

Abstract Submitted
for the MAR13 Meeting of
The American Physical Society

High resolution synchrotron X-ray studies of lyotropic liquid crystal phases of monolayer Zirconium Phosphate nanosheet¹ YUE SHI, YONGQIANG SHEN, NOEL CLARK, Department of Physics, Liquid Crystal Materials Research Center, University of Colorado-Boulder, CO 80309, USA, MIN SHUAI, ZHENG DONG CHENG, McFerrin Department of Chemical Engineering, Texas A&M University, College Station, TX 77843, USA — Aqueous suspensions of monolayer zirconium phosphate nanosheets (ZrP-NS) form various lyotropic liquid crystal phases. An interesting stripe pattern can be observed in a range of nanosheet concentrations when the suspensions were confined between flat surfaces. The stripe patterns were stable while slow evaporation of the solvent and were well-preserved even when the suspensions dried out. A high resolution synchrotron X-ray study gives detailed investigations of ZrPNS lyotropic phases at different concentrations.

¹Supported by NSF MRSEC Grant DMR-0820579 and NSF Grant DMR-1006870.

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Date submitted: 20 Nov 2012

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