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Nanostructured Thin Films IX: Design, Fabrication, Characterization, and Modeling

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The well-established discipline of thin-film optics is undergoing a spectacular revolution in recent years, due to the advent of nanotechnology. In particular, the propensity to engineer the morphology of thin films at nanometer length scales offers realistic opportunities to realize remarkable optical properties. Thus, the design, fabrication, characterization, and modeling of nanostructured thin films are all areas of intense ongoing research activity, presenting formidable challenges and tantalizing opportunities to experimentalists and theorists from a broad range of scientific and engineering disciplines. The Nanostructured Thin Films series of conferences, which are held under the auspices of the annual SPIE Optics + Photonics Symposium, provides a forum for the dissemination of the most recent developments in this rapidly expanding field.

The ninth conference in the Nanostructured Thin Films series took place in San Diego (California, USA) on the 30th August and 1st September 2016. Over 50 presentations were made, spread over nine oral sessions and one poster session. The topics encompassed all aspects of design, fabrication, characterization, and modeling, with specialist sessions being devoted to plasmonics, control and modification, and multilayers. In addition, the opening keynote lecture focused on the development of biosensors. As in previous years, the impressive number of high-quality presentations from graduate students and junior researchers from all parts of the world was especially noteworthy in 2016.

This special section of the *Journal of Nanophotonics* comprises papers that either have been expanded from those presented at Nanostructured Thin Films IX or are otherwise closely related to papers presented at this conference. These papers offer a representative snapshot of the diverse developments in the field of nanostructured thin films and serve to highlight the vitality of this research field and the creativity of those researchers involved.

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