

## *Curriculum Vitae*

Rashmi Rekha Satapathy, Ph.D.  
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### **Professional Experience:**

**May 2011-** Lecturer (Chemistry), Ravenshaw University, Cuttack. India.

**June 2007-May 2011** Postdoctoral Researcher at Department of Chemistry and Biochemistry, Northern Illinois University, USA.

**January 2007-April 2007** Research Associate at Centre for Biomedical Engineering, Indian Institute of Technology (IIT) Delhi, India.

**May 2005-December 2006** Senior Research Fellow (CSIR, India) at Department of Chemistry, IIT Kanpur, India.

**August 2002-April 2005** Research Assistant at Department of Chemistry, IIT Kanpur, India.

### **Education:**

BSc. (Chemistry, Honors), Utkal University, 1997 (9<sup>th</sup> Rank)

M.Sc. (Chemistry), Ravenshaw College, 1999 (2<sup>nd</sup> Rank)

M.Phil. (Chemistry), Ravenshaw College, 2001 (1<sup>st</sup> Rank)

Ph.D. (Synthetic Organic Chemistry), CSJM University/IIT Kanpur, 2008 (With Prof. F. A. Khan, IIT Kanpur)

Postdoctoral Research (Chemistry), Northern Illinois University, USA, 2007-2011

## Research Interests:

Synthetic Organic, Bio Organic and Medicinal Chemistry; Chemistry of Boron Clusters; Synthesis of Natural and Unnatural Products; Transition Metal Mediated Reactions in Organic Chemistry, New Synthetic Methods; Carbohydrate Chemistry.

## Academic Awards:

- 1) *Postdoctoral Research Assistantship* from National Science Foundation at Northern Illinois University, USA (June 2007-May 2011).
- 2) Recipient of *Senior Research Fellowship* from Council of Scientific and Industrial Research (CSIR), India (May 2005-December 2006) at Indian Institute of Technology (IIT) Kanpur.
- 3) *Research Assistantship* at Department of Chemistry, IIT Kanpur, India (August 2002-April 2005).
- 4) Qualified *Graduate Aptitude Test in Engineering* (GATE) conducted by IIT in 2002.
- 5) *Govinda Chandra Memorial Award* for securing *First Position* in the M.Phil. at Ravenshaw University in 2001.

## Publications:

- 1) "Carboranylpyrroles: a Synthetic Investigation" **R. Satapathy**, B. P. Dash, C. Zheng, J. A. Maguire, N. S. Hosmane, *Journal of Organic Chemistry*, **2011**, 76, 3562-3565.
- 2) "Enhanced  $\pi$ -Conjugation and Emission via Icosahedral Carboranes: Synthetic and Spectroscopic Investigation" B. P. Dash, **R. Satapathy**, E. R. Gaillard, K. M. Norton, J. A. Maguire, N. Chug, N. S. Hosmane, *Inorganic Chemistry*, **2011**, 50, 5485-5493.
- 3) "Polyhedral Boron Clusters in Materials Science" B. P. Dash, **R. Satapathy**, J. A. Maguire, N. S. Hosmane, **2011**, *New Journal of Chemistry*, DOI: 10.1039/c1nj20228f.
- 4) "Click Assembly of Carborane-Appended Polymers and Stabilization of Gold and Palladium Nanoparticles" L. Liang, A. Rapakousiou, L. Salmon, R. Ruiz, D. Astruc, B. P. Dash, **R. Satapathy**, J. W. Sawicki, N. S. Hosmane, **2011**, *European Journal of Inorganic Chemistry*, DOI: 10.1002/ejic.201100360.

