

Newsletter, September 2012

COST Plasmonics activities are currently on-hold, awaiting approval of the budget for the budget year 2012-2013 by the COST office.

The Domain Committee of the MPNS domain (to where COST Plasmonics belongs, http://www.cost.eu/domains_actions/mpns) got an impression of the malfunctioning of the network and is requesting the highest decision body of COST (Committee of Senior Officials, <http://www.cost.eu/service/glossary/CSO>) to terminate the network.

If you feel that the activity of COST Plasmonics (official name - COST Action MP0803 Plasmonic components and devices) is helpful for your research networking and you would like to benefit from its work in the coming year - I would strongly encourage you to contact your COST National Coordinator and/or CSO member from your country ([http://www.cost.eu/about_cost/who/\(type\)/3/](http://www.cost.eu/about_cost/who/(type)/3/)) and express this opinion. The complete list of CSO members for each country can be found here: [http://www.consilium.europa.eu/policies/cost/organisational-structure/committee-of-senior-officials-\(cso\)/cost-national-coordinators](http://www.consilium.europa.eu/policies/cost/organisational-structure/committee-of-senior-officials-(cso)/cost-national-coordinators)

All partners are welcome to submit the entries to Papers, Jobs and Events sections.

Papers

Nanoplasmonic Sensors

A. Dmitriev (ed.)

Springer, New York (2012)

<http://www.springer.com/chemistry/analytical+chemistry/book/978-1-4614-3932-5>

Plasmon Spectroscopy and Imaging of Individual Gold Nanodecahedra: A Combined Optical Microscopy, Cathodoluminescence, and Electron Energy-Loss Spectroscopy Study

V. Myroshnychenko, J. Nelayah, G. Adamo, N. Geuquet, J. Rodríguez-Fernández, I.

Pastoriza-Santos, K. F. MacDonald, L. Henrard, L. M. Liz-Marzán, N. I. Zheludev, M. Kociak, and F. J. García de Abajo

Nano Lett. 12, 4172 (2012)

<http://pubs.acs.org/doi/abs/10.1021/nl301742h>

Steric Hindrance Induces crosslike Self-Assembly of Gold Nanodumbbells

M. Grzelczak, A. Sánchez-Iglesias, H. Heidari Mezerji, S. Bals, J. Pérez-Juste, and L. M. Liz-Marzán

Nano Lett. 12, 4380 (2012)

<http://pubs.acs.org/doi/abs/10.1021/nl3021957>

Silver Nanoparticle Aggregates as Highly Efficient Plasmonic Antennas for Fluorescence Enhancement

R. Gill, L. Tian, W. R. C. Somerville, E. C. Le Ru, H. van Amerongen, and V. Subramaniam

J. Phys. Chem. C 116, 16687 (2012)

<http://pubs.acs.org/doi/abs/10.1021/jp305720q>

Exciting Bright and Dark Eigenmodes in Strongly Coupled Asymmetric Metallic Nanoparticle Arrays

A. Cunningham, S. Mühlig, C. Rockstuhl, and T. Bürgi

J. Phys. Chem. C 116, 17746 (2012)

<http://pubs.acs.org/doi/abs/10.1021/jp301764d>

Deep-subwavelength imaging of the modal dispersion of light

R. Sapienza, T. Coenen, J. Renger, M. Kuttge, N. F. van Hulst & A. Polman
Nat. Mater. 11, 781 (2012)

http://www.nature.com/nmat/journal/v11/n9/full/nmat3402.html?WT.ec_id=NMAT-201209

Fano Interference between Localized Plasmons and Interface Reflections

M. Svedendahl and M. Käll

ACS Nano 6, 7533 (2012)

<http://pubs.acs.org/doi/abs/10.1021/nn302879j>

Optical Absorption Engineering in Stacked Plasmonic Au–SiO₂–Pd Nanoantennas

C. Wadell, T. J. Antosiewicz, and C. Langhammer

Nano Lett., Article ASAP (2012)

<http://pubs.acs.org/doi/abs/10.1021/nl3022187>

Probing the Ultimate Limits of Plasmonic Enhancement

C. Ciraci, R. T. Hill, J. J. Mock, Y. Urzhumov, A. I. Fernández-Domínguez, S. A. Maier, J. B.

Pendry, A. Chilkoti, D. R. Smith

Science 337, 1072 (2012)

<http://www.sciencemag.org/content/337/6098/1072.short>

Jobs

Master, PhDs and Postdoc positions at LENS (<http://www.lens.unifi.it>), Florence, Italy on light-matter interaction at the nanoscale: spectroscopy, sensing and signal processing - theory and experiments.

