Stephan Herminghaus

List of Publications by Year
in descending order

100 papers	7,218 citations	66343 42 h-index	54911 84 g-index
103 all docs	103 docs citations	103 times ranked	7317 citing authors

#	Article	IF	Citations
1	Liquid Morphologies on Structured Surfaces: From Microchannels to Microchips. Science, 1999, 283, 46-49.	12.6	955
2	Droplet based microfluidics. Reports on Progress in Physics, 2012, 75, 016601.	20.1	813
3	How Plants Keep Dry:Â A Physicist's Point of View. Langmuir, 2004, 20, 2405-2408.	3.5	437
4	Hydrodynamic Flow-Mediated Protein Sorting on the Cell Surface of Trypanosomes. Cell, 2007, 131, 505-515.	28.9	352
5	Swarming behavior of simple model squirmers. New Journal of Physics, 2011, 13, 073021.	2.9	325
6	Thin Liquid Polymer Films Rupture via Defects. Langmuir, 1998, 14, 965-969.	3.5	260
7	Swimming Droplets. Annual Review of Condensed Matter Physics, 2016, 7, 171-193.	14.5	229
8	Controlled electrocoalescence in microfluidics: Targeting a single lamella. Applied Physics Letters, 2006, 89, 134101.	3.3	213
9	Wetting and Dewetting of Complex Surface Geometries. Annual Review of Materials Research, 2008, 38, 101-121.	9.3	167
10	Interfacial mechanisms in active emulsions. Soft Matter, 2014, 10, 7008-7022.	2.7	159
11	Generation of monodisperse gel emulsions in a microfluidic device. Applied Physics Letters, 2006, 88, 024106.	3.3	139
12	Interface Profiles near Three-Phase Contact Lines in Electric Fields. Physical Review Letters, 2003, 91, 086101.	7.8	138
13	Dynamics and structure formation in thin polymer melt films. Journal of Physics Condensed Matter, 2005, 17, S267-S290.	1.8	135
14	Synaptotagmin-1 may be a distance regulator acting upstream of SNARE nucleation. Nature Structural and Molecular Biology, 2011, 18, 805-812.	8.2	125
15	Electrostatic stabilization of fluid microstructures. Applied Physics Letters, 2002, 81, 2303-2305.	3.3	113
16	On capillary bridges in wet granular materials. Physica A: Statistical Mechanics and Its Applications, 2004, 339, 7-15.	2.6	105
17	Growth of Holes in Liquid Films with Partial Slippage. Langmuir, 1998, 14, 4961-4963.	3.5	97
18	Liquid Crystal Microfluidics for Tunable Flow Shaping. Physical Review Letters, 2013, 110, 048303.	7.8	94

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19	Liquid crystal microfluidics: surface, elastic and viscous interactions at microscales. Liquid Crystals Reviews, 2014, 2, 73-110.	4.1	92
20	Trends in Microfluidics with Complex Fluids. ChemPhysChem, 2003, 4, 1291-1298.	2.1	78
21	Optimized droplet-based microfluidics scheme for solâ€“gel reactions. Lab on A Chip, 2010, 10, 1700.	6.0	73
22	Influence of humidity on tribo-electric charging and segregation in shaken granular media. Soft Matter, 2017, 13, 394-401.	2.7	73
23	Solubilization of Thermotropic Liquid Crystal Compounds in Aqueous Surfactant Solutions. Langmuir, 2012, 28, 12426-12431.	3.5	71
24	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
25	Wet granular matter: a truly complex fluid. Soft Matter, 2012, 8, 8271.	2.7	69
26	The Role of Local Instabilities in Fluid Invasion into Permeable Media. Scientific Reports, 2017, 7, 444.	3.3	65
27	Switching Liquid Morphologies on Linear Grooves. Langmuir, 2007, 23, 12997-13006.	3.5	60
28	Generic Morphologies of Viscoelastic Dewetting Fronts. Physical Review Letters, 2002, 89, 056101.	7.8	59
29	Surface Hydrophobicity Causes SO2 Tolerance in Lichens. Annals of Botany, 2008, 101, 531-539.	2.9	58
30	Transport Dynamics in Open Microfluidic Grooves. Langmuir, 2007, 23, 5200-5204.	3.5	57
31	Wetting Heterogeneities in Porous Media Control Flow Dissipation. Physical Review Applied, 2014, 2, .	3.8	56
32	Self-synchronizing pairwise production of monodisperse droplets by microfluidic step emulsification. Applied Physics Letters, 2008, 93, 254101.	3.3	52
33	Bilayer membranes in micro-fluidics: from gel emulsions to soft functional devices. Soft Matter, 2011, 7, 1312-1320.	2.7	52
34	Topological microfluidics for flexible micro-cargo concepts. Soft Matter, 2013, 9, 7251.	2.7	50
35	Mixing and Condensation in a Wet Granular Medium. Physical Review Letters, 2003, 90, 168702.	7.8	47
36	Polymer Surface Melting Mediated by Capillary Waves. Physical Review Letters, 2004, 93, .	7.8	46

