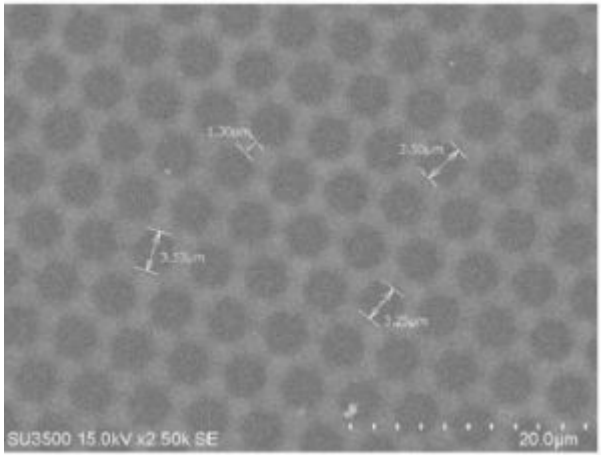
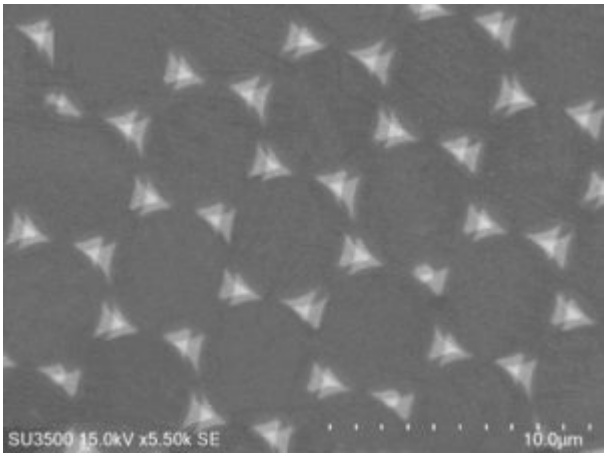
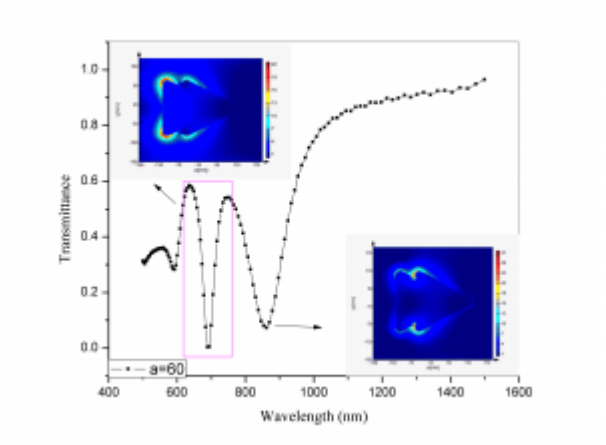
Our New paper in Journal of Superconductivity and Novel Magnetism