- 5) "Synthesis and Properties of Carborane-appended C<sub>3</sub>-symmetrical Extended  $\pi$ -systems", B. P. Dash, **R. Satapathy**, E. R. Gaillard, J. A. Maguire, N. S. Hosmane, *Journal of the American Chemical Society*, **2010**, *132*, 6578-6587.
- 6) "Facile Synthetic Routes to Phenylene and Triazine Core Based Dendritic Cobaltabisdicarbollides" B. P. Dash, **R. Satapathy**, J. A. Maguire, N. S. Hosmane, *Organometallics*, **2010**, *29*, 5230-5235.
- 7) "Click" Synthesis and Properties of Carborane-Appended Large Dendrimers" R. Djeda, R. Ruiz, D. Astruc, **R. Satapathy**, B. P. Dash, N. S. Hosmane, *Inorganic Chemistry*, **2010**, *49*, 10702-10709.
- 8) "New Developments in the Medicinal Chemistry of Carboranes" **R. Satapathy**, B. P. Dash, J. A. Maguire, N. S. Hosmane, *Collection of Czechoslovak Chemical Communications*, **2010**, *75*, 995-1022.
- 9) "Advances in the metallacarborane chemistry of f-block elements" **R. Satapathy**, B. P. Dash, J. A. Maguire, N. S. Hosmane, *Dalton Transactions*, **2010**, *39*, 6613-6625.
- 10) "Boron-Enriched Star-Shaped Molecule via Cycloaddition Reaction" B. P. Dash, **R. Satapathy**, J. A. Maguire, N. S. Hosmane, *Chemical Communications*, **2009**, 3267-3269.
- 11) "Synthesis of a New Class of Carborane-Containing Star-Shaped Molecules via Silicon Tetrachloride Promoted Cyclotrimerization Reactions" B. P. Dash, **R. Satapathy**, J. A. Maguire, N. S. Hosmane, *Organic Letters*, **2008**, *10*, 2247-2250.
- 12) "Serendipitously Discovered Diazomethane-Mediated Novel Molecular Rearrangements of Norbornyl  $\alpha$ -Keto hemiketals" F. A. Khan, G. H. M. Rao, **R. Satapathy** and K. Parasuraman. *Organic Letters*, **2007**, *9*, 1581 -1584.
- 13) "A New Reaction of Diazomethane with Norbornyl  $\alpha$ -diketones" F. A. Khan, **R. Satapathy**, Ch. Sudheer, C. N. Rao. *Tetrahedron Letters*, **2005**, 7193-7196.
- 14) "A Rapid and Stereoselective Route to the *trans*-Hydrindane Ring System" F. A. Khan, **R. Satapathy**, J. Dash, G. Savitha. *Journal of Organic Chemistry*, **2004**, *69*, 5295-5301.
- 15) "Hydrotalcite catalysis in ionic liquid medium: a recyclable reaction system for heterogeneous Knoevenagel and nitroaldol condensation" F. A. Khan, J. Dash, **R. Satapathy**, S. K. Upadhyay. *Tetrahedron Letters*, **2004**, *45*, 3055-3058.

## Book Chapter:

- 16) "Carborane clusters: versatile synthetic building blocks for dendritic, nanostructured and polymeric materials" B. P. Dash, **R. Satapathy**, J. A. Maguire, N. S. Hosmane, *Boron Science: New Technologies and Applications*, CRC Press, **2011**, 655-679.

## Presentations:

- 1) "Synthesis of Novel Boron-Biomolecules for Potential BNCT Applications" **R. Satapathy**, B. P. Dash, J. A. Maguire, N. S. Hosmane, Boron in Americas XII Conference, Michigan State University, East Lansing, Michigan, USA, June 6-10, **2010**.
- 2) "Synthesis of New Classes of Boron-Rich Compounds for Cancer Therapy" **R. Satapathy**, B. P. Dash, A. Patel, J. A. Maguire, N. S. Hosmane, Undergraduate Research Symposium, Northern Illinois University, DeKalb, Illinois, USA, April 29, **2010**.
- 3) "A new reaction of diazomethane with norbornyl  $\alpha$ -Diketones" F. A. Khan, **R. Satapathy**, Ch. Sudheer, C. N. Rao, Chemfest, IIT Kanpur, India, April, **2006**.
- 4) "Synthesis, Thermal and Photophysical Properties of Boron-Rich Macromolecules" B. P. Dash, **R. Satapathy**, J. A. Maguire, N. S. Hosmane; Boron in Americas XII Conference, Michigan State University, East Lansing, Michigan, USA, June 6-10, **2010**.
- 5) "Novel Carborane-Appended Symmetrical Conjugated pi-Systems" B. P. Dash, **R. Satapathy**, J. A. Maguire, N. S. Hosmane, 238<sup>th</sup> ACS National Meeting, Washington DC, August 16-20, **2009**.
- 6) "Silicon Tetrachloride Promoted Cyclotrimerization: New Route to Carbosilane Dendrons". B. P. Dash, **R. Satapathy**, J. A. Maguire, N. S. Hosmane, Boron in Americas XI Conference, Saint Louis University, Saint Louis, Missouri USA, June 4-8, **2008**.
- 7) "Synthesis and Potential Applications of Dendritic Boron Cluster Compounds" B. P. Dash, **R. Satapathy**, J. A. Maguire, N. S. Hosmane, Boron in Americas XII Conference, Michigan State University, East Lansing, Michigan, USA, June 6-10, **2010**.
- 8) "Syntheses and Biological Evaluation of Carborane-Thio-Sugar Conjugates and boron-rich dendrimers for potential applications in Cancer Therapy" J. Do, N. Lee, **R. Satapathy**, B. P. Dash, B. P. Bode, J. A. Maguire, N. S. Hosmane, Undergraduate Research Symposium, Northern Illinois University, DeKalb, Illinois, USA, April 20, **2011**.