Contact: Mario Agio (agio@lens.unifi.it)

Postdoc position at LBB (<http://www.lbb.ethz.ch>), ETH Zurich, Switzerland on FluidFM and nanoplasmonics for biomolecular sensing (In the framework of an interdisciplinary project supported by the Swiss Innovation Agency KTI-CTI). The main objective of the experimental work will be to combine the FluidFM technology and plasmonic metal nanoparticles for optical biosensing via molecular recognition on abiotic surfaces and cell membranes in liquid environment.

Duration: 2 years, starting Oct. 1 2012

Contact: Tomaso Zambelli (ztomaso@ethz.ch).

PhD position at AIT Austrian Institute of Technology, Vienna, Austria on Active Plasmonics with Responsive Hydrogels. The project focuses on new biosensor schemes that take advantage of actuating of surface plasmons and active hydrogel-based binding matrices. The project embraces the development of new hybrid metal-polymer responsive nanostructures with specific optical properties and their implementation to novel biosensors exploiting (localized) surface plasmon resonance and surface plasmon-enhanced fluorescence spectroscopy.

Contact: Jakub Dostalek, jakub.dostalek@ait.ac.at or Maria Mauer, maria.maurer@ait.ac.at.

Postdoc position in ultrafast magnetism and plasmonics at Chalmers, Göteborg, Sweden
Requirements: Previous experience with ultrafast optical studies is a prerequisite. Strong interest / previous experience in nanooptics / nanoplasmonics as well as in time-resolved MOKE is a merit.

Position starts ASAP

<http://web1.reachmee.com/i003/chalmers/eng/vacdetail.aspx?commadseqno=560&postback%20=%20vacancies.aspx>

Contact: Alexandre 'Sascha' Dmitriev, alexnd@chalmers.se

<http://www.chalmers.se/ap/EN/research/bionanophotonics/research/functional>

Postdoc positions at the University of Eastern Finland, Joensuu, Finland

Contact: Pasi Vahimaa, Pasi.Vahimaa@joensuu.fi
<http://www.uef.fi/fysmat>.

Postdoc position at NAM (www.nanophotonics.ch), EPFL, Lausanne, Switzerland on molecular lifetime engineering. The objective of this project is to use advanced plasmonic nanostructures to engineer radiative and non-radiative decay rates in molecular systems. The project will include setting up a lifetime measurement setup based on a PicoQuant system, nanofabrication of plasmonic nanostructures and the corresponding modelling.

Duration: up to 4 years

Requirements: Strong expertise in nanofabrication and modelling already exist in the NAM and we are looking for a collaborator with skills in lifetime measurements and/or microscopy and optical measurements. The candidate should ideally have expertise in lifetime measurements or a very strong background in optical microscopy, a proven track record in scientific publications and a strong interest for molecular interactions with plasmonic systems.

Further info: www.nanophotonics.ch

Postdoc or PhD position at Delft University of Technology, The Netherlands on Graphene nanopores for single-DNA analysis.

Contact: Prof. Cees Dekker, c.dekker@tudelft.nl with a letter, CV, and 3 or more email addresses of references.

More info: <http://ceesdekkerlab.tudelft.nl/job-openings>

Postdoc position in the group of Materials and Processes for Micro & Nano Technologies of the Politecnico di Torino (www.polito.it/micronanotech), Italy on biophotonics within the framework of an European FP7 project on optical biosensing. The successful candidate will be involved in the design of proper photonic nanostructures aimed at biosensing and the setting up of dedicated experimental arrangements for fluorescence-based and label-free detection of molecular biomarkers. In addition, the successful candidate will participate to activities related to surface functionalization and chemical patterning of the photonic transducers.

Duration: 3 years.

Start: autumn 2012

For further information, please contact Emiliano Descrovi (emiliano.descrovi@polito.it) or Fabrizio Giorgis (fabrizio.giorgis@polito.it).