List of Publications in Peer Reviewed Journals (Year wise)

Year 2014

[75] ZSM-5 zeolite nanosheets with remarkably improved catalytic activity synthesized using a new class of structure directing agents
Rajkumar Kore, Rajendra Srivastava*, Biswarup Satpati

[74] Cu(I) metal organic framework catalyzed C-C and C-N coupling reactions
Poonam Rani, Rajendra Srivastava*

[73] Simultaneous electrochemical determination of nanomolar concentrations of aminophenol isomers using nanocrystalline zirconosilicate modified carbon paste electrode
Balwinder Kaur, Rajendra Srivastava*

[72] Synthesis of ionic liquids coated nanocrystalline zeolite materials and their application in the simultaneous determination of adenine, cytosine, guanine, and thymine
Balwinder Kaur, Rajendra Srivastava*

[71] Ionic liquids coated Fe₃O₄ based inorganic–organic hybrid materials and their application in the simultaneous determination of DNA bases
Balwinder Kaur, Rajendra Srivastava*

[70] Nanocrystalline Metallosilicate Modified Electrodes for the Simultaneous, Sensitive, and Selective Determination of Riboflavin, Rutin, and Pyridoxine
Balwinder Kaur, Rajendra Srivastava*
Electroanalysis (In press,DOI: 10.1002/elan.201400064)
Article first published online : 24 APR 2014, DOI: 10.1002/elan.201400064
Highly efficient and green chemical synthesis of imidazolyl alcohols and N-imidazolyl functionalized \( \beta \)-amino compounds using nanocrystalline ZSM-5 catalysts
Rajkumar Kore, Biswarup Satpati, Rajendra Srivastava*

*Applied Catalysis A: General 477 (2014) 8-17

Facile preparation of \( \beta \)-Ni(OH)\(_2\)-NiCo\(_2\)O\(_4\) hybrid nanostructure and its application in the electro-catalytic oxidation of methanol
M.U. Anu Prathap, Biswarup Satpati, Rajendra Srivastava*

Electrochimica Acta 130 (2014) 368-380

Simultaneous determination of ascorbic acid, dopamine, uric acid, and tryptophan by nanocrystalline ZSM-5 modified electrodes
Balwinder Kaur, Rajendra Srivastava*

Journal of Nanoscience and Nanotechnology 14 (2014) 6539-6550

**Year 2013**

Highly efficient nanocrystalline zirconosilicate catalysts for the aminolysis, alcoholysis, and hydroamination reactions
Rajkumar Kore, Rajendra Srivastava*, and Biswarup Satpati


Simultaneous detection of guanine, adenine, thymine, and cytosine at polyaniline/MnO\(_2\) modified electrode
Anu Prathap M.U., Rajendra Srivastava*, and Biswarup Satpati


Facile preparation of Ni(OH)\(_2\)-MnO\(_2\) hybrid material and its application in the electrocatalytic oxidation of hydrazine
M.U. Anu Prathap, V. Anuraj, Biswarup Satpati, Rajendra Srivastava*


Transition-Metal-Exchanged Nanocrystalline ZSM-5 and Metal- oxide-Incorporated SBA-15 Catalyzed Reduction of Nitroaromatics
Balwinder Kaur, Mahesh Tumma, and Rajendra Srivastava*

A. Huerta Carlos, J.M Talamantes Gómez, T. Pandiyan*, I. Camacho-Arroyo, A. González-Arenas, N. Jayanthi, Rajendra Srivastava*

[61] Synthesis of imidazole based NHC-Au(I) complexes and their application in non-enzymatic glucose sensing
Anu Prathap M.U., Carlos Alberto Huerta Aguilar, Thangarasu Pandiyan,* and Rajendra Srivastava**

[60] Electrochemical reduction of Lindane (γ-HCH) at NiCo2O4 modified electrode
M.U. Anu Prathap, Rajendra Srivastava*

[59] Facile preparation of polyaniline/MnO2 nanofibers and its electrochemical application in the simultaneous determination of catechol, hydroquinone, and resorcinol
M.U. Anu Prathap, Biswarup Satpati, Rajendra Srivastava*

[58] Simultaneous and sensitive determination of ascorbic acid, dopamine, uric acid, and tryptophan with silver nanoparticles-decorated reduced graphene oxide modified electrode
Balwinder Kaur, Thangarasu Pandiyan, Biswarup Satpati, Rajendra Srivastava*

