



## Strain engineering as a tool for development of stretchable photonics

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The elastic strain engineering approach for controlling optical properties of the cavity and for growing of photonic crystals is conceptually described and experimentally confirmed in this work. A cavities used in this study are based on multilayer hybrid metal/polymer films. The optical properties of the cavity are effectively controlled by wrinkling the metal surface. The wrinkled surface at same time can be used for patterning of colloidal particles in order to make photonic crystal which bandgap can be controlled by wrinkling geometry. The work presented here constitutes a first step in development of stretchable and curved photonics.