

Curriculum Vitae

Dr. Bhaskar Sarmah

Correspondence Address



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Personal Details

Date of birth: 3rd January 1985 Gender: Male, Good health
Nationality: Indian Marital status: Unmarried

Academics

- PhD., Chemistry from Indian Institute of Technology Ropar, India, Department of Chemistry under the supervision of Dr. Rajendra Srivastava.
- M.Sc., Chemistry from Tezpur University, Assam, India, in 2009.
- B.Sc., Chemistry from Gauhati University, Assam, India, in 2007.

Languages known: English, Hindi, and Assamese.

Skills

- ❖ Expertise in the field of Heterogenous Catalysis
- ❖ Well versed in the synthesis and characterization of ionic liquid, zeolites, metal oxide, and metal nanoparticles supported zeolites.
- ❖ Well versed in carrying out all type of moisture sensitive organic reactions, pressure reaction in pressure reactors, vapor phase reactions in Fixed-bed reactors.
- ❖ Well versed in all type of separation technique such as column chromatography, gas chromatography etc.
- ❖ “Hands on” experience on various analytical instruments viz FT-IR, UV-Visible, DRUV-vis, PXRD, N₂ adsorption-desorption, Temperature-programmed desorption (TPD), ICP-AES, SEM, GC, GC-MS, etc.

Research experience

- ❖ Junior Research Fellow; June, 2011 to December, 2012; Department of Chemistry, Gauhati University, Assam under the guidance of Prof. Pranab jyoti Das in UGC sponsored project.
- ❖ Currently working as scientific officer at NIPER Guwahati under NEST Incubation center

Awards

- ❖ Qualified in CSIR-UGC (JRF) joint exam for national eligibility for research and lecturer ship (conducted by Council of Scientific Industrial Research (CSIR) and University Grant commission (UGC), New Delhi)-June 2013.
- ❖ Qualified in Graduate Aptitude Test in Engineering (GATE-2013) with 93 percentile.

List of Publications/Book chapters

- ❖ **Bhaskar Sarmah** and Rajendra Srivastava; Selective oxidation of biomass derived alcohols, aromatic and aliphatic alcohols to aldehydes with O₂/air using RuO₂ supported Mn₃O₄ catalyst; *ACS Omega* 3 (2018) 7944–7954.
- ❖ **Bhaskar Sarmah**, Biswarup Satpati and Rajendra Srivastava; One-pot tandem conversion of monosaccharides and disaccharides to 2,5-diformylfuran using a Ru nanoparticle-supported H-beta catalyst; *Catal. Sci. Technol.*, 8 (2018) 2870–2882.
- ❖ **Bhaskar Sarmah**, Rajkumar Kore and Rajendra Srivastava, An Efficient Halometallate Ionic Liquid Functionalized Mesoporous ZSM-5 for the Reduction of Carbon-Carbon Multiple Bonds; *Inorg. Chem. Front.*, 5 (2018) 1609–1621;
- ❖ Abhinav Kumar, **Bhaskar Sarmah** and Rajendra Srivastava; C-N bond formation by the

activation of alkenes and alkynes using Cu present in the framework and extra-framework of aluminophosphate; *Catal. Commun.*, 109 (2018) 43–49.

