

Abstract Submitted  
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**Second harmonic light scattering from a bent-core nematic liquid crystal**<sup>1</sup> SHOKIR PARDAEV, Department of Physics, Kent State University, Kent, ANTAL JAKLI, Liquid Crystal Institute, Kent State University, ROBERT TWIEG, JARROD WILLIAMS, Department of Chemistry & Biochemistry, Kent State University, JAMES GLEESON, BRETT ELLMAN, Department of Physics, Kent State University, SAMUEL SPRUNT, Department of Physics, Kent State University, Kent — We study the angular distribution of second harmonic (SH) light scattered from the aligned nematic phase of a bent-core liquid crystal. Throughout the nematic range and for certain combinations of polarizations of the fundamental and second harmonic fields, we detect peaks in the SH signal at non-zero scattering vectors ( $\pm q$ ) along the nematic director, while the signal for  $q = 0$  (forward direction) remains at the background level. The value of  $q$ , which corresponds to a length scale in the micron range, decreases with temperature when heating toward the nematic to isotropic transition. We will present a model to explain the major aspects of our results and indicate their significance in terms of the structure of bent-core nematics.

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