



Dinesh Jagadeesan
Ph.D. JNCASR Bangalore
Assistant Professor, Chemistry
d.jagadeesan@iitpkd.ac.in, 04923-226345
<https://iitpkd.ac.in/people/djagadeesan>

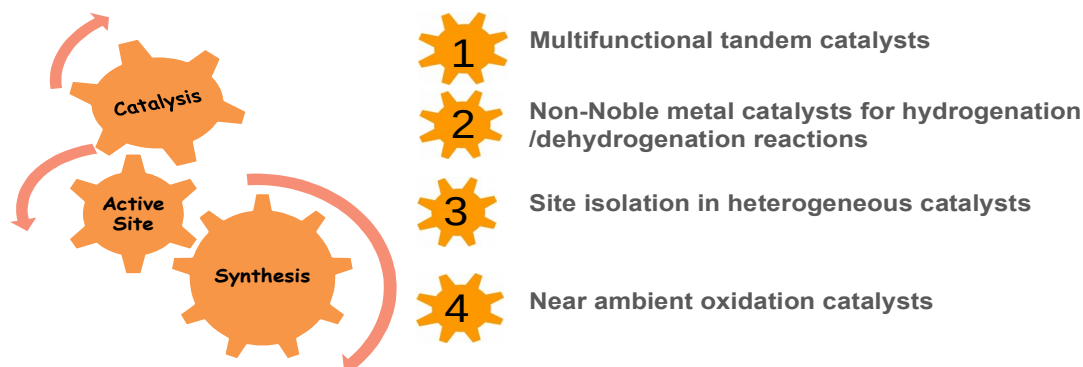


Research Interests

- Materials Chemistry
- Heterogeneous Catalysis
- Technologies for clean environment

Brief Summary of Research

Our research group works on the design and chemical synthesis of nano sized materials and studies its ability to accelerate the rate of chemical reactions. The interplay between chemical synthesis of materials, structure and catalysis is the core interest of the group. The successful translation of our understanding to a viable process can find applications in catalysing large scale industrial reactions to simple indoor air purifiers, waste management or even economical water treatment device. Dr. Jagadeesan is interested to collaborate with industries and start ups to address materials issues in developing viable technologies for clean environment. His research group has published over 30 research articles and three patents in the areas of materials and catalysis. He has guided the research of three Ph.D students and several Masters students. He was awarded the INSA medal for Young Scientists in 2017 for Chemical Sciences by the Indian National Science Academy in New Delhi.



Projects (Full list of projects: <https://sites.google.com/view/dinesh-jagadeesan>)

Dr. Jagadeesan has carried out several sponsored research projects funded by SERB, BRNS, GAIL and DST to develop new catalyst materials for environmentally important reactions.

Recent Publications (Full list of publications: <https://sites.google.com/view/dinesh-jagadeesan>)

- D. Vernekar, S. Ratha, C. V. Rode and **D. Jagadeesan**, Efficient bifunctional reactivity of K-doped CrO(OH) nanosheets: Exploiting the combined role of Cr(III) and surface -OH groups in tandem catalysis, *Catalysis Science and Technology*, 9, 1154 - 1164 (2019)
- D. Nagaraju, S. Gupta, D. Kumar, C. Jijil, S. Bhat, **D. Jagadeesan** and S. B. Ogale, Room temperature activation of CO by dual defect stabilized nanoscale haematite: Concurrent role of Fe and O vacancies, *ACS Omega*, 2, 8407 - 8413 (2017).