- ❖ **Bhaskar Sarmah** and Rajendra Srivastava, Selective One-Pot Conversion of Monosaccharide, Disaccharide, and Polysaccharide to 2,5-Diformylfuran (Manuscript submitted).
- ❖ **Bhaskar Sarmah** and Rajendra Srivastava; Highly efficient and recyclable basic ionic liquids supported on SBA-15 for the synthesis of substituted styrenes, carbinolamides, and naphthopyrans; *J. Mol. Catal. A: Chem.*, 427 (2017) 62–72.
- ❖ **Bhaskar Sarmah**, Rajendra Srivastava and Biswarup Satpati, Highly efficient and recyclable basic mesoporous zeolite catalyzed condensation, hydroxylation, and cycloaddition reactions; *J. Colloid Interface Sci.*, 493 (2017) 307–316.
- ❖ **Bhaskar Sarmah** and Rajendra Srivastava, Sustainable Catalytic Process with a High Eco-Scale Score for the Synthesis of Five-, Six-, and Seven-Membered Heterocyclic Compounds Using Nanocrystalline Zeolites; *Asian J. Org. Chem.*, 6 (2017) 873–889.
- ❖ **Bhaskar Sarmah** and Rajendra Srivastava; Activation and Utilization of CO₂ Using Ionic Liquid or Amine Functionalized Basic Nanocrystalline Zeolites for the Synthesis of Cyclic Carbonates and Quinazoline 2,4(1H,3H)-dione; *Ind. Eng. Chem. Res.*, 56 (2017) 8202–8215.
- ❖ **Bhaskar Sarmah** and Rajendra Srivastava; Octahedral MnO₂ molecular sieve decorated Meso-ZSM-5 catalyst for eco-friendly synthesis of pyrazoles and carbamates, *Ind. Eng. Chem. Res.*, 56 (2017) 15017–15029.
- ❖ **Bhaskar Sarmah**, Rajendra Srivastava and Biswarup Satpati ; Cu ion-exchanged and Cu nanoparticles decorated mesoporous ZSM-5 catalysts for the activation and utilization of phenylacetylene in a sustainable chemical synthesis; *RSC Adv.*, 6 (2016) 87066–87081.
- ❖ **Bhaskar Sarmah**, Rajendra Srivastava and Biswarup Satpati; Highly Efficient Silver Nanoparticles Supported Nanocrystalline Zirconosilicate Catalyst for the Epoxidation and Hydration Reactions; *ChemistrySelect* 5 (2016) 1047–1056.
- ❖ **Bhaskar Sarmah**, Rajendra Srivastava, Pandian Manjunathan, and Ganapati V. Shanbhag; Green and Sustainable Tandem Catalytic Approach for Fine Chemicals Synthesis Using Octahedral MnO₂ Molecular Sieve: Catalytic Activity versus Method of Catalyst Synthesis;

ACS Sustainable Chem. Eng., 3 (2015) 2933–2943.

- ❖ **Bhaskar Sarmah**, Rajendra Srivastava and Biswarup Satpati; Nanocrystalline ZSM-5 based bi-functional catalyst for two step and three step tandem reactions; *RSC Adv.*, 5 (2015) 25998–26006.
- ❖ **Bhaskar Sarmah** and Rajendra Srivastava; Simple and Economical Synthesis of Alkyl Phenyl Ethers by the Reaction of Phenols and Alkyl Esters Using Nanocrystalline Beta; *ACS Sustainable Chem. Eng.*, 3 (2015) 210–215.
- ❖ Bhaskar Sarmah and P. J. Das; A Convenient and Benign Synthesis of Sulphonamides in PEG-400; *Asian J. Chem.*, 27 (2015) 189-191.
- ❖ **Bhaskar Sarmah** and Rajendra Srivastava; Research Trends IN CHEMICAL SCIENCES volume 2: Synthesis of Heterocycles over Nanoporous Zeolites; Akinik publications, Newdelhi, India. ISBN: 978-93-5353-325-4
- ❖ **Bhaskar Sarmah**; Research Trends IN CHEMICAL SCIENCES volume 3: Synthesis of Heterocycles over Nanoporous Zeolites; Akinik publications, Newdelhi, India. ISBN: 978-93-5335-495-4.

Conferences/workshop participated

- ❖ **B. Sarmah**, R. Srivastava, *Poster presentation*, **18th CRSI National Symposium in Chemistry (NSC-18) and 10th RSC-CRSI symposium** at Panjab University, India; February 4-7, 2016.
- ❖ **B. Sarmah**, R. Srivastava, *Oral presentation*, (**7th Asia-Pacific Congress on Catalysis, International Conference**) (*APCAT-7*) in Mumbai, India; January 17-21, 2017.
- ❖ **B. Sarmah**, R. Srivastava, *Poster presentation*, **Thematic Conference in Chemical Sciences (TC2S) – 2017: Sustainable Chemistry** at Indian Institute of Technology Ropar, India; May 15-16, 2017.
- ❖ **B. Sarmah**, R. Srivastava, *Poster Presentation*, (**3rd Green & Sustainable Chemistry International Conference**) in Germany, Berlin; May, 13-16, 2018.
- ❖ **B. Sarmah**, R. Srivastava, *Poster presentation*, **23rd National Symposium on Catalysis (CATSYMP-23): Applied Catalysis in Emerging Technology for Chemicals**, Bengaluru, India; January 17-19, 2018

Reference

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