



Special Issue on Magneto-plasmonics

Call for Papers

Magneto-plasmonics is a relatively new field that has great potential applications in biomedicine and biomedical technologies such as ultra-sensitive biosensing and bio-detection, bio-imaging, bio-therapy, drug-delivery, nano-imaging, to name a few. Deep understanding of various factors influencing magnetoplasmon properties is an important step in the effort to design new magnetic sensors and devices. Although some progress on plasmonics has been achieved in the last few years, through combined simulation, modeling, experimental, and theoretical studies, there is still strong need to investigate new phenomena on magneto-plasmonics, in order to better tune and control magneto-optic properties, and to increase the sensitivity of the magnetic bio-sensor through modification of the optical radiation, magnetic field, and structure.

This new field merges the physics of nano-magnetics, where biological samples such as cells and DNA are made to interact with magnetic moments of a material in transverse direction, and nano-optics, where biological samples are made to interact with optical radiation in visible, infra-red, and telecommunication wavelength ranges. In a similar manner, it merges nano-plasmonics where biological samples are made to interact with surface plasmonic wave fields, also referred to as evanescent radiation fields.

The papers will be published in the Journal of Nano- and Electronic Physics, V.8, № 4, 2016

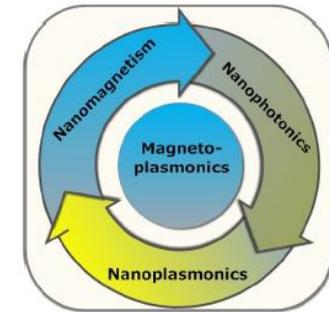
The purpose of this special issue is to highlight the progress in the field of magneto-plasmonics. We invite scientists and research scholars to contribute their original research and review articles that cover, but are not limited to, the following topics:

1. Review on plasmonics / magneto-plasmonics.
2. Theoretical models and calculations.
3. Preparation and characterization of nanomaterials.
4. Bio-functionalization of nanomaterials.
5. Experimental techniques for the study of plasmonics / magneto-plasmonics.
6. Recent advances in plasmonics / magneto-plasmonics and their possible applications in biomedical sensing, imaging, therapy, etc.

Journal of Nano- and Electronic Physics publishes original articles as regular papers and review articles, on experimental or theoretical investigations in the fields of condensed matter physics, nanoscale phenomena, and physical electronics. Investigations aimed at the development of the mathematical methods to describe processes and phenomena in specified fields are of interest as well. Authors can submit their manuscripts via the manuscript tracking System: <http://jnep.sumdu.edu.ua/>.

All of the submitted manuscripts should not have been previously published, nor be under consideration for publication elsewhere. Submitted manuscripts will be subject to the peer-review process. There is no charge for article processing, and there is no restriction on the length of the papers.

Deadline of paper submission – 01.11.2016.



Chief Editor:

Dr. Sci., Prof. **Ivan Yu. Protsenko**,
Sumy State University, Sumy, Ukraine,
e-mail: protsenko.aph@gmail.com

Lead Editor:

Dr. **Conrad Rizal**,
Baylor University, Department of Physics,
Texas, USA,
e-mail: Conrad_Rizal@baylor.edu

Guest Editors:

Dr. Ph. **Shigeyuki, Murayama** Muroran Institute of Technology, Hokkaido, Japan

Dr. Sci., Prof. **Eva Maikova**,
Slovak Academy of Sciences, Bratislava, Slovakia

Dr. **Simone Pisana**, York University, Toronto, Canada

Dr. Ph. **Byoung-Chul Choi**, University of Victoria, Canada

Dr. Sci., Ass. Prof. **Larysa Odnodvoretz**,
Sumy State University, Sumy, Ukraine.

Dr. Ph., Ass. Prof. **C.J. Panchal**,
The Maharaja Sayajirao University of Baroda,
Vadodara, India