

**Dr. N. RAJA M.Sc., M.Phil., Ph.D., FCSF (Switzerland).**

Department of Chemistry  
University College of Engineering Ariyalur  
Anna University, Ariyalur.  
Email: nr.science@gmail.com  
Mobile: +91-9626061514.



***Teaching/ Research/ Administration Experience***

---

- **Postdoctoral Researcher** – Institute of Chemistry, Faculty of Science, University of Neuchatel, Switzerland (Sep 2012 – Jun 2014).
- **Instrument in-charge – ESR Spectrometer (JEOL FA 200)** – School of Chemistry, Bharathidasan University, Tiruchirappalli, India (Aug 2009 – Mar 2012).
- **M.Sc., Practical Assistance** – School of Chemistry, Bharathidasan University, Tiruchirappalli (Feb 2007 – May 2009).
- **Lecturer** – Department of Chemistry, Government Arts College, Dharmapuri (Jul 2005 – Jan 2007).

***Broad Area of Research***

---

- Organometallic Compounds
- Bio-Organometallic Compounds
- Catalysis
- Supramolecular Chemistry
- Anticancer Compounds
- Electron Paramagnetic Resonance (EPR/ESR)
- 2D-NMR techniques

***Education***

---

- 2012 – 2014: Postdoc., Institute of Chemistry, University of Neuchatel, Switzerland.
  - 2007 – 2012: Ph.D., Bharathidasan University, Tiruchirappalli, Tamilnadu, India.
  - 2005 – 2007: M.Phil., Bharathidasan University, Tiruchirappalli, Tamilnadu, India.
  - 2003 – 2005: M.Sc., Bharathidasan University, Tiruchirappalli, Tamilnadu, India.
  - 2000 – 2003: B.Sc., Periyar University, Salem, Tamilnadu, India.
-

### *Selective Publications*

---

1. NMR Spectroscopy and DFT Calculations of a Self-Assembled Arene Ruthenium Rectangle Obtained from a Combination of Coordination and Hydrogen Bonds, Appavoo, D., **Raja, N.**; Deschenaux, R., Therrien, B., Carnevale, D, *Dalton Transactions*, **2016**, 4. 1410-1421.
2. Biological Activities of Pyrene-Derived Half-Sandwich Organometallic Complexes, **Raja, N.**; Devika, N., Gupta, G., Nagesh, N., Therrien, B., *J. Organomet.Chem.*, **2015**, 794, 104-114.
3. Synthesis, Characterization and catalytic activity of dinuclear half-sandwich complexes of Ru (II), Rh (III) and Ir (III) complexes. **Raja, N.**; Therrien, B., *J. Organomet.Chem.*, **2014**, 765, 1–6.
4. Binuclear ruthenium (II) pyridazine complex catalyzed transfer hydrogenation of ketones, **Raja, N.**; Ramesh, R., *Tetrahedron Lett.*, **2012**, 53, 4770–4777.
5. Ruthenium (II) NNO pincer type catalyst for the conversion of aldehyde to amides, **Raja, N.**; Ramesh, R., *Inorg. Chem. Commun.*, **2012**, 19, 51–54.
6. Paramagnetic ruthenium (III) complexes bearing O, O chelating ligands: Synthesis, spectra, molecular structure and electron transfer properties, **Raja, N.**; Ramesh, R. *Polyhedron* **2012**, 31, 196–201.

### *Invited Lecture*

---

Delivered a lecture on “*Catalytic and Anti-cancer Applications of Organometallic Compounds*” in Faculty Development Training Programme held at Department of Chemistry, University College of Engineering Tindivanam, Anna University Tindivanam.

### *Papers Presented in Conferences*

---

1. Presented a poster entitled “*Dinuclear arene Ru(II), Rh(III) and Ir(III) catalysts for the conversion of aldehydes to amides*” on SCS Fall Meeting, Sep 06, 2013 EPFL, Lausanne, Switzerland.
2. Presented a Poster entitled “*Catalytic organic transformation of aldehyde to amide by using ruthenium complexes*” Current challenges in Catalysis and Synthesis - December 13, 2012 University of Geneva, Geneva, Switzerland.

3. Presented a Poster entitled "*Synthesis, characterization and catalytic application of cationic arene ruthenium(II) phenylhydrazone complexes*" during March 07 to 09, 2012 in International Green Catalysis Symposium, Rennes. France.
4. Presented a paper entitled "*Rhodium(III) NCN pincer complexes catalyzed transfer hydrogenation of ketones*" at Modern Trends in Inorganic Chemistry during December 7 to 10, 2009 in Indian Institute of Science, Bangalore-560 012.
5. Presented a paper entitled "*Synthesis and Structure of Schiff base derivatives containing O, N donors*" at 38<sup>th</sup> National Seminar on Crystallography during February 11<sup>th</sup> to 13, 2009 in University of Mysore, Mysore-570 006.
6. Presented a paper entitled "*Transfer hydrogenation of ketones using recyclable ( $\eta^6$ -arene) ruthenium(II) naphthylazo-p-methyl phenolate complex,*" during, March 19 to 20, 2009 in International Conference on Coordination and Organometallic Chemistry, Bharathiar University, Coimbatore-641 046, India.

#### *Conference/Seminar/Workshop/FDP attended*

---

1. Participated in five days "*Foundation Skills in Integrated Product Development*" organized by Bharathidasan Institute of Technology (BIT) campus, Anna University Tiruchirappalli from 18.01.2016 to 23.01.2016.
2. Participated in seven days "*Faculty Development Training Programme*" held at Department of Chemistry, University College of Engineering Tindivanam, Anna University Tindivanam from 13.11.2015 to 06.12.2015.
3. Participated in "*Recent Development in Chemistry*" at Bharathidasan University, Tiruchirappalli-620 024, on 29.08.2011.
4. Participated in "*11<sup>th</sup> CRSI National Symposium in Chemistry*" at National Chemical Laboratory, Pune - 411 008, from 6.02.2009 to 8.02.2009.
5. Participated in "*3<sup>rd</sup> CRSI-RSC Symposium at National Chemical Laboratory*", Pune-411 008, on 5.02.2009.
6. Participated in "*National Seminar on Current trends in Chemistry*", Cochin University of Science and Technology, Cochin, from 18.01.2008 to 19.01. 2008.

***List of Awards/Honors:***

---

- Swiss - FCS Fellowship during the Postdoc (Swiss Federal Commission Fellowship for International Students).
- UGC - RFSMS Fellowship during the Ph. D (Research Fellowship for Science and Meritorious Students).

***Scientific Exposure and Other Instruments/Techniques Handled***

---

- Expert in Crystallographic Structure Solution
- JEOL JES-FA200 EPR Spectrometer
- 500 MHz, 400 MHz NMR (Bruker)
- Princeton Applied Potentiometer (Cyclic Voltammetry)
- Cary Varian Spectrophotometer, Uvikon 930 spectrophotometer
- JASCO 460 PLUS Spectrometer, Perkin Elmer FTIR 1720 X Spectrometer
- Princeton EG and G-PARC Model Potentiostat.