invitational Fellow for the year 2014, Australian Future Fellowship (Professorial Level) for the year 2010, Indian Society for Chemists and Biologists award for excellence for the year 2010, Catalysis Society of India Young Scientist award for the year 2010, Chemical Society of Japan Award for the Young Scientist for the year 2008, Laureate of Khwarizmi International Award 2008, Asian Excellent Lectureship Award, and ICYS fellowship. Prof. Vinu is honoured with the Fellow of Royal Society of Chemistry, FRSC (UK), Fellow of Royal Australian Chemical Institute (FRACI), Fellow of World Academy of Ceramics (FWAC) Fellow of World Academy of Art and Science (FWAAS) and Foreign Fellow of Maharashtra Academy of Sciences, FFMAS. His contribution in the field of nanoporous materials is also clearly reflected by his international ranking by Science Watch as one of the top 15 researchers in the field and has led to ca. 340 papers in high impact factor journals with ca. 16,000 citations and a H-index of 65. His research has been published in top journals like Angew. Chemie, Nano Letters, J. Am. Chem. Soc., Adv. Mater, Adv. Funct., Mater. Chem., Eur. J., Chem. Mater., etc. with an average of 850 citations per year. At least 40 of his papers have been cited more than 100 times (18 papers have been cited more than 200 times) and 80 papers have been cited more than 50 times.

The innovative nature and commercial potential of his research is evidenced by 28 national and international patents. He has been awarded for novel mesoporous carbon, silica and carbon nitride materials. He has received more than $9.0 million AUD from both industry and government funding agencies. He has also been invited to write several chapters by renowned publishers including Wiley, Elsevier and American Scientific. He is the Editor of Science of Advanced Materials and Australian Editor of Journal of Nanoscience and Nanotechnology and recently, was invited and appointed as the Editor-in-Chief of Advanced Porous Materials by the American Scientific Publishers for a period of five years. He has been recently appointed as the Editorial Board Member of Scientific Reports, a Nature Publishing Group and Chemical Record, a Wiley Journal for three years. Professor Vinu is also in the Editorial board of several journals namely Journal of Nano Science and Nanotechnology, Current Science, etc. He has been invited to deliver presentations at numerous international conferences, workshops and seminars and chaired sessions of several international conferences.

Prof. Vinu has visited institutes in more than 40 countries to deliver lectures and gave ca. 220 lectures including 31 plenary and 28 keynote lectures at international conferences as well as ca. 155 invited talks. He was also offered honorary professor position from leading universities including Hokkaido University, Japan, Yonsei University, South Korea, Kyungpook National University, South Korea, Fudan University, China, Jilin University, China, Mangalore University, India, and Anna University, India, and Adjunct Principal Researcher from Korean Research Institute for Chemical technology, Daejeon, South Korea. Prof. Vinu has a network of collaborations with researchers in 15 countries. He has established collaborative links with the researchers from NIMS, Japan, Yonsei and

EWHA Womans University and Kyungpook National University (South Korea), University of Erlangen, Germany, MPI Colloids and Interfaces, Germany, Kent State University, USA, BARC, India, and NCL and IICT, India. He has established NIMS-India Materials Research Center at IICT Hyderabad and was appointed as the research director for two years. Prof. Vinu has organised numerous international conferences and workshops including ICEAN 2012.