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37	Lasing and waveguiding in smectic A liquid crystal optical fibers. Optics Express, 2013, 21, 30233.	3.4	46
38	Impact of Microscopic Motility on the Swimming Behavior of Parasites: Straighter Trypanosomes are More Directional. PLoS Computational Biology, 2011, 7, e1002058.	3.2	45
39	Tuning active emulsion dynamics via surfactants and topology. European Physical Journal E, 2013, 36, 91.	1.6	45
40	Controlling the Formation of Capillary Bridges in Binary Liquid Mixtures. Langmuir, 2010, 26, 17184-17189.	3.5	44
41	Colloidal caterpillars for cargo transportation. Soft Matter, 2014, 10, 8813-8820.	2.7	44
42	Dimensionality matters in the collective behaviour of active emulsions. European Physical Journal E, 2016, 39, 64.	1.6	44
43	Electroactuation of Fluid Using Topographical Wetting Transitions. Langmuir, 2005, 21, 12218-12221.	3.5	41
44	Impact of Line Tension on the Equilibrium Shape of Liquid Droplets on Patterned Substrates. Langmuir, 2002, 18, 9771-9777.	3.5	38
45	Manipulation of gel emulsions by variable microchannel geometry. Lab on A Chip, 2009, 9, 325-330.	6.0	36
46	Liquid-Gas Phase Separation in Confined Vibrated Dry Granular Matter. Physical Review Letters, 2011, 107, 048002.	7.8	34
47	Freezing of polymer thin films and surfaces: The small molecular weight puzzle. Journal of Polymer Science, Part B: Polymer Physics, 2006, 44, 2968-2979.	2.1	33
48	Self-excited oscillatory dynamics of capillary bridges in electric fields. Applied Physics Letters, 2003, 82, 4187-4189.	3.3	31
49	Myelin Structures Formed by Thermotropic Smectic Liquid Crystals. Langmuir, 2013, 29, 15682-15688.	3.5	31
50	Flow Loading Induces Oscillatory Trajectories in a Bloodstream Parasite. Biophysical Journal, 2012, 103, 1162-1169.	0.5	29
51	Liquid microstructures at solid interfaces. Journal of Physics Condensed Matter, 2000, 12, 57-74.	1.8	28
52	Wetting morphologies and their transitions in grooved substrates. Journal of Physics Condensed Matter, 2011, 23, 184108.	1.8	28
53	Shear-induced solid-fluid transition in a wet granular medium. Physical Review E, 2003, 67, 052301.	2.1	27
54	Advancing modes on regularly patterned substrates. Soft Matter, 2012, 8, 6301.	2.7	27

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55	Dewetting of Liquid Filaments in Wedge-Shaped Grooves. Langmuir, 2007, 23, 12138-12141.	3.5	26
56	Flow of a nematogen past a cylindrical micro-pillar. Soft Matter, 2013, 9, 1937-1946.	2.7	26
57	Cooling and Aggregation in Wet Granulates. Physical Review Letters, 2009, 102, 148002.	7.8	25
58	In situ formation, manipulation, and imaging of droplet-encapsulated fibrin networks. Lab on A Chip, 2009, 9, 1933.	6.0	25
59	Opto-fluidic velocimetry using liquid crystal microfluidics. Applied Physics Letters, 2012, 101, .	3.3	25
60	Liquid morphologies and capillary forces between three spherical beads. Physical Review E, 2016, 94, 012907.	2.1	23
61	Why can artificial membranes be fabricated so rapidly in microfluidics?. Chemical Communications, 2013, 49, 1443.	4.1	22
62	Dilute wet granular particles: Nonequilibrium dynamics and structure formation. Physical Review E, 2009, 80, 031306.	2.1	21
63	Emergent Surface Tension in Vibrated, Noncohesive Granular Media. Physical Review Letters, 2012, 109, 228002.	7.8	21
64	Nanometer resolution of liquid surface topography by scanning force microscopy. Journal of Adhesion Science and Technology, 1999, 13, 1071-1083.	2.6	20
65	Wet granular matter under vertical agitation. Journal of Physics Condensed Matter, 2004, 16, S4213-S4218.	1.8	20
66	Templateâ€free Preparation of Mesoporous Silica Spheres through Optimized Microfluidics. ChemPhysChem, 2010, 11, 2091-2095.	2.1	19
67	X-Ray propagation imaging of a lipid bilayer in solution. Soft Matter, 2012, 8, 4595.	2.7	18
68	Role of contact-angle hysteresis for fluid transport in wet granular matter. Physical Review E, 2015, 91, 042204.	2.1	18
69	Smectic membranes in aqueous environment. Physical Review E, 2010, 81, 051709.	2.1	17
70	A modular approach for multifunctional polymersomes with controlled adhesive properties. Soft Matter, 2018, 14, 894-900.	2.7	17
71	Wet granular rafts: aggregation in two dimensions under shear flow. Soft Matter, 2012, 8, 11939.	2.7	16
72	A control theory approach to optimal pandemic mitigation. PLoS ONE, 2021, 16, e0247445.	2.5	16

