



SHORT BIOGRAPHY

Mercy Rose Benzigar is currently a PhD candidate in Prof. Ajayan Vinu's group, at the University of South Australia. Her educational qualifications are from India, where she completed her Master of Science in Biotechnology with the backgrounds in genetic engineering, chemistry and microbiology at Sathyabama University. After being trained during the internship project at the National Institute for Material Science in Japan at Prof. Ajayan Vinu's group, she gained a strong background in Material science and currently working on Mesoporous Fullerenes and Mesoporous functionalised fullerenes for Fuel cell Applications.

EDUCATION

- Bachelor of Biotechnology in the Noorul Islam University.
- Master of Biotechnology in Sathyabama University.
- Currently doing PhD at the University Of South Australia.

RESEARCH INTEREST

- Mercy's research is currently focussed on Mesoporous fullerenes and Mesoporous functionalised fullerenes with highly crystalline structures for fuel cell applications.
- She is also interested in working on supercapacitors and synthesis of new materials which is useful for developing future energy conversion devices as well as in fabricating new materials for biological applications.

RESEARCH EXPERIENCES

- Mercy Rose did her internship program at the National Institute for Material Science, Japan in 2011 and worked on the synthesis of “Mesoporous Hydroxyapatite” under the supervision of Prof. Ajayan Vinu.
- She has also worked on the project, “Extracting and Profiling of Amino Acids from Seaweeds”, at Manonmaniam Sundaranar University in 2009.
- During her PhD, she has worked on Energy storage and conversion applications with the strong guidance and training from Prof. Ajayan Vinu’s supervision.

HONORS AND AWARDS

- Organized the **ISEAN Symposium 2016**, as one of the member in Prof. Ajayan’s Research group.
- Received **The Graduate Travel Award** of young researchers for scientific discussions on Green Energy conversion, Seminar – International workshop, Koumi, Nagano, Japan, 2014.
- Awarded the **outstanding international student merit based, IPRS scholarship** by the Australian Government for my PhD program, 2012 to 2015.
- Awarded the premier **UQ Centennial scholarship** for outstanding PhD candidates that covers the living allowance for the entire doctoral program, 2012, Australia.
- Awarded the **Recognition of excellence award, UQ Advantage scholarship**, 2012, Australia.
- **Organized the ICEAN conference 2012**, with Prof. Ajayan Vinu’s Research team.
- Obtained the **International Internship Award** for young researchers by the International Centre for Materials Nano-architectonics, National Institute of Materials Science, Japan, 2010.
- Won best **Poster Presentation Award** for the 3rd International Workshop on Green Energy Conversion, Japan, 2014.
- Received **AIBN Graduate travel support** for the scientific discussion held at the International conference and exhibition on advanced nanomaterials (**ICANM**), **Calgary, Canada**, 2014.
- **Secured first Rank and awarded Merit certificate** during the academic year of 2009-2010 in Sathyabama University, India.
- **Got first in paper presentation** on gene to vial held in 25th of February 2009 in Noorul Islam college of Arts and Science, India.
- **Secured ‘A’ grade in Gold medallist Examination** on English language held in 2004 conducted at state level by GRP, Chennai.

- **Won in** Shuttle badminton in 2001 in Maria Rafols Matriculation School.
- **Won in kho-kho** Sports in 2001 held in Maria Rafols Matriculation School.
- **Won a prize on shuttle** during the inter school competition in Kanyakumari.
- Participated in **International Conference held in VIT College**, Vellore on the topic Developmental tools in Biotechnology.
- Participated in **Bio-trix competition** held in 25th and 26th February 2009, organised in the department of Bio sciences in Noorul Islam college of Arts and Science.

PAPERS IN INTERNATIONAL JOURNALS

1. **M. R. Benzigar**, G. Mane, S. N. Talapaneni, C. Anand, S. Varghese, S. S. Aldeyab, V. V. Balasubramanian, A. Vinu,* Microwave-assisted synthesis of highly crystalline mesoporous hydroxyapatite with a rod shaped morphology, *Chemistry Letters*, 2012, 41, 458460.
2. S. Varghese, S. Nagarajan, **M. R. Benzigar**, A. Mano, Z. ALothman, G. A Gnana Raj, A. Vinu,* 3D Nanoporous FeAl-KIT-5 with a cage type pore structure: a highly efficient and stable catalyst for hydroarylation of styrene and arylacetylenes, *Tetrahedron Letters*, 53 (2012) 1485–1489.
3. U. Balakrishnan, N. Ananthi, S. Velmathi, **M. R. Benzigar**, S. N. Talapaneni, Salem S. Aldeyab, K. Ariga, A. Vinu*, Immobilization of chiral amide derived from (1R,2S)-(-)-norephedrine over 3d nanoporous silica for the enantioselective addition of diethylzinc to aldehydes, *Microporous and Mesoporous Materials*, 2012.
4. R. Yogamalar, P. S. Venkateshwaran, **M. R. Benzigar**, K. Ariga, A. Vinu* and A. Chandra Bose, Dopant induced bandgap narrowing in Y-doped zinc oxide nanostructures, *J. Nanosci. Nanotech.* 2011.
5. P.K. Raja, A. Chokkalingam, S. V. Priya, V. V. Balasubramanian, **M. R. Benzigar**, S. S. Aldeyab, R. Jayavel, K. Ariga and A. Vinu*, Highly basic CaO nanoparticles in mesoporous carbon materials and their excellent catalytic activity, *Advanced Science Letters*, 2011.
6. D. S. Dhawale, **M. R. Benzigar**, M. A. Wahab, C. Anand, S. Varghese, V. V. Balasubramanian, S. S. Aldeyab, K. Ariga, A. Vinu*, Fine tuning of the supercapacitive performance of nanoporous carbon electrode with different pore diameters, *ChemSusChem*, 2012.
7. C. Anand*, P. Srinivasu, G. P Mane, S. N. Talapaneni, **M. R. Benzigar**, S. V. Priya, S. S. Al-deyab, Y. Sugi, A. Vinu*, Direct synthesis and characterization of highly ordered cobalt substituted KIT-5 with 3D nanocages for cyclohexene epoxidation, *Microporous and Mesoporous Materials*, 2012.