381. Title:THz nematic liquid crystal devices using stacked membrane film layers
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Abstract:Twisted nematic type THz polarization control devices using liquid crystal immersed membrane films were fabricated by using simple stacking process. First of all, we verify the liquid crystal alignment effect in various kinds of membrane films. From THz Time-Domain Spectroscopy measurements, apparent refractive index anisotropy was observed in liquid crystal immersed Polytetrafluoroethylene and Polyolefin membrane films. Furthermore, transmission properties of twisted nematic type THz device are in rough agreement with 4 × 4 matrix calculation data. We believe that primary characteristic of THz TN device can be obtained by optimizing the fabrication processes and measurement method.