




Faculty Details proforma for DU Web-site

Title	Dr.	Name	A. SAKTHIVEL	Photograph
Designation		Assistant Professor		
Address		Department of Chemistry, Inorganic Materials and Catalysis Laboratory University of Delhi (North Campus) Delhi 110007		
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Web-Page	http://www.du.ac.in/du/uploads/departments/faculty_members/Chemistry/2932.pdf			
Educational Qualifications				
Degree	Institution		Year	
Ph.D.	Indian Institute of Technology-Bombay, Mumbai		2002	
PG	Madurai Kamaraj University (VHNSN College), Tamil Nadu		1997	
UG	Madurai Kamaraj University (VHNSN College), Tamil Nadu		1995	
Any other qualification				
Career Profile				
<p>November 2010 – present; working as Assistant Professor, Department of Chemistry, University of Delhi, Delhi, India. June 2008 – October 2010; Senior Manager (R&D), Reliance Industries Limited, Vadodara, India. September 2006 – May 2008, JSPS Fellow, Gifu University, Gifu, Japan. January 2006 – July 2006; Max-Planck Fellow, Fritz Haber Institut der Max-Planck Gesellschaft-Berlin, Germany. February 2004 – December 2005; AvH Fellow, Technical University of Munchen, Munich, Germany. September 2002 – January 2004; Postdoctoral Research Fellow, Institute of Atomic and Molecular Sciences, Academia Sinica, Taiwan</p>				
Administrative Assignments				
<ul style="list-style-type: none"> ➤ A member of University space committee (2011-2012) ➤ Member of various committees in the chemistry department 				
Areas of Interest / Specialization				
<ul style="list-style-type: none"> ➤ Heterogeneous catalysis development for fine and petrochemical processes ➤ Development of multimetal oxides for oxidation of hydrocarbon ➤ Heterogenisation of homogeneous catalysis and its applications for various organic transformations ➤ Development of nano size zeolite and zeolite materials, composite materials for the hydrocarbon transformation ➤ Nano particles synthesis and its catalytic application for hydrogenation / hydrofomylation 				
Subjects Taught				
<ul style="list-style-type: none"> ❖ Inorganic Chemistry <ul style="list-style-type: none"> ❖ Chemistry of d & f block elements ❖ Practical Inorganic Chemistry (Instrumentation Techniques) ❖ Chemistry of silicates and borates ❖ Catalysis and Bio-inorganic chemistry 				
Research Guidance				

List against each head (If applicable)

1. Supervision of awarded Doctoral Thesis 1 (submitted)
Mr. Arvind Kumar Singh:: Synthesis of novel micro-mesoporous aluminophosphate based materials and its applications
2. Supervision of Doctoral Thesis, under progress 4 (Ms. Rekha, Mr. Baskaran, Mr. Maqsood & Mr. Dhananjar)
Ms. Rekha Yadav: Framework aluminophosphate derived from microporous precursors: A potential catalysis for various organic transformations.
Mr. T. Baskaran: Layered double hydroxide : As potential support and catalytic Materials
Mr. Maqsood Functionalized molecular sieve materials as potential catalysts
Mr. Dhananjar Monometallic layered materials and its catalytic applications
3. Supervision of awarded M.Phil / M.Tech dissertations 2 (Two)
4. Supervision of M.Phil dissertations, under progress

Publications Profile

List against each head (If applicable) (as Illustrated with examples) (Given in separate sheet)

1. Books/Monographs (Authored/Edited) --- 3 (A chapter in edited volume)
2. Research papers published in Refereed/Peer Reviewed Journals 69 (Selected publication list see below)

Selected Publications:

