

Supporting Information

Protein Crystallisation Facilitated by Silica Particles to Compensate the Adverse Impact from Protein Impurity

Xiaoyu Li¹ and Jerry Y. Y. Heng^{1,}*

† Department of Chemical Engineering, Imperial College London, South Kensington
Campus, London, SW7 2AZ, United Kingdom

* Corresponding Author: jerry.heng@imperial.ac.uk

Contents

Section S1. Characterisation of Silica Particles

Section S2. Normalised Lysozyme Concentration and Induction Time Determination

Section S1. Characterisation of Silica Particles

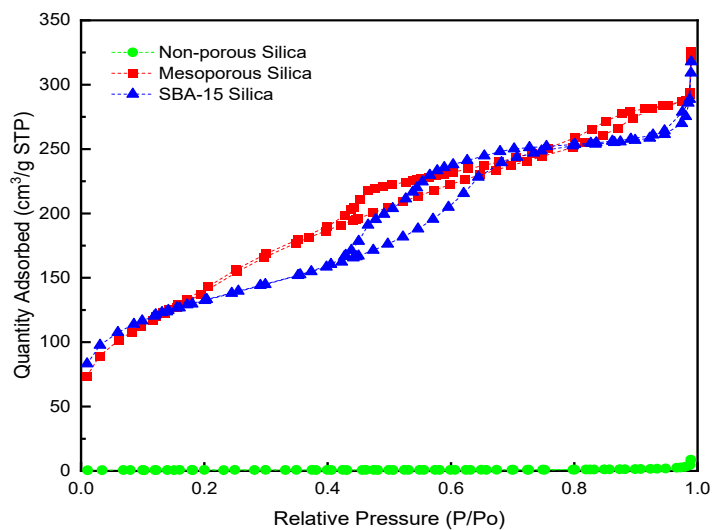


Figure S1: Nitrogen adsorption and desorption isotherms for the silica particles: Non-porous silica (green circle); Mesoporous silica (red square); SBA-15 silica (blue triangle).

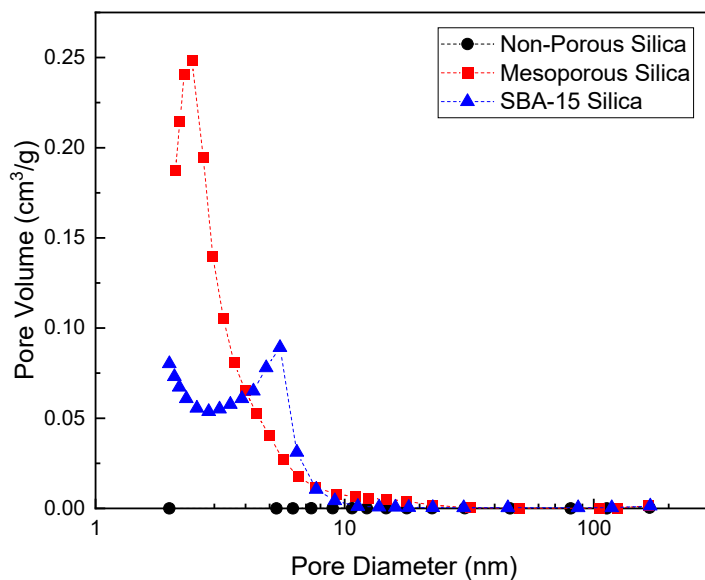


Figure S2: Pore size distribution calculated based on BJH adsorption.

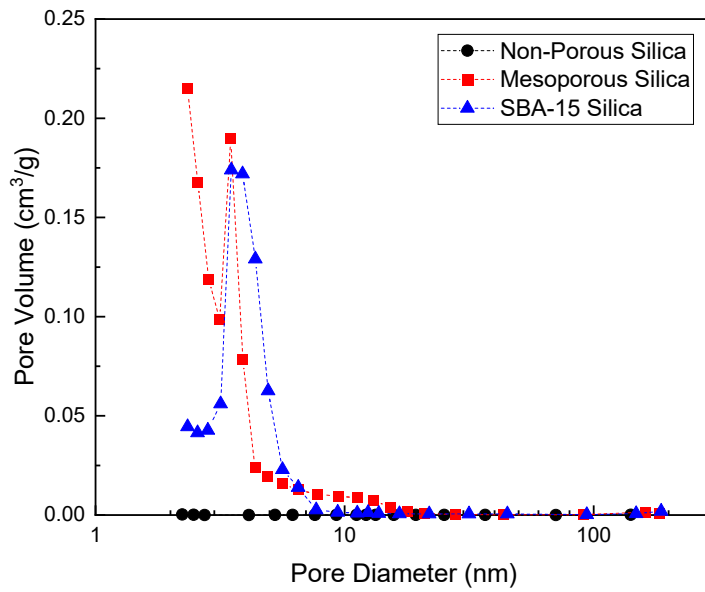


Figure S3: Pore size distribution calculated based on BJH desorption.

