VARADHACHARI VENKATESH

Research Area: Synthesis and characterization of π-conjugated novel redox active multi-metal complexes

Key words: multi-metal complexes, π-conjugated system

Education

January 2011: Ph.D. in Organic Chemistry from Indian Institute of Technology Kanpur, India.

Advisor: Professor Maddali L. N. Rao

2000-2002: M.Sc. in Chemistry from Presidency College, Chennai, University of Madras, India.

1997-2000: B.Sc. in Chemistry from A. G. Government Arts and Science College, Tindivanam, University of Madras, India.

Employment Experience

2011-Present: Global COE Post-doctoral fellow,

Advisor: Professor Yoshito Tobe,

Graduate School of Engineering Science,

Osaka University, Japan.

July 2005-December 2005: Project Research Associate, Department of Chemistry, Indian Institute of Technology Kanpur, India.

October 2002-March 2003: Research Associate (Trainee), Mitocon Biotec Pharmaceuticals Division, SPIC LTD, Chennai, India.

July 2002-October 2002: Lab Chemist (Trainee), Indian Organic Chemicals Limited (IOCL), Futura Synthetics Division, Chennai, India.

Awards

- **2011-Present:** Global COE fellowship, Frontiers Materials Science Division, Graduate School of Engineering Science, Osaka University, Japan.
- **2007-2010:** Senior Research Fellowship (SRF), University Grants Commission (UGC), India.
- **2005-2007:** Junior Research Fellowship (JRF), University Grants Commission (UGC), India.
- **June 2004:** UGC-JRF-Lectureship, National Eligibility Test (NET) conducted by CSIR-UGC, Council of Scientific and Industrial Research, India.
- **2001-2002: First rank** in M.Sc. Chemistry, Presidency College, Chennai, India.
- **2001-2002:** Professor B. Ramachandra Pai **gold medal** as an endowment prize, Presidency College, Chennai, India.
- **2001-2002:** Professor T. A. Sunderarajan certificate of merit as an endowment prize, Presidency College, Chennai, India.

Selected Publications

1. Rao, Maddali L. N.; Venkatesh, Varadhachari.; Jadhav, Deepak N. An atom-efficient palladium-catalyzed cross-coupling reaction of triarylbismuths wit-

h acid chlorides: synthesis of diaryl and alkyl aryl ketones. *Tetrahedron Lett.* **2006**, *47*, 6975-6978.

2. Rao, Maddali L. N.; Venkatesh, Varadhachari.; Banerjee, Debasis. Atom-efficient cross-coupling reactions of triarylbismuths with acyl chlorides under Pd(0) catalysis. *Tetrahedron* **2007**, *63*, 12917-12926.

3. Rao, Maddali L. N.; Venkatesh, Varadhachari.; Jadhav, Deepak N. A palladium-catalyzed atom-efficient cross-coupling reactivity of triarylbismuths with α,β-unsaturated acyl chlorides *J. Organomet. Chem.* **2008**, *693*, 2494-2498.

4. Rao, Maddali L. N.; Venkatesh, Varadhachari.; Jadhav, Deepak N. Pd-Catalyzed Efficient Cross-Couplings of 3-Iodochromones with Triarylbismuths as Substoichiometric Multicoupling Organometallic Nucleophiles. *Synlett* **2009**, 2597-2600.

5. Rao, Maddali L. N.; Jadhav, Deepak N.; Venkatesh, Varadhachari. Pd(0)/C-catalyzed cross-couplings of acyl chlorides with triarylbismuths as atom-efficient sub-stoichiometric multi-coupling reagents. *Tetrahedron Lett.* **2009**, *50*, 4268-4271.

6. Rao, Maddali L. N.; Jadhav, Deepak N.; Venkatesh, Varadhachari. Atom-Efficient Vinylic Arylations with Triarylbismuths as Substoichiometric Multicoupling Reagents under Palladium Catalysis. *Eur. J. Org. Chem.* **2009**, 4300-4306.

7. Rao, Maddali L. N.; Venkatesh, Varadhachari.; Jadhav, Deepak N. Palladium-Catalyzed Synthesis of 4-Arylcoumarins Using Triarylbismuths as Atom-Efficient Multi-Coupling Organometallic Nucleophiles. *Eur. J. Org. Chem.* **2010**, 3945-3955.

8. Rao, Maddali L. N.; Venkatesh, Varadhachari.; Dasgupta, Priyabrata. Oxalyl chloride as carbonyl synthon in Pd-catalyzed carbonylations of triarylbismuth and triarylindium organometallic nucleophiles. *Tetrahedron Lett.* **2010**, *51*, 4975-4980.

Highlights in Current Synthetic Organic Chemistry:

Rao, Maddali L. N.; Venkatesh, Varadhachari.; Banerjee, Debasis. Palladium-Catalyzed Cross-Coupling of Triarylbismuths with Acyl Chlorides. *Synfacts* **2008**, *4*, 406-406.

Research Statement

The π-conjugated multi-metal complexes have attracted the chemists because of their potential applications in the fields of material and environmental science. Thus synthesis of novel multi-metal complexes is a challenging and important task. My current research interest is to focus on synthesis and characterization of multi-metal complexes of π-conjugated systems and experiments are on going related to this task.

My goal

Synthesis and property investigation of novel multi-metal complexes with π-conjugated system are targeted.