Stimuli-Responsive Liquid Crystalline Materials: From Tunable Photonics to Deformable Soft Systems

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Liquid crystals (LCs) represent a fascinating state of matter that combines order and mobility on a molecular and supramolecular level. The unique combination of order and mobility results in that LC is typically "soft" and responds easily to external stimuli. The responsive nature and diversity of LCs provide tremendous opportunities as well as challenges for insights in fundamental science, and open the door to various applications. Conventional nematic LCs have become the quintessential materials of LC displays. With the LC displays ubiquitous in our daily life, the research and development of LCs are moving rapidly beyond display applications and evolving into entirely new and fascinating scientific frontiers. In my talk, I will focus on our recent research and development on stimuli-responsive liquid crystalline materials: from tunable photonics to deformable soft systems.

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