



Special Issue Reprint

Micro-Nano Surface Functionalization of Materials and Thin Films for Optical Applications

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Edited by Ramón Escobar-Galindo Elena Guillén Rodríguez

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This book contains the articles collected for the Special Issue entitled "Micro-nano Surface Functionalization of Materials and Thin Films for Optical Applications" in the journal *Coatings* (ISSN 2079-6412). These selected articles provide a meaningful overview of recent advances and concepts beyond the state-of-the-art regarding surface functionalization of materials and deposition of thin films to be used in optical applications. The aim was to cover all relevant aspects of the topic (simulation, design, fabrication, characterization and applications) with a special emphasis on non-conventional methods for surface modification of materials, combinations of mature fabrication routes with emerging technologies (i.e., additive manufacturing) and large-area fabrication concepts to pave the way to an industrial utilization of the developed materials. This overview comprises the recent work of reputed scientists from Germany, Austria, Spain and India on:

- New developments on the scale-up deposition of transparent conductive materials by magnetron sputtering,

- Design of hierarchical surface structures at different scale lengths for nanoimprinting of optical nano- and micro-structures,

- Non-conventional preparation of rutile-type TiO2 films at room temperature for optical applications on heat-sensitive substrates,

- Design of spectrally selective solar absorber coatings based on computational simulation



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