

INERTIO-VISCO-ELASTIC COUPLING ON A LAMELLAR PHASE

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The understanding of the phenomena leading to shear-induced structural transitions requires time resolved experiments allowing to characterize the material properties at all involved length scales, nanoscopic, microscopic and macroscopic. This is done after different experimental techniques, namely wide angle x-ray scattering under shear, freeze fracture electron microscopy and shear rheometry. Besides the shear-induced meso-phase present complex viscoelastic properties. These are characterized after an especially designed creep-flow based measurement procedure which allows a full control of the different parameters involved.