

Curriculum Vitae

Name : **Raja Gopal Rayavarapu**
Date of Birth : 05.10.1978

Academic Qualifications :

2014-Present Senior Scientist, Nanomaterial Toxicology Group, CSIR-IITR, Lucknow, India
2013-2014 Assistant Professor at SRM University, Chennai, India
2010 - 2012 Postdoctoral Research Scholar at Radboud University Nijmegen, The Netherlands
2005–2010 Ph.D from University of Twente, Enschede, The Netherlands
2003 – 2005 M.Sc., in Molecular Bioengineering, Technical University of Dresden, Dresden, Germany
1999 – 2001 M.Sc., in Biochemistry, Nagarjuna University, India
1996 – 1999 B.Sc., (Biochemistry, Microbiology and Aquaculture), Nagarjuna University, India

Research Interests

- Engineering nanomaterials to be used as electronic/molecular/contrast agents for different applications in chemistry, physics and biology
- Optical properties of nanomaterials in order to use them as diagnostic markers for Nanotherapeutic applications
- Framing the bridge between engineering and chemical sciences in order to achieve faster, cheaper and effective technology for commercial applications
- Developing novel contrast imaging materials for specific targeting of tumors within organs
- Toxicological responses of nanoparticles to biological cells in *in vitro* models

Professional Experience

- **2004-2005** - Research student in the group of Bionanotechnology and Networking Systems, Dresden, Germany
- **2003** - Lab Technician at National Brain Research Centre, Dept. of Biotechnology, India

International Journal Publications

1. **R. G. Ravavarapu**, W. Petersen, C. Ungureanu, J. Post, T. G van Leeuwen and S. Manohar, "Synthesis and Bioconjugation of gold nanoparticles as potential contrast agents for light-based imaging techniques" *Intl. Journal Biomed. Imaging*, 29817, 2007
2. **R. G. Ravavarapu**, W. Petersen, L. Hartsuiker, P. Chin, H. Janssen, F. van Leeuwen, C. Otto, S. Manohar and T. G. van Leeuwen, "In vitro toxicity of polymer coated gold nanorods", *IOP Nanotechnology*, 2010
3. **R. G. Ravavarapu**, C. Ungureanu, T. G. van Leeuwen and S. Manohar; "Iodide impurities in hexadecyltrimethylammonium bromide (CTAB) products: lot-lot variations and influence on gold nanorod synthesis", *Langmuir*, 2010
4. C. Ungureanu, **R. G. Ravavarapu**, S. Manohar and T. G van Leeuwen, "Discrete Dipole Approximation simulations of gold nanorod optical properties- Choice of input parameters and comparison with experiment", *J. Appl. Phys.*, 105, 102302, 2009
5. D. P. K. Lankveld, **R. G. Ravavarapu**, P. Krystek, A. G. Oomen, H. W. Verharen, T. G. van Leeuwen, W. H. De Jong and S. Manohar, "Blood clearance and tissue distribution of PEGylated and Non-PEGylated gold nanorods after intravenous administration in rats", *Future Medicine(Nanomedicine)*, 2011
6. C. Ungureanu, A. Amelink, **R. G. Ravavarapu**, H. J. C. M. Sterenborg, S. Manohar and T. G. van Leeuwen", Differential pathlength spectroscopy for the quantitation of optical properties of gold nanoparticles", *ACS Nano*, 2010
7. C. Ungureanu; T. van Weperen, J. Sijl, **R. G. Ravavarapu**, S. Manohar, M. Versluis, T. G. van Leeuwen, Acoustic signals from gold nanoparticles irradiated with pulsed lasers (A), *J. Acoust. Soc. Am.*, 2008
8. L. Hartsuiker, W. Petersen, **R. G. Ravavarapu**, Aufried T.M. Lenferink, A. Poot, Leon W.M.M. Terstappen, Ton G. van Leeuwen, S. Manohar, and C. Otto "Raman imaging and fluorescence emission spectra of live breast cancer cells incubated with gold nanorods reveal additional lipid signals" *Applied Spectroscopy*, 2011

International Conference Proceedings Papers

9. **R.G. Rayavarapu**, W. Petersen, S. Le Gac, C. Ungureanu, Ton van Leeuwen and S. Manohar, "Synthesis, functionalization and characterization of rod-shaped gold nanoparticles as potential optical contrast agents" SPIE, ECBO, Munich, Germany, 2007.

10. Constantin Ungureanu, **R.G. Rayavarapu**, Ton van Leeuwen and Srirang Manohar, Gold nanoparticles as contrast agents for photoacoustic imaging. In C.D. Depeursinge (Ed.), SPIE, **Munich, Germany, 2007**.
11. S. Manohar, **R.G. Rayavarapu**, W. Petersen and Ton van Leeuwen, "Cell viability studies of PEG-thiol treated gold nanorods as optoacoustic contrast agents," SPIE Photonics, **San Jose, USA, 2009**.

International Conference Oral Presentations

12. **R. G. Rayavarapu**, Constantin Ungureanu, Srirang Manohar and Ton van Leeuwen, "Synthesis and optical properties of gold nanorods with applications in nanomedicine" (International conference on Nanomedicine), Thessaloniki, **Greece, 2008**.
13. **R. G. Rayavarapu**, Wilma Petersen, Srirang Manohar and Ton van Leeuwen, "Biocompatible gold nanoparticles as contrast agents for light based imaging techniques" (Second Annual Dutch BME conference), Egmond an Zee, **Netherlands, 2009**.
14. **R.G. Rayavarapu**, P. Kouwer, A.E. Rowan, Th. Rasing, "Plasmonic Nanoparticles – Synthesis, Characterization and Applications", Hierarchy European Project, **Slovenia, 2010**.

International Poster Presentations

15. **R. G. Rayavarapu**, W. Petersen, C. Ungureanu, S. Manohar, T. G. van Leeuwen; (Poster presented at First Annual Dutch Biomedical Engineering conference, **Netherlands, 2007**).
16. C. Ungureanu, **R. G. Rayavarapu**, S. Manohar, T. G. van Leeuwen; (Poster presented at First Annual Dutch Biomedical Engineering conference, **Netherlands, 2007**).
17. C. Ungureanu, **R. G. Rayavarapu**, S. Manohar, T. G. van Leeuwen; (Poster presented at Biophotonics school, **Sweden, 2007**).
18. C. Ungureanu, **R. G. Rayavarapu**, W. Petersen, T. G. van Leeuwen and S. Manohar; Article presented at Nanomedicine Conference, **Greece, 2007**.
19. C. Ungureanu, J. Jose, **R. G. Rayavarapu**, S. Manohar, & T. G. van Leeuwen (2008). Symposium Highlights in Biomedical Technology: Enschede, **Netherlands, 2008**.
20. R. Kroes, C. Ungureanu, **R. G. Rayavarapu**, H. van Dijk, B. Oude Alink, S. Manohar and T. G. van Leeuwen, poster, Fotonica Event, **Netherlands, 2009**.
21. S. Manohar, C. Ungureanu, A. Amelink, **R. G. Rayavarapu**, Henricus J. C. Sterenborg, T. G. van Leeuwen; European Conferences on Biomedical Optics, **Germany, 2009**.
22. C. Ungureanu, A. Amelink, Henricus J. C. M. Sterenborg, **R. G. Rayavarapu**, S. Manohar, T. G. Van Leeuwen, CLINAM, Basel, **Switzerland, 2009**.
23. C. Ungureanu, T. van Hespren, J. Sijl, M. Versluis, **R. G. Rayavarapu**, S. Manohar, Ton van Leeuwen, at Acoustics, Paris, **France, 2008**.