## Lyotropic Liquid Crystal Phases of Phytantriol in a Protic Ionic Liquid with Fluorous Anion

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**Figure S1.** Stackplots of SAXS/WAXS patterns at 25 °C for phytantriol in a) MImOF (no water), b) MImOF90wt%-water10wt%, c) MImOF75wt%-water25wt%, d) MImOF50wt%-water50wt%, and e) MImOF25wt%-water75wt%. Concentrations refer to the proportion of phytantriol in the binary or tertiary system.











**Figure S2.** Stackplots of IR spectra at 20 °C for phytantriol in a) MImOF (no water), b) MImOF90wt%-water10wt%, c) MImOF75wt%-water25wt%, d) MImOF50wt%-water50wt% and e) MImOF25wt%-water75wt%.



**Figure S3.** IR spectra at 20 °C for phytantriol concentrations between 30 and 80 wt% in the solvent mixture of 75 wt% MImOF and 25 wt% water.



**Figure S4.** IR spectra at 20 °C for phytantriol concentrations between 30 and 80 wt% in the solvent mixture of 50 wt% MImOF and 50 wt% water.