[57] Synthesis of NiCo2O4 and its application in the electrocatalytic oxidation of methanol
M.U. Anu Prathap, Rajendra Srivastava*

[56] A simple, eco-friendly, and recyclable bi-functional acidic ionic liquid catalysts for Beckmann rearrangement
Rajkumar Kore, Rajendra Srivastava*
*Journal of Molecular Catalysis A: Chemical 2013 (376) 90-97

[55] Transition metal nanoparticles supported on mesoporous polyaniline
catalyzed reduction of nitroaromatics
Mahesh Tumma, Rajendra Srivastava
*Catalysis Communications* 37 (2013) 64–68

[54] Synthesis of hierarchical Beta using piperidine based multi-ammonium surfactants
Rajkumar Kore, R. Sridharkrishna, and Rajendra Srivastava

[53] Tailoring properties of polyaniline for simultaneous determination of a quaternary mixture of ascorbic acid, dopamine, uric acid, and tryptophan
M.U. Anu Prathap, Rajendra Srivastava

[52] Cu nanoparticles supported mesoporous polyaniline and its applications towards non-enzymatic sensing of glucose and electrocatalytic oxidation of methanol
M.U. Anu Prathap, Thangarasu Pandiyian, Rajendra Srivastava
*Journal of polymer research* 20 (2013) 86.

[51] One-pot synthesis of 3-substituted indole derivatives using moisture stable, reusable task specific ionic liquid catalysts
A. Ravindran, R. Kore, R. Srivastava

**Year 2011-2012**

[50] Synthesis of transition metal exchanged nanocrystalline ZSM-5 and their application in electrochemical oxidation of glucose and methanol
Balwinder Kaur, M.U. Anu Prathap, Rajendra Srivastava

[49] Synthesis of zeolite Beta, MFI, and MTW using imidazole, piperidine, and pyridine based quaternary ammonium salts as structure directing agents
R. Kore, R. Srivastava

[48] Influence of –SO₃H functionalization (N-SO₃H or N-R-SO₃H, where R = alkyl/benzyl) on the activity of Brønsted acidic ionic liquids in the hydration reaction
R. Kore, R. Srivastava*


[47] Hydration of alkynes using Brönsted acidic ionic liquids in the absence of Nobel metal catalyst/H$_2$SO$_4$

R. Kore, T.J. Dhilip Kumar, R. Srivastava*


[46] Direct synthesis of metal Oxide incorporated mesoporous SBA-15 and their applications in non-enzymatic sensing of glucose

M.U. Anu Prathap, B. Kaur, Rajendra Srivastava*


[45] Hydrothermal synthesis of CuO micro-/nanostructures and their applications in the oxidative degradation of methylene blue and non-enzymatic sensing of glucose/H$_2$O$_2$

M.U. Anu Prathap, Balwinder Kaur, Rajendra Srivastava*


[44] Syntheses and catalytic activities of homogenous and hierarchical ZSM-5 grafted Pd(II) dicarbene complex of imidazole based ionic liquids

Rajkumar Kore, Mahesh Tumma, Rajendra Srivastava*


[43] Synthesis of mesostructured polyaniline using mixed surfactants, anionic sodium dodecylsulfate and non-ionic polymers and their applications in H$_2$O$_2$ and glucose sensing

M.U. Anu Prathap, Bhawana Thakur, Shilpa N. Sawant, Rajendra Srivastava*


[42] Synthesis of triethoxysilane imidazolium based ionic liquids and their application in the preparation of mesoporous ZSM-5

Rajkumar Kore, Rajendra Srivastava*


[41] Synthesis of Dicationic Ionic Liquids and their Application in the preparation of Hierarchical Zeolite Beta

Rajkumar Kore, Biswarup Satpati, Rajendra Srivastava*
Morphologically controlled synthesis of copper oxides and their catalytic applications in the synthesis of propargylamine and oxidative degradation of methylene blue

**Rajendra Srivastava*, Anu Prathap M. U., Rajkumar Kore**


Catalytic Activity of Dual Metal Cyanide Complex in Multi-Component Coupling Reactions

Anaswara Ravindran, R. Srivastava*


Synthesis and applications of novel imidazole and benzimidazole based sulfonic acid group functionalized Bronsted acidic ionic liquid catalysts

Raj Kumar Kore, **Rajendra Srivastava***

*Journal of Molecular Catalysis A: Chemical* 345 (2011) 117.

