

Abstract Submitted  
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**Enhancing Nucleation rates using Porous Silica<sup>1</sup>** SATHISH AKELLA, SETH FRADEN, Brandeis University — The role of nucleants in promoting protein crystal nucleation is an on-going field of research. Porous silica acts as heterogeneous nucleation centers and enhances nucleation rates. For the protein lysozyme there are multiple polymorphs and we demonstrate that porous silica preferentially increases one of the polymorphs. Preliminary studies are presented in which accurate nucleation rates for the different polymorphs as a function of nucleant concentration are obtained through optical microscopy studies of thousands of crystallization trials in identical water-in-oil emulsion drops produced using microfluidics.

<sup>1</sup>NSF-IDBR

Sathish Akella  
Brandeis University

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