

Abstract Submitted
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Electrically controlled negative refraction in a uniaxial nematic liquid crystal OLEG D. LAVRENTOVICH, OLEG P. PISHNYAK, Liquid Crystal Institute, Kent State University, Kent, Ohio 44242 — We demonstrate the phenomenon of electrically controlled negative refraction at the interface between an isotropic material and a uniaxial nematic liquid crystal, in which the optic axis makes a large angle (40-60 degrees) with the interface and is switched by a modest (few volts) electric field. Depending on the applied voltage, the refracted beam is either on the opposite side of the interface normal as compared to the incident beam (positive refraction) or on the same side (negative refraction) .

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