

Newsletter, March 2010

Papers

Distance-controlled scattering in a plasmonic trap

L. Huang and O. J. F. Martin

Appl. Phys. Lett. 96, 073104 (2010)

<http://link.aip.org/link/?APPLAB/96/073104/1>

Experimental Realization of Subradiant, Superradiant, and Fano Resonances in Ring/Disk Plasmonic Nanocavities

Y. Sonnefraud, N. Verellen, H. Sobhani, G. A. E. Vandenbosch, V. V. Moshchalkov, P. Van Dorpe, P. Nordlander and S. A. Maier

ACS Nano, Article ASAP

<http://pubs.acs.org/doi/abs/10.1021/nn901580r>

Optical excitations in electron microscopy

F. J. García de Abajo

Rev. Mod. Phys. 82, 209-275 (2010)

http://rmp.aps.org/abstract/RMP/v82/i1/p209_1

Free-space excitation of propagating surface plasmon polaritons by nonlinear four-wave mixing

J. Renger, R. Quidant, N. van Hulst, S. Palomba, L. Novotny

Phys. Rev. Lett. 103, 266802 (2009)

<http://prl.aps.org/abstract/PRL/v103/i26/e266802>

Surface-enhanced nonlinear four-wave mixing

J. Renger, R. Quidant, N. Van Hulst, L. Novotny

Phys. Rev. Lett. 104, 046803 (2010)

<http://prl.aps.org/abstract/PRL/v104/i4/e046803>

Nanoscale Control of Optical Heating in Complex Plasmonic Systems

G. Baffou, R. Quidant and F. Javier Garcia de Abajo

ACS Nano 4, 709 (2010)

<http://pubs.acs.org/doi/abs/10.1021/nn901144d>

Modelling of Polarization-Dependent Loss in Plasmonic Nanowire Waveguides

T. Rosenzweig, P.G. Hermannsson, K. Leosson

Plasmonics, DOI: 10.1007/s11468-009-9118-y

<http://www.springerlink.com/content/41p301gh2565k515/>

Limits on Integration as Determined by Power Dissipation and Signal-to-Noise Ratio in Loss Compensated Photonic Integrated Circuits Based on Metal/Quantum-Dot Materials

L. Thylén, P. Holmström, A. Bratkovsky, J. Li, S.-Y. Wang

IEEE J. Quantum Electron. 46, 518 (2010)

http://ieeexplore.ieee.org/xpls/abs_all.jsp?arnumber=5415798

How Far Are We from Making Metamaterials by Self-Organization? The Microstructure of Highly Anisotropic Particles with an SRR-Like Geometry

D. A. Pawlak, S. Turczynski, M. Gajc, K. Kolodziejak, R. Diduszko, K. Rozniatowski, J. Smalc, I. Vendik

Adv. Funct. Mater., Early View article

<http://www3.interscience.wiley.com/journal/123305225/abstract>

High-Performance Biosensing Using Arrays of Plasmonic Nanotubes

J. McPhillips, A. Murphy, M. P. Jonsson, W. R. Hendren, R. Atkinson, F. Höök, A. V. Zayats, Robert J. Pollard

ACS Nano, Article ASAP

<http://pubs.acs.org/doi/abs/10.1021/nn9015828>

Trapping and Sensing 10 nm Metal Nanoparticles Using Plasmonic Dipole Antennas

W. Zhang, L. Huang, C. Santschi, O. J. F. Martin

Nano Lett., 2010, 10 (3), pp 1006–1011

<http://pubs.acs.org/doi/abs/10.1021/nl904168f>

Jobs

The University of Iceland invites APPLICATIONS FOR PHD AND POSTDOCTORAL POSITIONS within the "Center of Excellence in Polaritonics" funded by Icelandic Research Fund. Applicants for the 3-year Ph.D positions should hold a masters degree in Physics or related disciplines from a recognized university. Applicants for the Postdoctoral positions should hold a Ph.D degree in Physics or related disciplines from a recognized university. Positions are open for both theoretical and experimental work. Applicants for theoretical positions should be familiar with methods of modern quantum or/ and nonlinear optics and be able to carry out corresponding numerical calculations. They will also be supposed to carry out long-term research visits to partner organizations abroad. Applicants for experimental positions should preferably be familiar with micro/nanofabrication techniques of optical structures as well as common optical characterization techniques. All applicants should possess an excellent knowledge of the English language and good communication skills to participate in collaborative work.

The successful candidates will perform research on the following subjects:

1. Theoretical modelling of nonlinear processes in quantum microcavities
2. Theoretical study of the decoherence in microcavities
3. Modelling of optical properties of hybrid metal- dielectric structures
4. Fabrication of optical micro- and nanostructures using high power impulse magnetron sputtering, photolithography, e-beam lithography and related cleanroom techniques.
5. Characterization of optical structures using, e.g., spectrally resolved transmission and reflection measurements.

Interested candidates with relevant expertise should send a statement of interest together with their CV, publication list and name and address of two possible referees to:

For theoretical positions: Prof. Ivan Shelykh, shelykh@raunvis.hi.is

For experimental positions: Prof. Kristjan Leosson, kleos@hi.is

PHD AND POSTDOC POSITIONS open in THz plasmonic metamaterials and THz near-field imaging. This is joint work between the departments of physics and materials at Imperial College London. For further particulars please get in touch with Prof. Stefan Maier, S.Maier@imperial.ac.uk

Events

EOS General meeting: Deadline 7 June 2010

<http://www.myeos.org/events/eosam2010>

Metamaterials '2010

Fourth International Congress on Advanced Electromagnetic Materials in Microwaves and Optics (<http://congress2010.metamorphose-vi.org/>), Karlsruhe, Germany

Conference: September 13 – 16, 2010; Doctoral School: September 17 – 18, 2010

Deadline: March 29, 2010

Contact: Stefan Linden and Vladimir Podlozny (contact@congress2010.metamorphose-vi.org)

GRC Plasmonics, June 13-18, 2010, Colby College, Waterville, ME

Deadline for applications submission: May 23, 2010

<http://grcmail.grc.uri.edu/programs.aspx?year=2010&program=plasmonics>

NANOMETA 2011, The 3rd International Topical Meeting on Nanophotonics and Metamaterials, 3 - 6 January 2011 Seefeld ski resort, Tirol, Austria
Call for papers opens August 1, 2010; Deadline for submission: October 1, 2010
<http://www.nanometa.org>