Special Issue

Optical Trapping of Micro/Nanoparticles

Message from the Guest Editors

Since Ashkin's pioneering works, optical tweezers have become an essential tool to immobilize and manipulate micro- and nanoscale objects. In recent years, the most relevant topic in this field has been studies focused on the trapping dynamics of individual sub-100 nm objects. Their use is key for a variety of applications, including single molecule spectroscopy, colloidal dynamics, tailored particle assembly, protein isolation, high-resolution surface studies, the controlled investigation of biological processes, and surface-enhanced spectroscopy. In addition, the number of biosensing techniques based on optical trapping is continuously increasing due to the synergy between optical engineering and material science. This Special Issue welcomes contributions on optical trapping and the manipulation of micro/nanoparticles. These may comprise both theoretical and experimental studies, and applications of optical manipulation methods on (but not limited to) dielectric, metal, lumincescent, and nonluminescent micro/nanoparticles. The Special Issue will accept diverse forms of contributions, including research papers and review articles and etc.

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