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Nano/Micromechanical Metasurfaces and Active Metasurfaces/Plasmonics

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Message from the Guest Editors

Metasurfaces/plasmonics can be artificially engineered for a desired electromagnetic response. The optical response of metasurfaces is controlled by the geometrics of unit cells; however, the excellent functionalities of metasurfaces, such as a perfect absorber, epsilon-nearzero (ENZ), and metalenses, are normally fixed by its geometries.

The advances in nano- and microelectromechanical systems (N/MEMS) technologies, offer an approach for tuning the structural reconfiguration of metasurface/plasmonics EM properties.

The state-of-the-art articles that deal with the desirable properties of metasurfaces, including a large tunability, fast speed, small size, lightweight, ability to integrate, and compatibility of cost-effective fabrication processes are welcome. Topics include, but are not limited to:

- Metasurfaces for the modulation of amplitude, frequency, and polarization
- Metasurfaces for the manipulation of wavefronts
- Tunable metasurface-based holograms, Tuneable metasurface emitters and perfect absorbers
- Metasurface sensors, Active metasurfaces/plasmonics
- Noval tuning mechanisms
- Applications in biological imaging and sensing
- Communication-related applications

