

RenoTahoePhotonics Cluster

OSA-RenoTahoeChapter and the local LEOS chapter

Meeting Dates:

Feb,1st, 2007
Mar,15th,2007
Apr,19th,2007

summer break

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Please join us for the 2nd in this series of Nanotechnology

Speaker: Prof. Wolfgang Fritzsche

Nanobiophotonics Department
Institute for Physical High Technology (IPHT) Jena, Germany

Title: DNA-Conjugated Metal Nanoparticle for Bioanalytics, Nanophotonics, and Nanoelectronics

Abstract: Metal (especially gold) nanoparticles exhibit unique electronic, optical and catalytic properties. In order to utilize these properties, an integration of the particles into technical setups such as a chip surface is helpful. We develop techniques to use bio-molecular tools in order to address and control the positioning of particles on microstructured chips. These techniques are utilized for novel DNA detection schemes using optical or electrical principles. Plasmonic properties of the particles and the combination of nano-apertures with particles are promising fields for further bioanalytical developments. On the other hand, methods for defined positioning of single molecules in parallel approaches are under development, in order to provide needed defined nanostructures for applications in nanoelectronics. Connecting DNA with nanoparticles, metalization of DNA or positioning of individual DNA-structures over microstructured electrode gap including subsequent metal particle binding are important steps in this direction.

Date: Friday, February, 16st, 2007

Time: 3:00 PM

Location: ROOM SEM-331, EBME Dept., UNR

EBME: Electrical and Bio-Medical Engineering formerly Electrical Engineering
3rd Floor in the SEM Bldg

All are invited. Refreshments will be served.

questions? Please contact either

Jutta Recktenwald at jutta@recktenwald.com phone:(775)250-3379 or

Prof.Dr.R.Bruch at bruch@physics.unr.edu phone:(775)784-4920 or

Prof. Dr. B. Rawat at rawat@ee.unr.edu phone: (775)784-1457

We thank your last speaker, Dough Ellsworth of Alairnano for his great presentation and patience with all of our questions.

Upcoming meetings:

March, 15th TBA:

April, 19th Fleischman Planetarium, New Optics Exhibit, Johanna