

Newsletter, February 2011

COST Plasmonics Working Groups 1-5 + MC meetings will be co-located with SPIE Optics+Optoelectronics
18 - 21 April 2011, Prague Congress Centre, Prague, Czech Republic
<http://spie.org/optics-optoelectronics.xml>

COST Plasmonics invites applications to host the hands-on training school(s): it is our commitment to spread the experimental and theoretical (methodological) hands-on knowledge in the plasmonics community, thus we aim at supporting focused events where participants learn in practice a particular (new) technique or real practical aspects of the established one. Example: Hole-mask Colloidal Lithography (HCL) training school (<http://www.chalmers.se/ap/EN/research/bionanophotonics/adverts/hcl>). If you would like to organize/host such event to share your knowledge with the community - please, contact me directly at alex.d@chalmers.se

STSMs (Short Term Scientific Missions) are sponsored by the network: if you plan a short (up to 3 months) visit to the partners lab - this is the instrument.
Documents to be submitted (to STSMs Coordinator Dorota Pawlak: Dorota.Pawlak@itme.edu.pl):

- CV of the applicant
- Acceptance letter of the host
- Detailed work plan
- On-line application (for the form - please, contact Dorota)

Planning: The documents should arrive to the network office at least one month before the trip

Papers

Gap and Mie Plasmons in Individual Silver Nanospheres near a Silver Surface
N. Yamamoto, S. Ohtani, and F. Javier Garca de Abajo
Nano Lett., 11, 91 (2011)
<http://pubs.acs.org/doi/abs/10.1021/nl102862x>

Formation of metal nanoparticles in silicon nanopores: Plasmon resonance studies
S. Polisski, B. Goller, S. C. Heck, S. A. Maier, M. Fujii, and D. Kovalev
Appl. Phys. Lett. 98, 011912 (2011)
http://apl.aip.org/resource/1/applab/v98/i1/p011912_s1?

Plasmonic interactions between overlapping nanowires
D. Y. Lei, A. Aubry, S. A. Maier, and J. B. Pendry
ACS Nano, Article ASAP (2011)
<http://pubs.acs.org/doi/abs/10.1021/nn102819p>

Sub-10 nm patterning of gold nanostructures on silicon-nitride membranes for plasmon mapping with electron energy-loss spectroscopy
A. L. Koh, D. W. McComb, S. A. Maier, H. Y. Low, and J. K. W. Yang
J. Vac. Sci. Technol. B 26, C6O45 (2010)
http://avspublications.org/jvstb/resource/1/jvtbd9/v28/i6/pC6O45_s1

Collection and concentration of light by touching spheres: a transformation optics approach
A. I. Fernández-Domínguez, S. A. Maier, and J. B. Pendry
Phys. Rev. Lett. 105, 266807 (2010)
<http://prl.aps.org/abstract/PRL/v105/i26/e266807>

Enhanced nonlinear response from metal surfaces

J. Renger, R. Quidant, and L. Novotny

Opt. Express 19, 1777 (2011)

<http://www.opticsinfobase.org/oe/abstract.cfm?>

Entanglement of Two Qubits Mediated by One-Dimensional Plasmonic Waveguides

A. Gonzalez-Tudela, D. Martin-Cano, E. Moreno, L. Martin-Moreno, C. Tejedor, and F. J.

Garcia-Vidal

Phys. Rev. Lett. 106, 020501 (2011)

<http://prl.aps.org/abstract/PRL/v106/i2/e020501>

Anomalous Band Formation in Arrays of Terahertz Nanoresonators

Y. M. Bahk, H. R. Park, K. J. Ahn, H. S. Kim, Y. H. Ahn, Dai-Sik Kim, J. Bravo-Abad, L.

Martin-Moreno, and F. J. Garcia-Vidal

Phys. Rev. Lett. 106, 013902 (2011)

<http://prl.aps.org/abstract/PRL/v106/i1/e013902>

Combined antenna and localized plasmon resonance in Raman scattering from random arrays of silver-coated, vertically aligned multiwalled carbon nanotubes*

P. Dawson, J.A. Duenas, M.G. Boyle, M.D. Doherty, S.E.J. Bell, A.M. Kern, O.J.F. Martin,

A.S. Teh, K.B.K. Teo, and W.I. Milne

Nano Lett., Article ASAP (2011)

<http://pubs.acs.org/doi/abs/10.1021/nl102838w>

*result of COST Plasmonics STSM

Excitation and reemission of molecules near realistic plasmonic nanostructures

A.M. Kern, and O.J.F. Martin

Nano Lett., Article ASAP (2011)

<http://pubs.acs.org/doi/abs/10.1021/nl1032588>

Symmetry and selection rules for localized surface plasmon resonances in nanostructures

W. Zhang, B. Gallinet, and O.J.F. Martin

Phys. Rev. B 81, 233407 (2010)

<http://prb.aps.org/abstract/PRB/v81/i23/e233407>

Trapping and sensing 10 nm metal nanoparticles using plasmonic dipole antennas

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

Nano Lett. 10, 1006 (2010)

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

Designed ultrafast optical nonlinearity in a plasmonic nanorod metamaterial enhanced by nonlocality

G. A. Wurtz, R. Pollard, W. Hendren, G. P. Wiederrecht, D. J. Gosztola, V. A. Podolskiy & A. V. Zayats

Nature Nanotech. 6, 107 (2011)

<http://www.nature.com/nnano/journal/v6/n2/abs/nnano.2010.278.html?lang=en>

Radiationless energy transfer in CdSe/ZnS quantum dot aggregates embedded in PMMA

Reitinger, N., Hohenau, A., Köstler, S., Krenn, J.R., Leitner, A.

Phys.Stat.Sol., Early view, DOI: 10.1002/pssa.201026590

<http://onlinelibrary.wiley.com/doi/10.1002/pssa.201026590/abstract>

Hohenau, A, Krenn, J.R.

Plasmonic modes of gold nano-particle arrays on thin gold films

Phys.Stat.Sol. (RRL) 4, 256 (2010)

<http://onlinelibrary.wiley.com/doi/10.1002/pssr.201004260/abstract>

Thermo-induced electromagnetic coupling in gold/polymer hybrid plasmonic structures probed by surface-enhanced Raman scattering

Gehan, H., Fillaud, L., Chehimi, M.M., Aubard, J., Hohenau, A., Felidj, N, Mangeney, C.
ACS Nano 4, 6491 (2010)

<http://pubs.acs.org/doi/abs/10.1021/nn101451q>

Jobs

3 PhD positions at Nanophotonics and metrology lab (NAM), EPFL (Lausanne, Switzerland).

(1) Engineering radiative and non-radiative optical interactions in plasmonic systems; (2)

Modelling plasmonic nanostructures in complex surroundings; (3) Plasmonic biosensing.

Contact: Prof. Olivier J. F. Martin, olivier.martin@epfl.ch

<http://nam.epfl.ch/openpos.html>

Events

PIERS 2011: Progress In Electromagnetics Research Symposium in Suzhou, China

12-16 September, 2011

Abstract Submission Deadline: 20 February, 2011

<http://www.piers.org/piers2011Suzhou/>

ICTON 2011: The 13th International Conference on Transparent Optical

COST Actions MP0702 (Sub-Wavelength Photonics) and MP0805 (Gain Materials and Devices Based on III-V-N Gain Devices) are having their 2011 annual events co-located with this event

June 26 - 30, 2011, Royal Institute of Technology (KTH), Stockholm, Sweden

Contributions submission deadline: March 31, 2011

<http://www.itl.waw.pl/icton2011>