Electronic Supplementary Material (ESI) for Physical Chemistry Chemical Physics

Supporting Information

The impact of ionic liquids on amyloid fibrilization of Aβ16-22: Tuning the rate of fibrilization using a reverse Hofmeister strategy

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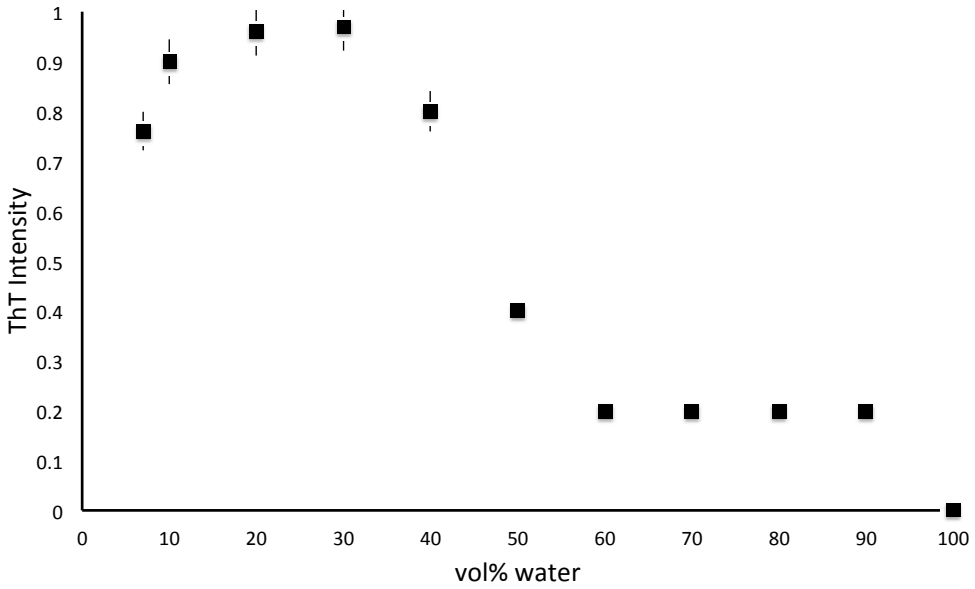

Figure 1: ThT intensity for Aβ16-22 dissolved in TeaH_2PO_4 solutions with varying water content after 1 minute.

Included is a Movie showing the fast fibrilization of Aβ16-22 in 90%TeaH_2PO_4.

Materials and Methods

Aβ16-22 was synthesized by Fmoc solid phase chemistry using PEG-PS resin. The peptide was cleaved using 95% TFA, 3% TES and 2% water (v/v/v), and obtained in the form of a TFA salt. Peptide purity was determined by HPLC and found to be 96%, and mass spectrometry (ESI, +ve); *m/z* calc. $(C_{43}H_{64}N_8O_{10})^+$, 852.47; found 853.46.

Ionic liquids were prepared as previously reported[1].

CD spectra were collected using a Jasco J-850 spectropolarimeter. Peptide concentration was 50uM. The spectra were averaged over 5 scans, and a pathlength of 1mm was used.

ThT was performed using a Varian Cary Eclipse Fluorescence Spectrophotometer. Peptide concentration was 2mg/ml and ThT concentration was 0.5mg/ml. pILs with 0.5mg/mL ThT were used as controls and data points were collected at 482nm over 3 accumulations and from 3 sample sets. ThT was added to the sample at each time increment prior to measuring the ThT intensity

TEM images were taken using a Jeol 210 microscope accelerating voltage was 100kV, grids were staining using 2% uranyl acetate.

Reference

1. Belieres, J.-P.; Angell, C. A. *J Phys Chem B* 2007, **111**, 4926-4937