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.**

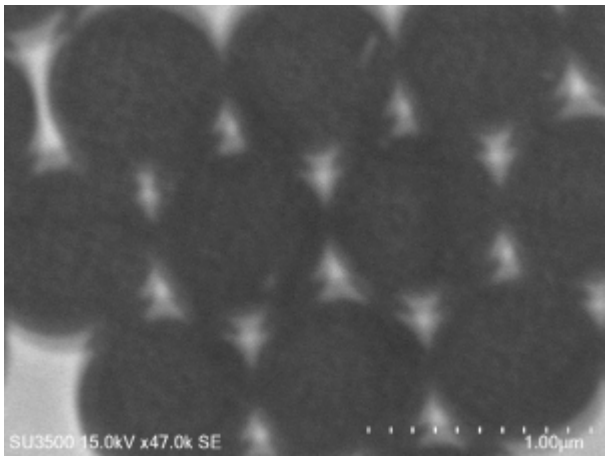


Our New Paper in Journal of optics and laser technology

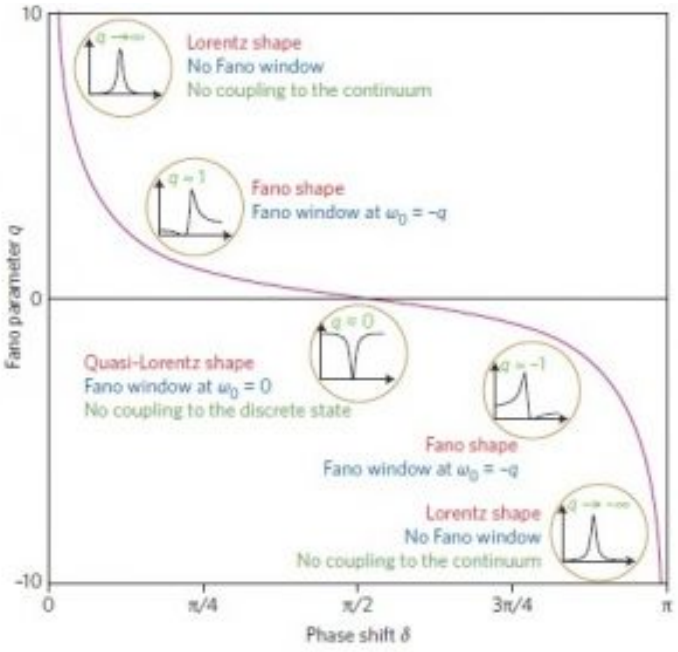




Congratulations for the publication of paper “Large area multi-channel plasmonic absorber based on the touching triangular dimers fabricated by angle controlled colloidal nanolithography” in the “Journal of optics and Laser Technology” by **S. M. Hamidi, S. Behjati.**



Fano resonances in photonics



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 resonant electromagnetic effects by using two effective coupled oscillators, including the Fano resonance, electromagnetically induced transparency, Kerker and Borrmann effects, and parity–time symmetry breaking. they discuss how to introduce the Fano parameter for describing a transition between two seemingly different spectroscopic signatures associated with asymmetric Fano and symmetric Lorentzian shapes. they also review the recent results on Fano resonances in dielectric nanostructures and metasurfaces.

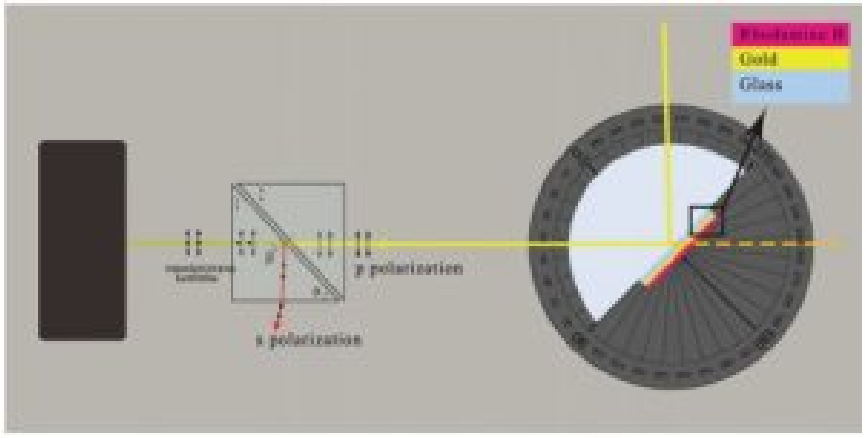
Source:
www.nature.com/nphoton/journal/v11/n9/full/nphoton.2017.142.html?foxtrotcallback=true

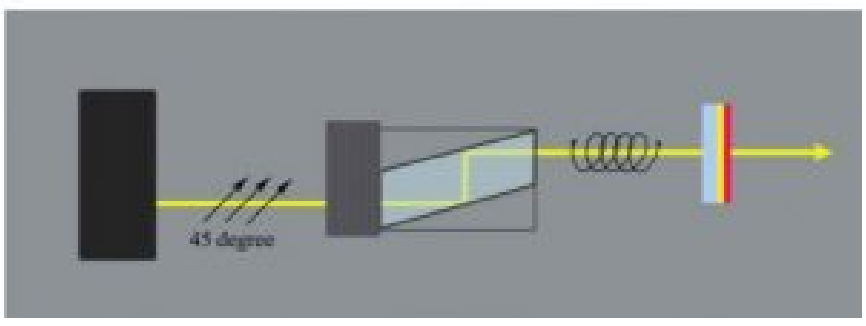
Related paper: Mikhail F. Limonov et al., Fano resonances in

photonics, *Nature Photonics.*, 11,(2017).

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

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 prepared five different samples as Glass/Cr/Au/PMMA (RB_x); in which the weight of RB has been changed from 0 to 4 mg. The spectroscopy of the samples has been done under angular modulation and also the dispersion relation of the samples has been extracted from this measurement. These measurements revealed the formation of two split polaritonic extreme in reflectance spectra as a function of wavelength. Then we have shown exciton–plasmon coupling in dispersiondiagram which presented an extra allowed mode between the polaritonic branches. After that, the circular dichroism spectra of samples have been measured to see the strong coupling circular dichroism. Our results show that, we have significant change in the dichroism of gold thin film due to strong coupling in all of visible region.