

Abstract Submitted
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**Effect of Diffusion on Size Distribution Dynamics of Desorption
in KMC Simulations of a Lattice-Gas Model of Pulsed Electrodeposition**

TJIPTO JUWONO, Florida State University — We have studied the effect of diffusion during the desorption phase in pulsed electrodeposition in a square lattice-gas model using Kinetic Monte Carlo simulations. The effect of diffusion on correlation length and size distribution during the desorption were studied. During the process, the correlation length increased up to a maximum and then decreased. We found that diffusion increase correlation length by small percentage in the regime where correlation length is decreasing, and increase it more significantly when the correlation length is increasing. By studying size distributions we found that diffusion tends to shrink large clusters and grow or create medium clusters. When the clusters growth or creation by diffusion is small, the increase of correlation length by diffusion is small and large otherwise.

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