- i. T. Baskaran, **Sakthivel, A***, et al., An environment friendly route for grafting of molybdenum carbonyl on to a diaminosilane modified SBA-15 molecular sieve and its catalytic behavior in olefin oxidation, **New J. Chem.** 39 (2015) 3758-3764
- ii. Baskaran, T., **Sakthivel, A***, et al., *Synthesis and heterogenization of siloxane functionalized cobalt complex: Potential catalyst for oxidation of alcohols*, **Catal. Lett.** 145 (2015) 851-859.
- iii. **Sakthivel, A***, et al., *Molybdenum carbonyl grafted onto silicate intercalated cobalt-aluminum hydrotalcite: A new potential catalyst for the hydroformylation of octene*, **Catal. Commun.** 65 (2015) 55-61.
- iv. Rekha Yadav, **Sakthivel, A.*** Mesoporous silico-aluminophosphates derived from microporous precursors as promising catalyst for hydroisomerization, **Catal. Today** 245 (2015) 155-162.
- v. Arvind K. Singh, **Sakthivel, A***, et al., *Uniform mesoporous silicoaluminophosphate derived by vapor phase treatment: Its catalytic and kinetic studies in hydroisomerization of 1-octene*, **J. Phys. Chem. C**, 118 (2014) 27961-27972.
- vi. Rekha Yadav, **Sakthivel, A.*** *Silicoaluminophosphate molecular sieves as potential catalysts for hydroisomerization of alkane and alkenes*, **Applied Catal. A: Gen.**, 481 (2014) 143-160.
- vii. Baskaran, T., **Sakthivel, A***, et al., *Silicate anion intercalated cobalt-aluminium hydrotalcite (CoAl-HT-Si) a potential catalysts for alcohol oxidation*, **RSC Advances** 4 (2014) 11188-11196.
- viii. Arvind K. Singh, **Sakthivel, A***, et al., Mesoporous silico-aluminophosphates derived from microporous precursors as promising catalyst for hydroisomerization, **RSC Advances** 4 (2014) 8727-8734.
- ix. **Sakthivel, A.*** et al., *Molybdenum based cyclopentadienyl carbonyl complexes as precursors for epoxidation catalysts*, in *Molybdenum and its compounds*, **Nova Science Publisher, Chapter 8 (2014) ISBN: 978-1633212107.**
- x. P. Selvam and **Sakthivel A**, *Selective catalytic oxidation over ordered nanoporous metallo-aluminophosphates*, in *Liquid phase oxidation via heterogeneous catalysts*, **John Wiley & Sons, (2013) ISBN: 978-0-470-91552-3**
- xi. P. Selvam, **Sakthivel, A.*** et al., Tertiary butylation of phenol over solid acid catalysts: An overview on recent progress, **Advanced Porous Materials** 1 (2013) 239-254.
- xii. **Sakthivel, A.*** et al., *Silicate Anion-Stabilised Layered Magnesium–Aluminium Hydrotalcite*, **RSC Advances** 3 (2013) 16392-16398.
- xiii. **Sakthivel, A*.** et al., Synthesis, Characterisation and its Catalytic applications of Mesoporous SAPO-34 (MESO-SAPO-34) Molecular Sieves, **Microporous and Mesoporous Materials**, 181 (2013) 166-174.
- xiv. **Sakthivel, A***, et al., Unique mesoporous silicoaluminophosphate assembled from faujasite-type SAPO-37 precursor: A potential catalyst for isomerization, **Chemistry Letters**, 42 (2013) 1160-1162 .
- xv. **Sakthivel, A.**, et al., "Nano-sized β -zeolites with tunable particle sizes: Synthesis by DGC method characterization, and catalytic properties", **Microporous Mesoporous Materials** 119 (2009) 322-330.
- xvi. Sakthivel, A., et al., *Replication of Mesoporous Aluminosilicate Molecular Sieves (RMMs) with Zeolite Framework from Mesoporous Carbons (CMKs)*, **Chem. Mater.** 16, 3168-3175 (2004).

xvii. **Sakthivel, A**, et al., *Heterogenization of organometallic molybdenum complexes with siloxane functional groups and their catalytic application*, **Adv. Syn. Catal.** 347, 473-483 (2005).

3. a) *Research papers published in Academic Journals other than Refereed/Peer Reviewed Journals*
- b) *Research papers published in Refereed/Peer Reviewed Conferences* **25**
- c) *Research papers Published in Conferences/Seminar other than Refereed/Peer Reviewed Conferences* **15**
- d) *Other publications (Edited works, Book reviews, Festschrift volumes, Patents etc.)* **4**

Conference Organization/ Presentations (in the last three years)

List against each head (If applicable)

1. *Organization of a Conference*
2. *Participation as Paper/Poster Presenter* **15 (fifteen)**

Research Projects (Major Grants/Research Collaboration)

Name of the project : **Functionalized Nano-structured Silicoaluminophosphates Materials: Synthesis, Characterization and its Catalytic Applications**

Position in the project : *Principal Investigator*

Period : *2015-2018*

Funding Agency : *Department of Science and Technology (DST)*

Name of the project : **Synthesis of novel micro-mesoporous aluminophosphate nanostructures and their application in hydrocarbon transformation**

Position in the project : *Principal Investigator*

Period : *2011-2014 (completed)*

Funding Agency : *Department of Science and Technology (DST)*

Name of the project : **Heterogenisation of homogeneous complexes of the type..... As Eco friendly catalysts for hydroformylation and oxygenation reactions**

Position in the project : *Principal Investigator*

Period : *2011-2014*

Funding Agency : *Council of Scientific and Industrial Research (CSIR) (completed)*

Name of the project : **Silicoaluminophosphate Composite Materials: As Eco-friendly Catalysts for Skeletal Isomerization of Long Chain Hydrocarbon**

Position in the project : *Principal Investigator*

Period : *2012-2015*

Funding Agency : *University Grant Commission (UGC) (completed)*

Awards and Distinctions

- **Dr. Sistla Kameswari Young Scientist Award – 2015, Catalysis Society of India, India**
- **Young Research Award-2015, 5th Asia-Oceanic conference on Green and Sustainable catalysts**
- **Alexander von Humboldt (AvH) Research Fellow, 2004.**
- **Japan Society for the Promotion of science (JSPS) Research Fellow, 2006**
- **Max-Planck Research Fellow, 2006**
- **G.A.T.E (Graduate Aptitude Test in Engineering) 1997**

Association With Professional Bodies

1. *Editing*
2. *Reviewing* : *Reviewer of several international Journal*
3. *Advisory Committees and Boards of several Ph. D scholars*
4. *Memberships:*
 - *Member, American Chemical Society (ACS Membership No. 30763223)*
 - *Member, Royal Society of Chemistry (549566)*

- *Life Member, Chemical Research Society of India (CRSI)*
 - *Life Member, Materials Research Society of India (MRSI)*
 - *Life Member, Catalysis Society of India*
 - *Life Member, Indian Solid State and Surface Physics Association*
 - *Life Member, International Zeolite Association*
 - *Life Member, International Mesostructured Association*
5. *Office Bearer: Space committee (2010)*

Other Activities