Oliver BÃ¤umchen

List of Publications by Year
in descending order

37 papers	1,172 citations	471509 17 h-index	377865 34 g-index
42 all docs	42 docs citations	42 times ranked	1536 citing authors

#	Article	IF	Citations
1	Reduced Glass Transition Temperatures in Thin Polymer Films: Surface Effect or Artifact?. Physical Review Letters, 2012, 109, 055701.	7.8	151
2	Selfâ€assembled silane monolayers: an efficient stepâ€byâ€step recipe for highâ€quality, low energy surfaces. Surface and Interface Analysis, 2015, 47, 557-564.	1.8	93
3	Reduced Interfacial Entanglement Density Affects the Boundary Conditions of Polymer Flow. Physical Review Letters, 2009, 103, 247801.	7.8	81
4	Solid capillarity: when and how does surface tension deform soft solids?. Soft Matter, 2016, 12, 2993-2996.	2.7	77
5	Influence of slip on the Plateauâ€“Rayleigh instability on a fibre. Nature Communications, 2015, 6, 7409.	12.8	76
6	Vesicles-on-a-chip: A universal microfluidic platform for the assembly of liposomes and polymersomes. European Physical Journal E, 2016, 39, 59.	1.6	71
7	Adhesion of Chlamydomonas microalgae to surfaces is switchable by light. Nature Physics, 2018, 14, 45-49.	16.7	55
8	Curvature-Guided Motility of Microalgae in Geometric Confinement. Physical Review Letters, 2018, 120, 068002.	7.8	54
9	Self-Similarity and Energy Dissipation in Stepped Polymer Films. Physical Review Letters, 2012, 109, 128303.	7.8	47
10	Slip effects in polymer thin films. Journal of Physics Condensed Matter, 2010, 22, 033102.	1.8	46
11	Influence of Slip on the Rayleigh-Plateau Rim Instability in Dewetting Viscous Films. Physical Review Letters, 2014, 113, 014501.	7.8	34
12	Capillary-driven flow induced by a stepped perturbation atop a viscous film. Physics of Fluids, 2012, 24, .	4.0	30
13	Numerical solutions of thin-film equations for polymer flows. European Physical Journal E, 2012, 35, 114.	1.6	30
14	Surfactant-free production of biomimetic giant unilamellar vesicles using PDMS-based microfluidics. Communications Chemistry, 2021, 4, .	4.5	30
15	Micropipette force sensors for in vivo force measurements on single cells and multicellular microorganisms. Nature Protocols, 2019, 14, 594-615.	12.0	28
16	Slippage and nanorheology of thin liquid polymer films. Journal of Physics Condensed Matter, 2012, 24, 325102.	1.8	27
17	In vivoadhesion force measurements ofChlamydomonason model substrates. Soft Matter, 2019, 15, 3027-3035.	2.7	19
18	Solid surface structure affects liquid order at the polystyreneâ€“self-assembled-monolayer interface. Physical Review E, 2013, 87, 012306.	2.1	18

#	Article	IF	Citations
19	A modular approach for multifunctional polymersomes with controlled adhesive properties. Soft Matter, 2018, 14, 894-900.	2.7	17
20	Dynamic force measurements on swimming Chlamydomonas cells using micropipette force sensors. Journal of the Royal Society Interface, 2020, 17, 20190580.	3.4	17
21	Emergent probability fluxes in confined microbial navigation. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	17
22	Relaxation and intermediate asymptotics of a rectangular trench in a viscous film. Physical Review E, 2013, 88, 035001.	2.1	14
23	Nanofluidics of thin polymer films: Linking the slip boundary condition at solidâ€"liquid interfaces to macroscopic pattern formation and microscopic interfacial properties. Advances in Colloid and Interface Science, 2014, 210, 13-20.	14.7	13
24	Capillary droplet propulsion on a fibre. Soft Matter, 2015, 11, 6921-6926.	2.7	13
25	Adhesion strategies ofDictyostelium discoideumâ€" a force spectroscopy study. Nanoscale, 2018, 10, 22504-22519.	5.6	13
26	Elastocapillary levelling of thin viscous films on soft substrates. Physical Review Fluids, 2017, 2, .	2.5	13
27	Universal contact-line dynamics at the nanoscale. Soft Matter, 2015, 11, 9247-9253.	2.7	12
28	Capillary leveling of stepped films with inhomogeneous molecular mobility. Soft Matter, 2013, 9, 8297.	2.7	11
29	Adsorption-induced slip inhibition for polymer melts on ideal substrates. Nature Communications, 2018, 9, 1172.	12.8	11
30	Can liquids slide? Linking stability and dynamics of thin liquid films to microscopic material properties. Soft Matter, 2010, 6, 6028.	2.7	10
31	Altered N-glycan composition impacts flagella-mediated adhesion in Chlamydomonas reinhardtii. ELife, 2020, 9, .	6.0	10
32	Self-generated oxygen gradients control collective aggregation of photosynthetic microbes. Journal of the Royal Society Interface, 2021, 18, 20210553.	3.4	10
33	Sliding fluids: Dewetting experiments reveal the solid/liquid boundary condition. Journal of Physics: Conference Series, 2010, 216, 012002.	0.4	7
34	Nucleated dewetting in supported ultra-thin liquid films with hydrodynamic slip. Soft Matter, 2017, 13, 4756-4760.	2.7	7
35	Onset of Area-Dependent Dissipation in Droplet Spreading. Physical Review Letters, 2015, 115, 046103.	7.8	4
36	Comprehensive Analysis of Dewetting Profiles to Quantify Hydrodynamic Slip. IUTAM Symposium on Cellular, Molecular and Tissue Mechanics, 2009, , 51-65.	0.2	3

#	Article	IF	Citations
37	Measuring and upscaling micromechanical interactions in a cohesive granular material. Soft Matter, 2021, 17, 5806-5814.	2.7	1