

# Nano-optomechanical Metamaterials

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**Abstract:** The development of metamaterials has led to demonstrations of fascinating optical properties such as negative refraction, invisibility, ultra-thin lenses and many more. However, the unique properties of metamaterials are usually fixed and narrowband. Here we develop nano-optomechanical metamaterials that offer a flexible platform for static and fast dynamic control of metamaterial optical properties using electrostatic, magnetic, optical forces and ultrasound.