

Crystal Growth of Zeolites

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NNIN Facility utilized: Characterization Facility

- Tracking of early stages of zeolitic crystallization in a tetrapropylammonium (TPA)-silica sol by SAXS and Cryo-TEM

- MAJOR OBSERVATIONS

- ◆ Formation of aggregates of precursor nanoparticles (ca. 5 nm) before zeolitic crystallization
- ◆ Observation of the regions of high-solubility in growing crystals, which suggests the aggregation of structurally distributed population of precursor nanoparticles

- Publications

- ◆ S Kumar et al, *JACS*, 130 (51), 17284–1728, 2008
- ◆ S Kumar et al, *J Phys Chem B*, 111 3398–3403, 2007
- ◆ T M Davis et al, *Nat Mater.* 5 400–408, 2006

