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Non-trivial statistics crossover in random sequential adsorption due to the presence of a pattern NUNO A.M. ARAUJO, GCEP-Centro de Fisica da Universidade do Minho, 4710 Braga, Portugal; T-12 Group, MS B268, Los Alamos National Laboratory, Los Alamos, NM 87545, USA, ANTONIO CADILHE, T-12 Group, MS B268, Los Alamos National Laboratory, Los Alamos, NM 87545, USA; GCEP-Centro de Fisica da Universidade do Minho, 4710 Braga, Portugal, VLADIMIR PRIVMAN, Department of Physics, and Center for Advanced Materials Processing, Clarkson University, Potsdam, NY 13699, USA — The random sequential adsorption (RSA) on a lattice approaches the jammed state exponentially, while in the off-lattice version approaches the jammed state as a power-law. In this presentation, we focus on the kinetics leading to the jammed state. The presence of pattern influences the kinetics of approach to the jammed state. Namely, a pattern consisting of equal size squares embedded on a square matrix lattice provides a rich set of regimes. Measurements of the distribution of areas available for adsorption during the process make possible to predict how the jammed state is attained: power-law or exponential. Finally, we associate these two different kinetic regimes with the breakdown of Pommeau statistics near the jammed state.

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