

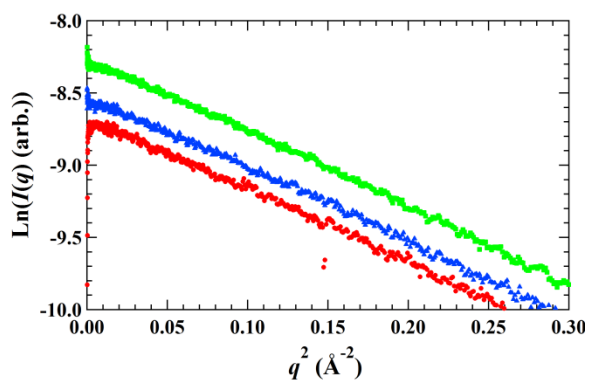
## ESI for

### Structural aspects of heteropolyacid microemulsions

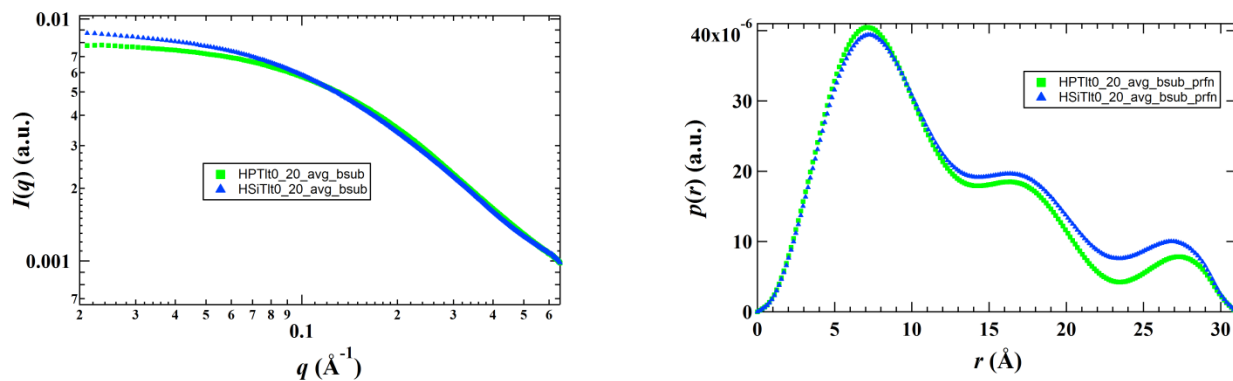
Mrinal K. Bera,<sup>a</sup> Ross J. Ellis,<sup>a</sup> Benjamin P. Burton-Pye,<sup>b</sup> and Mark R. Antonio<sup>a,\*</sup>

<sup>a</sup>Chemical Sciences & Engineering Division, Argonne National Laboratory, Argonne, IL 60439 U.S.A. <sup>b</sup>CUNY Hunter College, Department of Chemistry, New York, NY 10065 U.S.A.

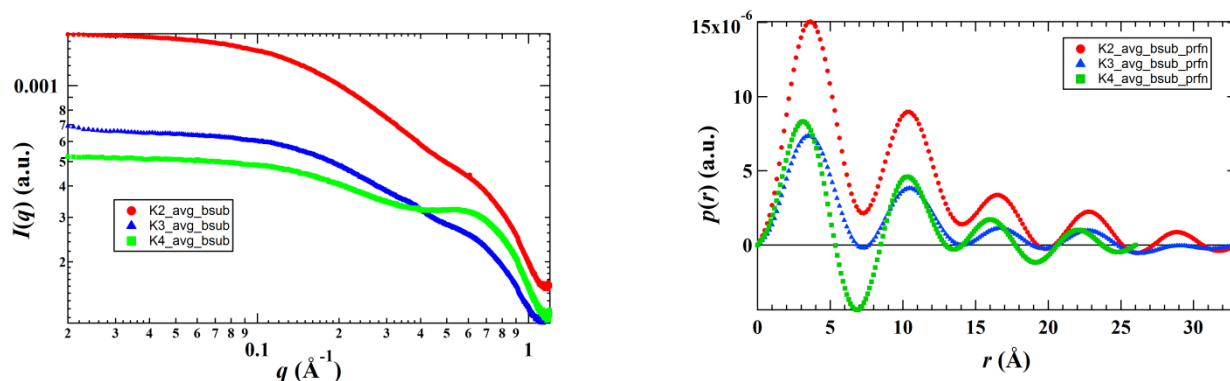
**Figure S1.** Guinier plots of the experimental SAXS data of Figure 3 (article text) showing the linear and effectively parallel responses that indicate that the clusters sizes are the same and independent of charge for H<sub>3</sub>PT, H<sub>4</sub>SiT, and H<sub>5</sub>AIT (green squares, blue triangles, and red circles, respectively) in acidic (pH = 1) aqueous electrolytes.



