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Editors

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Introduction

The SPIE Conference 9278 **Plasmonics** took place in Beijing, China 9–11 October 2014, as a part of the SPIE Meeting **Photonics Asia 2014.** Over 40 presentations and 9 posters by researchers from 12 countries and regions (Australia, China, Hong Kong, India, Israel, Japan, Russian, Spain, Singapore, Taiwan, USA, United Kingdom) were presented during the three-day meeting. Many of those presentations also resulted in a complete manuscript which is now being published in this Conference Proceedings Volume 9278.

Plasmonics is a new area for the basic research and application of electro-magnetic information transfer in nanoscale structures by means of surface plasmons, which are coherent delocalized electron oscillations that exist at the interface between, e.g., a metal-dielectric interface.

Plasmonics has been developed as one of the rapidly growing research topics for nano-optics and nanophotonics. With the advanced nanofabrication techniques, a broad variety of nanostructures can be designed and fabricated for plasmonic devices at nanoscale. Fundamental properties for both surface plasmon polaritons and localized surface plasmons gave rise to a new insight and understanding for the electro-optical device investigations.

This conference is a continuation of the previous SPIE conferences on nano-optics, near-field optics and nanophotonics, such as Conference on *Nano-Optics and Nano-Structures, SPIE* 4923 (2002); Conference on *Nanophotonics, Nanostructure and Nanometrology*, SPIE 5635 (2004); and Conference on *Nanophotonics, Nanostructure and Nanometrology II,* SPIE 6831 (2007).

During this conference, many key issues of plasmonics were discussed, such as plasmonic nanofocusing, plasmon waveguiding, active plasmonic detectors for energy harvesting, magnetic and thermal properties in plasmonics, nonlinear graphene plasmonics, Aluminum plasmonics, as well as quantum plasmonics and plexcitonics.

We would like to thank the excellent organization of SPIE and Chinese Optical Society. Special thanks are due to Dr. Zheyu Fang (Peking University) for his constant assistance.

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