

## Dr. Beena James

**Designation:** Assistant Professor

**Academic qualifications:** M.Sc. Ph.D.

### **Research Interest:**

- Synthesis of photoresponsive polymers and hydrogelators
- Synthesis of Oligomeric Multifunctional Gelators
- Synthesis and Characterization of dendrimeric polymers.
- Synthesis of nano particles, fast degrading polymers and hydrogels for biomedical applications
- Synthesis of biologically active hetrocyclic compound

### **Awards**

- CSIR Senior Research Fellowship (2004).
- CSIR Junior Research Fellowship (2002).
- Qualified Graduate Aptitude Text in Engineering (GATE) exam (2002).

### **Publications**

1. **B. James**, M. Yoshida, Synthesis of Photoresponsive Polymers, *Japanese Patent* filed. Number: **2010-236948**
2. **James, B.**; Viji, S.; Mathew, S.; Suresh, E.; Lakshmanan, D.; Kumar, R. A.; Nair, M. S. Synthesis of Highly Functionalized, Biologically Active Novel Polycyclic Caged Amides. *Tetrahedron Lett.* **2007**, *48*, 6204.
3. **James, B.**; Suresh, E.; Nair, M. S. Friedel-Crafts alkylation of a cage enone: Synthesis of Aralkyl Substituted Tetracyclo[5.3.1.0<sup>2,6</sup>.0<sup>4,8</sup>]undeca-9,11-diones and the Formation of Fascinating Novel Cage Compounds with Pyrrole and Thiophene using Montmorillonite K-10. *Tetrahedron Lett.* **2007**, *48*, 6059.
4. **James, B.**; Suresh, E.; Nair, M. S. Hetero Diels-Alder Reaction of 3-Bromo-7-(bromomethyl)tetracyclo[5.3.1.0<sup>2,6</sup>.0<sup>4,8</sup>]undec-10(12)-ene-9,11-dione with Pentafulvenes: Facile Synthesis of Novel Polycyclic Cage Compounds Having Pyran Ring. *Synlett.* **2006**, *20*, 3479.
5. **James, B.**; Rath, N. P.; Suresh, E.; Nair, M. S. Formation of Novel Polycyclic Cage Compounds through 'Uncaging' of Readily Accessible Higher Cage Compounds. *Tetrahedron Lett.* **2006**, *47*, 5775.

6. Sudhir, U.; **James, B.**; Joly, S.; Nair, M. S. Formation of Highly Caged compounds through Diels-Alder Cycloaddition of 3-Bromo-7-(bromomethyl) tetracyclo[5.3.1.0<sup>2,6</sup>.0<sup>4,8</sup>]undeca-10(12)-ene-9,11-dione with itself and with Cyclopentadiene. *Res. Chem. Int.***2004**, 30, 247.
7. Sudhir, U.; **James, B.**; Joly, S.; Nair, M.S. Diels-Alder Reactivity of 2-(Bromomethyl)-1,4-quinone and 2-Bromo-5-(bromomethyl)-1,4-quinone with Cyclopentadiene and the Synthesis of New Substituted Pentacyclic Systems. *Res. Chem. Int.***2003**, 29, 523.

### Seminar/Symposia

1. **Beena James.**; Mangalam, S. Nair. Synthesis of Nitrogen Containing Polycyclic Cage Compounds with Potential Anti-viral Activity. Joint International Conference on "Building Bridges, Forging Bonds for 21st Century Organic Chemistry and Chemical Biology" (ACS CSIR OCCB 2006), Pune, January-2006, Poster # P-18.
2. **Beena James.**; Mangalam, S. Nair. Formation of Novel Cage Compounds through Uncaging of Readily Accessible 1,9-Bishalomethylpentacyclo[5.4.0.0<sup>2,6</sup>.0<sup>3,10</sup>.0<sup>5,9</sup>]undeca-8,11-diones. International Symposium on Advances in Organic Chemistry, Mahatma Gandhi University, Kerala, January-2006. Poster # P-141.
3. Participated as a delegate in International conference on "Frontiers of Nanotechnology: Impact on India" at **3<sup>rd</sup> Bangalore Nano2010**, December 8 & 9.
4. Participated as a delegate in International conference on "**Nanotechnology: Nano India-2013**" at National Institute for Interdisciplinary Science and Technology, CSIR, Trivandrum on 2013, February 19 & 20.