

Statistical properties of the ballistic deposition and solid on solid models

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The study of the statistical property of surfaces growing under the deposition of particles has helped researchers to find new information about surfaces. The theoretical description are based on continuous models: the Edwards-Wilkinson model, the Kardar-Parisi-Zahang(KPZ) equation and models based on molecular beam epitaxy. The focus of this study has been statistical characterization of the growing surface. This is achieved by simulating ballistic deposition and restricted solid on solid models. We found same roughness and growth exponent as they are in a same universality class(KPZ). In our investigation we have found some different properties for those. We determined Markov property, Markov length scale and Keramers-Moyal coefficients. These two models can be distinct by differences between them.