

# Effect of disorder on condensation in the lattice gas model on a random graph

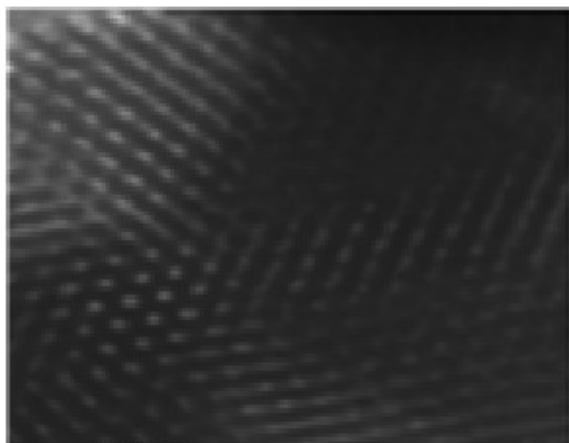
T.P. Handford<sup>1</sup>, A. Dear<sup>1</sup>, F.J. Perez-Reche<sup>2</sup> and S.N. Taraskin<sup>3</sup>

<sup>1</sup>Department of Chemistry, University of Cambridge, Cambridge, UK

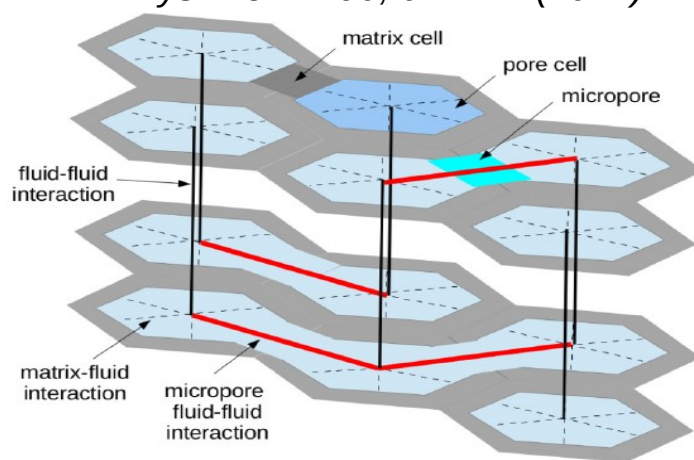
<sup>2</sup>Inst. for Complex Systems and Math. Biology, SUPA, King's College, University of Aberdeen, Aberdeen, UK

<sup>3</sup>St. Catharine's College and Department of Chemistry, University of Cambridge, Cambridge, UK

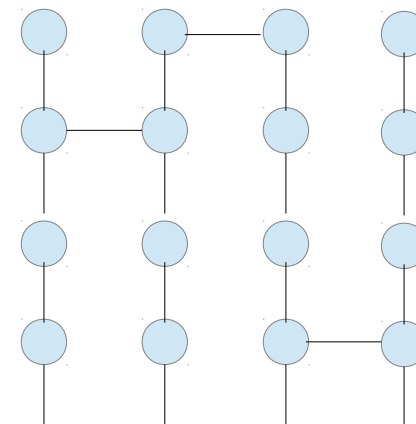
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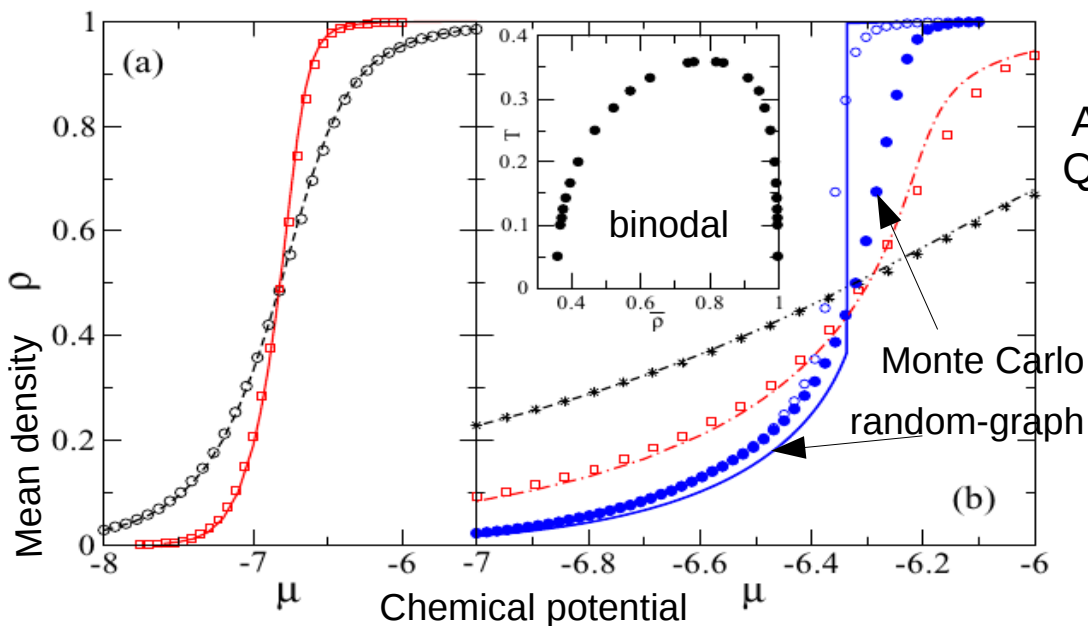
Mesoporous silica SBA-15



Lattice model of SBA-15



Random graph Model of SBA-15



Adsorption/desorption in SBA-15 shows a hysteresis.  
Question: Does the first-order phase transition occur in SBA-15?

Monte Carlo simulations cannot help.

**BUT**

Random-graph network models mimicking local connectivity in SBA-15 can be solved **EXACTLY** analytically and help to answer this question.

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