**The Diffusion of Sticky Particles in One Dimension**

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**Abstract**

In order to model the diffusion of oxygen atoms through a titanium lattice, I have made a simple one-parameter hopping model which attempts to incorporate basic interactions between particles. The parameter represents the degree of “stickiness” of the particles. It turns out that the mean-field approximation to this model has a continuum limit which is easily solvable in closed form, and exhibits some interesting properties. In this poster I will discuss these properties, along with numerical results designed to explore the range of validity of this mean-field approximation.

<References to paper preprint possibly to follow; I will email it when I have it>