

Abstract Submitted
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Interparticle gap distributions on one-dimensional discrete lattices MARIA D'ORSOGNA, TOM CHOU, UCLA — We analyze the successive binding of two species of particles on a one-dimensional discrete lattice, where the second variety is deposited only after complete adsorption of the first. We consider the two extreme cases of a perfectly irreversible initial deposition, with non-sliding particles, and that of a fully equilibrated one. For the latter we construct the exact gap distribution from the Tonks gas partition function. This distribution is contrasted with that obtained from the Random Sequential Adsorption (RSA) process. We discuss implications for the kinetics of adsorption of the two species, as well as experimental relevance of our results.

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