

## News

### Our New paper in Journal of Superconductivity and Novel Magnetism

Posted: September 19, 2017

Congratulations for the publication of paper “Transverse Tunable Magneto-Plasmonic Kerr Effect in Large Area Micro-Patterned Au/Co/Au Structures” in the “Journal of Superconductivity and Novel Magnetism” by S. M. Hamidi, S. Behjati, F. Sohrabi.

[0 comments](#)

### Our New Paper

Posted: September 15, 2017

Congratulations for the publication of paper “Large area multi-channel plasmonic absorber based on the touching triangular dimers fabricated by angle controlled colloidal nanolithography” in the “Journal of optics and Laser Technology” by S. M. Hamidi, S. Behjati.

[0 comments](#)

### Fano resonances in photonics

Posted: September 3, 2017

Rapid progress in photonics and nanotechnology brings many examples of resonant optical phenomena associated with the physics of Fano resonances, with applications in optical switching and sensing. For successful design of photonic devices, it is important to gain deep insight into different

resonant phenomena and understand their connection. Here, they review a broad range of [...]

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## **Congratulations for the publication of paper “Plasmon- exciton induced circular dichroism in Gold/PMMA (RB) complex”**

Posted: September 1, 2017

Congratulations for the publication of paper “Plasmon- exciton induced circular dichroism in Gold/PMMA (RB) complex” by Dr Hamidi, Ms Jafari, Mr Behjati and Ms Sohrabi. In this paper, we have investigated the strong coupling between exciton-plasmon by the aid of reflectance spectroscopy under different dye molecules weight in the samples. For this purpose, we have [...]

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## **Broadband Surface Plasmon Lasing in One-dimensional Metallic Gratings on Semiconductor**

Posted: August 12, 2017

They report surface plasmon (SP) lasing in metal/semiconductor nanostructures, where one-dimensional periodic silver slit gratings are placed on top of an InGaAsP layer. The SP nature of the lasing is confirmed from the emission wavelength governed by the grating period, polarization analysis, spatial coherence, and comparison with the linear transmission. The excellent performance of the [...]

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## [Congratulations on the acceptance of the paper “Localized to Propagating Surface Plasmon Resonance Transition in Ni-Au Magneto-Plasmonic Gratings”](#)

Posted: August 10, 2017

The paper entitled “Localized to Propagating Surface Plasmon Resonance Transition in Ni-Au Magneto-Plasmonic Gratings” is written by Morteza Alizadeh Oskuie under the direct supervision of Dr Seyedeh Mehri Hamidi and it is accepted in the journal of Superconductivity and novel magnetism. The abstract is as follows: Magneto-plasmonic structures, which are the best candidates for different applications, have been [...]

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## [Strong magneto-optical response of non-magnetic organic materials coupled to plasmonic nanostructures](#)

Posted: August 2, 2017

Plasmonic nanoparticles (PNPs) can significantly modify the optical properties of nearby organic molecules and thus present an attractive opportunity for sensing applications. However, the utilization of PNPs in conventional absorption, fluorescence, or Raman spectroscopy techniques is often ineffective due to strong absorption background and light scattering, particularly in the case of turbid solutions, cell suspensions, [...]

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## [Manipulating coherent plasmon-exciton interaction in single silver nanorod on monolayer WSe2](#)

Posted: July 22, 2017

Strong coupling between plasmons and excitons in nanocavities can result in the formation of hybrid plexcitonic states. Understanding the dispersion relation of plexcitons is important both for fundamental quantum science and for applications including optoelectronics and nonlinear optics devices. The conventional approach, based on statistics over different nanocavities suffers from large inhomogeneities from the samples, owing to the [...]

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## [Deep learning with coherent nanophotonic circuits](#)

Posted: July 14, 2017

Artificial neural networks are computational network models inspired by signal processing in the brain. These models have dramatically improved performance for many machine-learning tasks, including speech and image recognition. However, today's computing hardware is inefficient at implementing neural networks, in large part because much of it was designed for von Neumann computing schemes. Significant effort [...]

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## [Vertically magnetic-controlled THz modulator based on 2-Dmagnetized](#)

# plasma photonic crystal

Posted: July 10, 2017

A novel magnetized plasma modulator for THz range is proposed. The structure is based on 2-D photonic crystal (PC) constructed by triangular lattice of Si rods in air with line defects and an InSb rod as a point defect. Based on the magneto-optic effect, the resonant frequency can be tuned by the external magnetic field and the radius [...]

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