Synthesis and applications of highly efficient, reusable, sulfonic acid group functionalized Brönsted acidic ionic liquid catalysts

Raj Kumar Kore, **Rajendra Srivastava***

*Catalysis Communications* 12 (2011) 1420-1424.

Synthesis of nanoporous metal oxides through the self-assembly of phloroglucinol–formaldehyde resol and tri-block copolymer

M.U. Anu Prathap, **R. Srivastava***

*Journal Colloid and Interface Science* 358 (2011) 399-408.

Morphological controlled synthesis of micro-/nano-polyaniline

M.U. Anu Prathap, **R. Srivastava***


**Year 2010-2003**

Eco-friendly and morphologically controlled synthesis of porous CeO₂ microstructure and its application in water purification

**Rajendra Srivastava***

[33] Assessment of the Catalytic Activities of Novel Brönsted Acidic Ionic Liquid Catalysts

**Rajendra Srivastava**

*Catalysis Letters* 139 (2010) 17-25

[32] Synthesis and adsorption properties of smectite-like materials prepared using ionic liquids

**R. Srivastava, S. I. Fujita and M. Arai**


[31] Dealumination of zeolite beta catalyst under controlled conditions for enhancing its activity in acylation and esterification

**R. Srivastava, N. Iwasa, S.I. Fujita, M. Arai**


[30] Alkylation of aromatic compounds with multicomponent Lewis acid catalysts of ZnCl₂ and ionic liquids with different organic cations.

**R. Srivastava, S.I. Fujita, S. Okamura, M. Arai**


[29] Preparation of nanocrystalline MFI-zeolite having intracrystalline mesopores and its application in fine chemical synthesis Involving Large Molecules

**R. Srivastava, N. Iwasa, S-I. Fujita and M. Arai.**


[28] Assessment of the mesopore wall catalytic activities of MFI zeolite with mesoporous/microporous hierarchical structures

V. N. Shetti, J. Kim, **R. Srivastava, M. Choi, R. Ryoo**


[27] A novel method for the protection of amino alcohols and carbonyl compounds over a heterogeneous, reusable catalyst

P. Srivastava and **R. Srivastava**


[26] Synthesis of a novel class of mesoporous hollow silica from organic templates

N. Venkatathrin, **R. Srivastava, D. S. Yun and J. W. Yoo**

P. Srivastava and R. Srivastava*

Rajendra Srivastava*
*Journal of Molecular Catalysis A: Chemical 264 (2007) 146-152.


[22] Mesoporous materials with zeolite framework: remarkable effect of the hierarchical structure for retardation of catalyst deactivation
*Chemical Communications (2006) 4489-4491.

[21] Organosilane surfactant-directed synthesis of mesoporous aluminophosphates constructed with crystalline microporous frameworks
M. Choi, R. Srivastava and R. Ryoo
*Chemical Communications (2006) 4380-4382.

[20] Fe-Zn double metal cyanide complexes as novel Solid, transesterification catalysts
R. Srivastava, D. Srinivas, P. Ratnasamy

[19] Hydrophobic, solid acid catalysts for production of biofuels and lubricants
P.S. Sreeprasanth, R. Srivastava, D. Srinivas, P. Ratnasamy

[18] Active sites for CO₂ activation over amine-functionalized mesoporous SBA-15 catalysts
R. Srivastava, D. Srinivas, P. Ratnasamy
[17] Syntheses of polycarbonate and polyurethane precursors utilizing CO$_2$ over highly efficient, solid as-synthesized MCM-41 catalyst

R. Srivastava, D. Srinivas, P. Ratnasamy


[16] CO$_2$ activation and synthesis of cyclic carbonates and alkyl/aryl carbamates over adenine-modified Ti-SBA-15 solid catalysts

R. Srivastava, D. Srinivas, P. Ratnasamy


S. Mmandal, A. Das, R. Srivastava, M. Sastry


[14] Zeolite-based organic-inorganic hybrid catalysts for phosgene-free and solvent-free synthesis of cyclic carbonates and carbamates at mild conditions utilizing CO$_2$

R. Srivastava, D. Srinivas and P. Ratnasamy


[13] Factors affecting activation and utilization of carbon dioxide in cyclic carbonate synthesis over Cu and Mn peraza macrocyclic complexes

R. Srivastava, T. H. Bennur and D. Srinivas


[12] Synthesis and characterization of vanadium containing mesoporous aluminophosphate molecular sieves

N. Venkatathri and R. Srivastava

*Catalysis Communications* 6 (2005) 177-182.


