Supercooled liquids

Suo, Zhigang, suo@seas.harvard.edu, Harvard University

ABSTRACT

In this discussion, we present a theory for the computation of poling processes which is based on a constitutive model taking into account all electro-mechanically coupled ferroelectric and ferroeleastic hysteresis properties. In addition, this theory includes as a unique feature weak electric conductivity. The author presents an example where the developed finite element tool has been used to compute poling processes in piezoceramic devices. In particular, the author demonstrates the effect of subsequent charge transport following the poling process induced by depolarization fields.