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Synthesis and Optical Properties of ZnO Nanostructured Materials

Guest Editor:

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Deadline for manuscript submissions:
closed (10 October 2023)

Message from the Guest Editor

Dear Colleagues,

Due to its fascinating multi-functional properties, zinc oxide (ZnO) has attracted significant attention in both the academic and industrial spheres. ZnO nanostructures, in particular, have been a focus of research for various applications because these nanostructures can be easy prepared in a variety of precisely tuned morphologies and sizes, and they also offer a wide direct band gap (3.37 eV), high thermal conductivity, a high refractive index (2.0041) and a rather large excitation binding energy (60 meV). Heretofore, a wide range of chemical and physical technologies were implemented for the preparation of ZnO nanostructures, such as chemical vapor deposition, sputtering, a microwave and ultrasonic combined technique, hydrothermal synthesis, etc. The optical properties of ZnO nanostructures can be modified through annealing, plasma and/or doping processes.

Therefore, combining different synthesis and post-modification approaches can lead to highly tunable opto-electrical ZnO nanostructures with well-defined physico-chemical properties. Original research papers, short communications and state-of-the-art reviews are welcome for this Special Issue.

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Message from the Editor-in-Chief

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