D. Srinivas, R. Srivastava and P. Ratnasamy


[10] Phosgene-free synthesis of carbamates over zeolite-based catalysts

R. Srivastava, M. D. Manju, D. Srinivas and P. Ratnasamy

[9] Phase transfer of Platinum nanoparticle from aqueous to organic solution using fatty amines molecules

[8] Synthesis, characterization and catalytic properties of SAPO-11, -31 and -41 molecular sieves
N. Venkatathri, R. Srivastava

[7] Efficient chemoselective liquid phase acylation of amines, alcohols and bifunctional compounds over ZSM-35
R. Srivastava, and N. Venkatathri

[6] Synthesis of polycarbonate monomers by CO₂ insertion in epoxides over zeolite-based catalysts
Rajendra Srivastava, D. Srinivas and P. Ratnasamy

R. Srivastava and N. Venkatathri

R. Srivastava and N. Venkatathri

[3] Synthesis of cyclic carbonates from olefins and CO₂ over zeolite-based catalysts
Rajendra Srivastava, D. Srinivas and Paul Ratnasamy

[2] Synthesis of polycarbonate precursors over titanosilicate molecular sieves
R. Srivastava, D. Srinivas and P. Ratnasamy
*Catalysis Letters* 91 (2003) 133-139.

[1] Pd-SAPO-31, an efficient, heterogeneous catalyst for Heck reactions of deactivated
aryl chlorides

R. Srivastava, N. Venkatathri, D. Srinivas and P. Ratnasamy


---

**Book Chapter Published**

1. Synthesis and electrocatalytic applications of polyaniline
   
   **Rajendra Srivastava**, Anu Prathap M. U., and Martin Francis Pulikottil
   
   Comprehensive guide for mesoporous materials, Volume 1
   
   Nova Science Publishers, Inc., 400 Oser Avenue, Suite 1600
   
   Hauppauge, New York 11788 (*Accepted, 2014*).

2. Synthesis and applications of porous materials
   
   **Rajendra Srivastava**, S. I. Fujita and Masahiko Arai
   
   Progress in porous Media Research
   
   Chapter 1, pp 1-53.
   
   Nova Science Publishers, Inc., 400 Oser Avenue, Suite 1600
   
   Hauppauge, New York 11788 (*Published 2009*).
List of Patent Granted

1. Process for the preparation of cyclic carbonates
   Darbha Srinivas and Rajendra Srivastava
   USA Patent 7,365,214 (29th April 2008)

2. Adenine modified silica-based catalyst, a process for the preparation and use there for
   the production of cyclic carbonates
   Darbha Srinivas, Rajendra Srivastava and Paul Ratnasamy
   USA patent 7,375,224 (20th May 2008)

3. Process for the preparation of carbamates
   Darbha Srinivas, Rajendra Srivastava and Paul Ratnasamy
   USA Patent 7,405,319 (29th July 2008)

4. An improved process for the preparation of lubricants by using double metal cyanide
   catalysts
   Darbha Srinivas, Rajendra Srivastava and Paul Ratnasamy

5. Process for the preparation of hydrocarbon fuel
   Darbha Srinivas, Rajendra Srivastava and Paul Ratnasamy
   USA Patent 7,482,480 (27th January 2009)

6. Process for the preparation of Dialkyl Carbonates
   Darbha Srinivas, Rajendra Srivastava and Paul Ratnasamy
   USA Patent 7,518,012B2 (14th April 2009)

7. Transesterification Catalyst and a process for the preparation thereof
   Darbha Srinivas, Rajendra Srivastava and Paul Ratnasamy
   USA Patent 7,754,643 B2 (13th July 2010)

Patent field

[1] Crystalline mesoporous ZSM-5 and mesoporous silicalite zeolites and the process for
   their preparation thereof
   Dr. Rajendra Srivastava and Mr. Rajkumar Kore
   Indian Patent 128/DEL/2014 (Field on 16th January 2014)