

Abstract Submitted
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A Theoretical Study of the Graphite Surface Patterns DA GAO,
University of Minnesota at Twin Cities — A quantitative understanding of surface patterns of graphite and other materials might has applications in nanostructure fabrication and surfaces engineering. For example, the controlled nanostructures growth is essential for the nanofabrication, which has already established its potential in industry. In this study, the Kinetic Monte Carlo (KMC) method has been employed to model and simulate the graphite crystal growth and surface patterns with our own developed software. In addition, we compared our theoretical results with the experimental observations. The good agreement between our simulations and the experiments not only provides insights and feasible mechanisms for controlling nanostructures growth in a more desirable pattern but also establishes that KMC is a promising method for such studies.

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