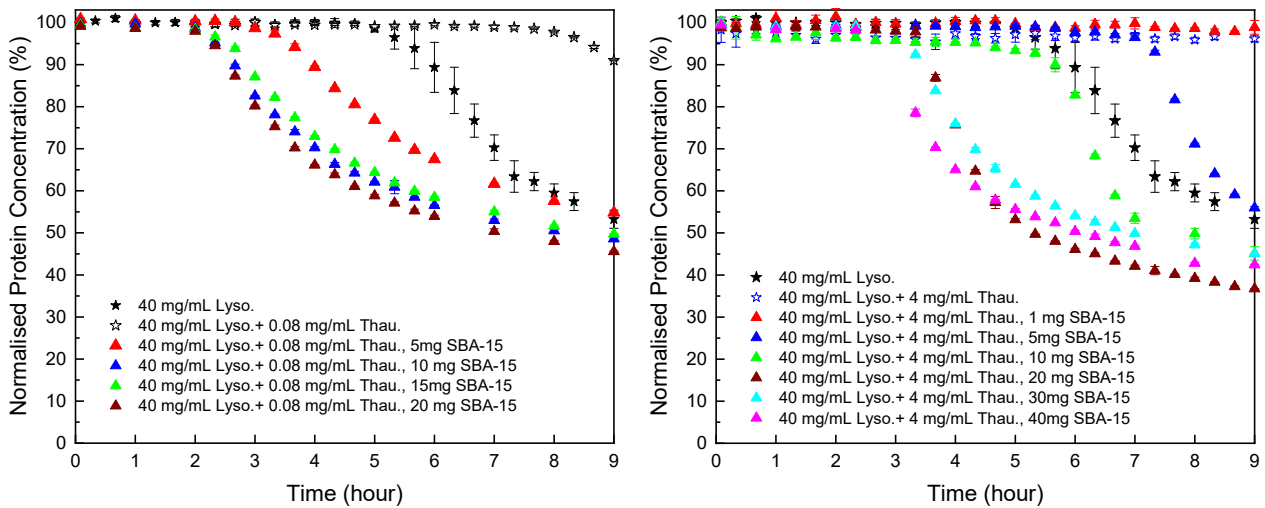


Figure S4: Normalised lysozyme concentration profiles with different amount of thaumatin impurity and silica particle.

Section S2. Normalised Lysozyme Concentration and Induction Time Determination

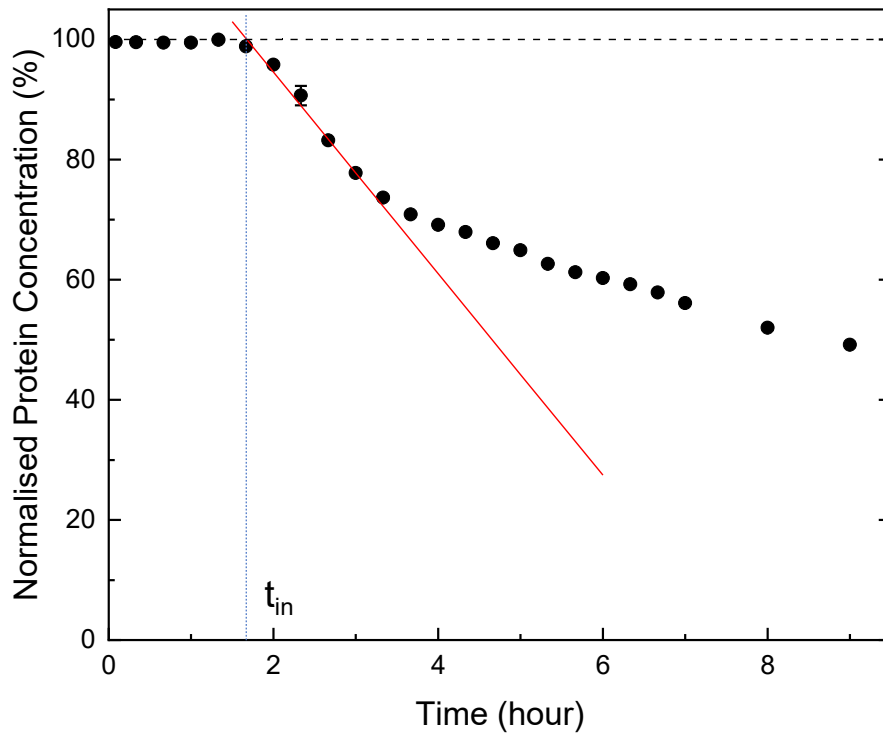


Figure S5: An schematic illustration of protein concentration desupersaturation curve determined by UV-Vis spectrophotometer in protein crystallisation process. induction time determination. The black line represents 100% normalised protein concentration. The red line represents the tangent of the inflection point of the desupersaturation curve. The blue line represents $x(\text{time})=t_{in}$, which is the x value of the intercept of the red line and the black line.