

Physical Review E

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Dear editor,

it is our pleasure to submit the manuscript "*Dewetting simulations of the fluctuating thin film equation with a lattice Boltzmann method*" as a regular article to Physical Review E.

Only recently thermal fluctuations in thin liquid films have gained reasonable attention. Theoretically, capillary wave theory can explain the spectrum of those fluctuations. However, their influence on the dewetting process of thin films is still under debate. In this manuscript we show that our here presented numerical model is consistent with capillary wave theory and can reproduce results from previous publications. We then demonstrate that a chemically patterned substrate can to a large extent suppress the effect of thermal fluctuations, where the efficiency of this suppression depends on the structure of the pattern. To the best of our knowledge this behavior has not been reported so far. We think that our contribution fits the readership of the fluid dynamics and computational physics sections of Physical Review E since it provides a revised/extended computational framework which allows simulations of a classical fluid dynamics problem together with a number of new and in our opinion relevant findings.

Thank you for your time and consideration. We look forward to hearing from you in connection with our submission.

Yours sincerely,

Stefan Zitz, Andrea Scagliarini and Jens Harting