Abstract Submitted
for the MAR09 Meeting of
The American Physical Society

**Dielectric properties of bent-core nematic materials**[1] PETER SALAMON, NANDOR EBER, SAMUEL SPRUNT, JAMES GLEESON, ANTAL JAKLI — We report of dielectric spectroscopy measurements on bent-core nematic liquid crystals. The components of the relative dielectric permittivity and the dielectric loss have been measured as functions of frequency and temperature in the case of various bent-core mesogens in their nematic and isotropic phases. The results show that these liquid crystals have extraordinary dielectric behaviors if we compare them to the traditional calamitic materials, such as – they show low frequency ( $< 10$ kHz ) relaxations. Distortion elastic constants measurements reveal that $K_1$ / $K_3$ $\sim 1$ in contrast to typical calamitics. The reasons for these anomalous behaviors will be discussed.

[1]This work was supported by NSF DMR 0606160, and OTKA-K-61075.

Peter Salamon

Date submitted: 18 Nov 2008 Electronic form version 1.4