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Polarization Mapping in Ferroelectric Polymer Thin Films by Pyroelectric Scanning Microscopy JINGFENG SONG, STEPHEN DUCHARME, Department of Physics and Astronomy, Nebraska Center for Materials and Nanoscience, University of Nebraska-Lincoln, Lincoln, Nebraska 68588-0299, USA — High-resolution mapping of polarization distribution in P(VDF-TrFE) Langmuir-Blodgett film was carried out through pyroelectric scanning microscopy with a focused 405nm blue diode laser beam. A lateral resolution of 500 nm was achieved by modulating the laser power at high frequency. At frequencies above 1 MHz, the laser spot size, rather than the thermal diffusion, becomes the limiting factor in the lateral resolution. The experimental results were compared to computer models developed with the finite element method.

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