

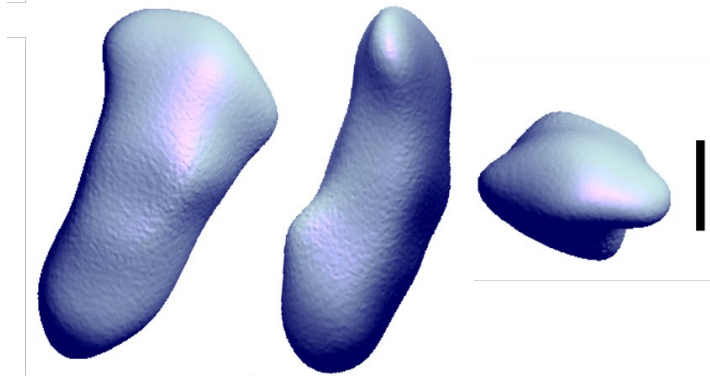
Materials Research Science and Engineering Centers

Understanding solution processing of inorganic materials using cryo-EM (IRG-2)

As₂S₃ in Propylamine



As₂S₃ in Ethylenediamine



- Detailed understanding of colloidal structure is critical to understanding thin film formation and material properties
- Long standing models for colloidal structure of chalcogenide glass in solution remained untested for decades
- IRG-2 developed a new methodology based on the work of structural biologists to employ Cryo Electron Microscopy (Cryo-EM) toward the study of inorganic materials in solution
- This method can be applied to other inorganic materials and systems

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First direct measurement of the colloidal structure of As₂S₃ in solution state