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Liquid Crystals Confined in Micro and Nanochannels[1] YU-BING GUO, JIE XIANG, OLEG LAVRENTOVICH, QI-HUO WEI, Liquid Crystal Institute, Kent State Univ, Kent, OH — Geometrical confinements cause frustration, topological defects in liquid crystal molecular orientations, altering behaviors of phases and phase transitions. In this paper, we developed microfabrication processes for assembling cells of glass slides with various well-defined confinement geometries such as microfluidic channels and nanofluidic channels, and will present experimental studies on the structures and phase transitions of nematic and cholesteric liquid crystals under these confinements.

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