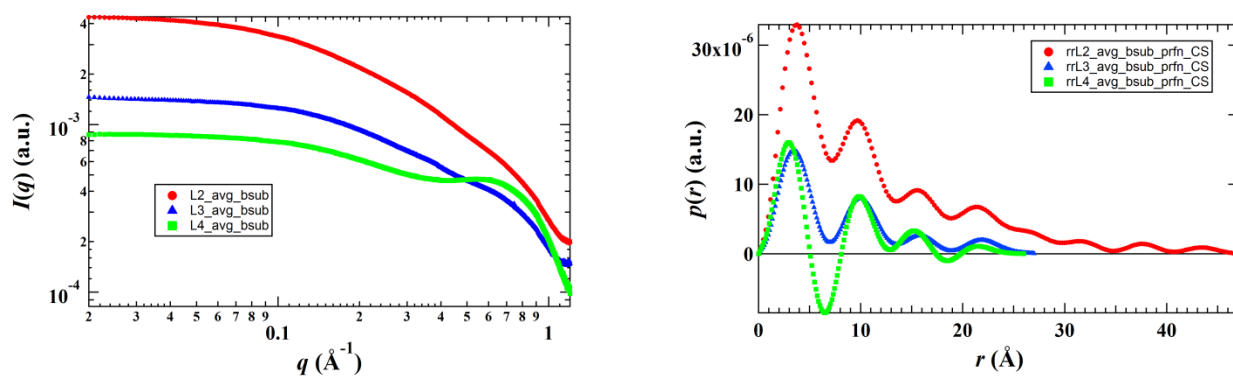
**Figure S2.** (a) Log-log plot of the SAXS data,  $I(q)$  vs.  $q$ , for the light solution phases obtained from the solvent extraction (SX) of H<sub>3</sub>PT and H<sub>4</sub>SiT (green squares and blue triangles, respectively) with 20% TBP-*n*-octane and 20% TBP-*n*-dodecane solutions, respectively. (b) The corresponding distance distribution functions,  $p(r)$  vs.  $r$ ., obtained from the data of part (a) using the Moore autocorrelation method.<sup>1</sup> These data are consistent with reverse micellar structures without heteropolyacid.



**Figure S3.** (a) Log-log plot of the SAXS data,  $I(q)$  vs.  $q$ , for the light solution phases obtained from the dissolution of H<sub>3</sub>PT, H<sub>4</sub>SiT, and H<sub>5</sub>AIT (green squares, blue triangles, and red circles, respectively) in 20% TBP-*n*-dodecane solutions. (b) The corresponding distance distribution functions,  $p(r)$  vs.  $r$ ., obtained from the data of part (a) using the Moore autocorrelation method.<sup>1</sup>



**Figure S4.** (a) Log-log plot of the SAXS data,  $I(q)$  vs.  $q$ , for the light solution phases obtained from the dissolution of H<sub>3</sub>PT, H<sub>4</sub>SiT, and H<sub>5</sub>AIT (green squares, blue triangles, and red circles, respectively) in 30% TBP-*n*-dodecane solutions. (b) The corresponding distance distribution functions,  $p(r)$  vs.  $r$ ., obtained from the data of part (a) using the Moore autocorrelation method.<sup>1</sup>



## References

- (1) Moore, P. B. *J. Appl. Crystallogr.* **1980**, *13*, 168-175.