Imaging Experiments in PPMS

We can visualize symmetry breaking in crystals, formation of magnetic domains, and conduction pathways using polarizing microscopy with a magneto-optical indicator. Dr. Yuto Kinoshita and his collaborators have developed a polarizing microscope system that can be inserted into a solenoid-type magnet (see photo). They have verified its effectiveness in detecting magnetic field-induced phase transitions in magnetic shape-memory alloys, observing the creation and annihilation processes of magnetic bubble domains, and measuring local magnetization in a transparent magnet. The present system is available up to 14 T and down to 2 K. For details, please refer to this paper. → https://aip.scitation.org/doi/10.1063/5.0094747