



Beitrag ID: 26

Typ: Poster

Swalbe.jl - Droplets, Dewetting, Dynamic Contact Angles

Montag, 8. November 2021 17:55 (20 Minuten)

Swalbe.jl is an open source lattice Boltzmann based solver for thin film dynamics [1]. Intended for problems ranging from the relaxation or coalescence of droplets to the dewetting of thin films on complex substrates [2]. Features such as thermal fluctuations or spatially resolved contact angles are readily usable and shown to agree with theoretical predictions [3,4]. Switchable substrates can be realized adding a temporal component to the contact angle [5].

1. Oron, A., Davis, S. H., & Bankoff, S. G. (1997), Long-scale evolution of thin liquid films, *Reviews of modern physics*, 69(3), 931.
2. Zitz, S., Scagliarini, A., Maddu, S., Darhuber, A. A., & Harting, J. (2019), Lattice Boltzmann method for thin-liquid-film hydrodynamics, *Physical Review E*, 100(3), 033313.
3. Mecke, K., & Rauscher, M. (2005), On thermal fluctuations in thin film flow, *Journal of Physics: Condensed Matter*, 17(45), S3515
4. Zitz, S., Scagliarini, A. & Harting, J. (2021), Lattice Boltzmann simulations of stochastic thin film dewetting, *Physical Review E*, 104(3), 034801.
5. Zitz, S., Scagliarini, A. & Harting, J. *in preparation*.

Hauptautoren: ZITZ, Stefan (Forschungszentrum Jülich GmbH, Helmholtz Institute Erlangen-Nürnberg for Renewable Energy (IEK-11)); Dr. SCAGLIARINI, Andrea (Consiglio Nazionale delle Ricerche, Institute for Applied Mathematics "M. Picone" (IAC)); Prof. HARTING, Jens (Forschungszentrum Jülich GmbH, Helmholtz Institute Erlangen-Nürnberg for Renewable Energy (IEK-11))

Vortragende(r): ZITZ, Stefan (Forschungszentrum Jülich GmbH, Helmholtz Institute Erlangen-Nürnberg for Renewable Energy (IEK-11))

Sitzung Einordnung: Poster session