

## Supplementary Information

### Enhanced stabilization of the Tobacco mosaic virus in protic ionic liquids

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#### Experimental

TMV virus particles were partially purified from TMV infected tobacco (*Nicotiana tabacum*) plants using a method described by Chapman (1998). Briefly, 10 grams of TMV infected tobacco tissue was homogenized in 30 ml of chilled 0.5 M Phosphate buffer (pH 7.2) containing 1% 2-mercaptoethanol and filtered through two layers of Miracloth. Butan-1-ol was gradually added to the filtrate at a rate of 0.8 ml/10 ml filtrate with stirring prior to centrifuging at 10,000g for 30 minutes. A 20% Polyethylene Glycol 8000 (PEG) was added to the aqueous phase to give a final concentration of 4%, and incubated on ice for 15 minutes with regular stirring. The PEG solution was centrifuged at 10,000g for 15 minutes at 4°C and the opaque pellet was resuspended in 2 ml of 10 mM phosphate buffer (pH 7.2). This solution was re-centrifuged for 15 minutes at 10,000g and the supernatant of partially purified TMV particles was retained for further analysis. pILs were prepared as previously described by reference 26. TMV was added at a concentration of 0.5mg/ml for secondary structure and 1mg/ml for tertiary analysis

#### Results

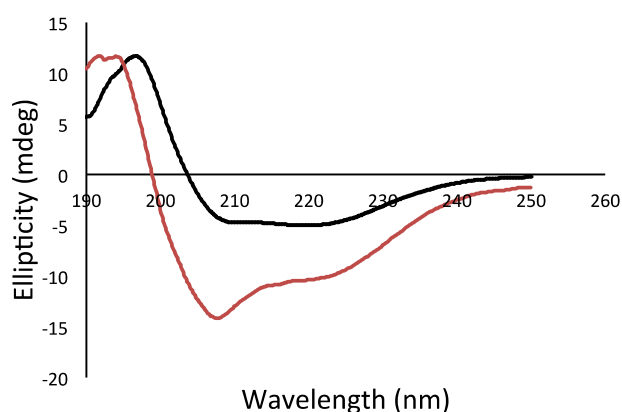


Figure S1: CD spectrum of TMV dissolved in propylammonium mesylate (Black) and tripropylammonium mesylate (red).

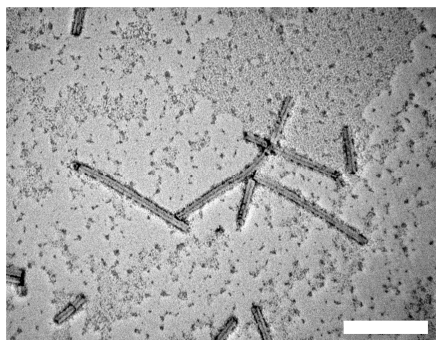


Figure S2: TEM micrograph showing TMV dissolved in propylammonium mesylate showing the characteristic rod morphology.

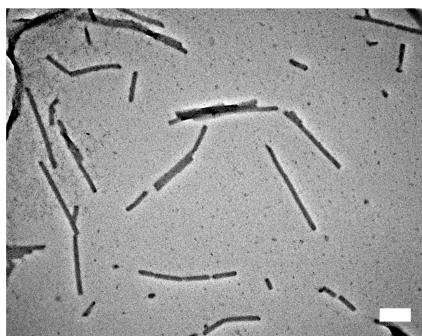


Figure S3: TEM micrograph showing TMV dissolved in ethylammonium mesylate, EaMs after 4 months, again the rod like morphology is observed.