

**From:** [support@perc.ufl.edu](mailto:support@perc.ufl.edu)  
**To:** [Jackson, Donna A](#)  
**Subject:** New Project Proposal Submission  
**Date:** Thursday, May 21, 2009 10:46:46 AM

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Lab Address:	PERC
Department:	MSE and PERC
Title:	Synthesis, Dispersion and Bioconjugation of Gold Speckled Silica Nanoparticles
Problem:	Gold Speckled silica nanoparticles provide 2 surfaces for further modification - silica and gold. Both the surfaces will be modified to obtain dispersion in biological medium
Approach:	Surface of the particle would be changed by modulation chemistries of both silica and gold.
Techniques/Equipment:	Particle size, distribution agglomeration studies- in different systems- Buffer, Biological media protein adsorption, Surface modification chemistry, FTIR, Raman
Systems and Materials:	Microemulsions for Synthesis: PEG, EDC, NHS (cojugation reagents), biological media, etc.
Goals:	Dispersion of GSS nanoparticles before and after bioconjugation modifications.
Relevant Industries/Applications:	Imaging and Pharmaceutical companies
Number of Students Requested:	2
Time Commitment:	15h
Semesters Required to Complete Project:	2
Will this Project Satisfy Senior/Honor Research Requirements in your Department?	Yes

If not, Can the Scope of this Project be Expanded to Meet Senior/Honor Research Requirements?

Yes