

Abstract Submitted  
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**Computational Study of a Random Surface Model** MATTHEW DRAKE, JONATHAN MACHTA, University of Massachusetts, YOUJIN DENG, USTC, DOUGLAS ABRAHAM, Rudolph Peierls Centre for Theoretical Physics, Oxford, UK, CHARLES NEWMAN, Courant Institute, NYU — We present results of Monte Carlo simulations of the equilibrium random surface model proposed in [1]. The model includes both the Volmer-Weber and Stranski-Krastanow growth regimes. In one limit, the model reduces to the two-dimensional Ising model in the height representation. We find that the critical temperature is reduced when the Ising model constraint of a single height steps is relaxed. The critical properties of the model are explored using a variant of the worm algorithm.

[1] C. Newman and D. B. Abraham, Equilibrium Stranski-Krastanow and Volmer-Weber models, *Europhys. Lett.*, 86, 16002 (2009).

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