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73	Discrete microfluidics: Reorganizing droplet arrays at a bend. Applied Physics Letters, 2009, 95, .	3.3	15
74	Electrowetting Actuated Microfluidic Transport in Surface Grooves with Triangular Cross Section. Langmuir, 2015, 31, 1231-1236.	3.5	15
75	Droplet sorting in a loop of flat microfluidic channels. Journal of Physics Condensed Matter, 2013, 25, 285102.	1.8	14
76	Interface morphologies in liquid/liquid dewetting. Chemical Engineering and Processing: Process Intensification, 2011, 50, 531-536.	3.6	12
77	The minimization of mechanical work in vibrated granular matter. Scientific Reports, 2016, 6, 28726.	3.3	12
78	Unstable Kolmogorov flow in granular matter. Chaos, 2009, 19, 041106.	2.5	10
79	Direct Visualization of Spatiotemporal Structure of Self-Assembled Colloidal Particles in Electrohydrodynamic Flow of a Nematic Liquid Crystal. Langmuir, 2015, 31, 3815-3819.	3.5	10
80	Studies on the Dielectric Behavior of Silica-Filled Butyl Rubber Vulcanizates After Cyclic Deformation. Journal of Macromolecular Science - Physics, 2003, 42, 1265-1280.	1.0	9
81	Radar for tracer particles. Review of Scientific Instruments, 2017, 88, 051801.	1.3	9
82	Wetting behaviour of 5CB and 8CB and their binary mixtures above the isotropic transition. Liquid Crystals, 2004, 31, 557-566.	2.2	8
83	Mechanical stability of ordered droplet packings in microfluidic channels. Applied Physics Letters, 2011, 99, .	3.3	7
84	Packings of monodisperse emulsions in flat microfluidic channels. Physical Review E, 2012, 85, 061403.	2.1	7
85	Dynamics of the wet granular Leidenfrost phenomenon. Physical Review E, 2012, 86, 021301.	2.1	5
86	Arrest of the flow of wet granular matter. Journal of Fluid Mechanics, 2014, 738, 407-422.	3.4	5
87	Filling transitions on rough surfaces: Inadequacy of Gaussian surface models. Physical Review E, 2016, 93, 032802.	2.1	5
88	AFM and Optical Investigations of Liquid Crystal Dewetting: Influence of Short and Long-Range Forces. Molecular Crystals and Liquid Crystals, 1999, 330, 267-276.	0.3	4
89	Kolmogorov-Sinai Entropy of the Dilute Wet Granular Gas. Physical Review Letters, 2005, 95, 198001.	7.8	4
90	Pulsedâ€laser induced desorption and subsequent readsorption in ambient gas. Applied Physics Letters, 1993, 62, 2877-2879.	3.3	3

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91	OberflÃchenphysik: Strukturbildung in dÃ¼nnen Filmen: Wie perlt eine FlÃ¼ssigkeit von einer Unterlage ab?. Physik Journal, 1999, 55, 35-40.	0.1	3
92	<title>Time-resolved study of excimer laser ablation of thin organic films from a metal surface</title>. , 1992, , .		2
93	Strukturbildung und Dynamik in makromolekularen Filmen. Nachrichten Aus Der Chemie, 2001, 49, 1398-1404.	0.0	1
94	Platinum Supported Mesoporous Silica Spheres by Optimized Microfluidic Sol-Gel Synthesis Scheme. , 2010, , .		0
95	Lasing and waveguiding in smectic A liquid crystal optical fibers. , 2014, , .		0
96	Capillary Interaction in Wet Granular Assemblies: Part 1. , 2019, , 239-275.		0
97	Controlled Production of Monodispersed Silica Microspheres Using a Double Step-Emulsification Device. , 2008, , .		0
98	Dynamic x-ray optics with microfluidics: stabilization of gas bubbles by surface ordering and freezing. Houille Blanche, 2009, 95, 129-134.	0.3	0
99	Structure Formation in Thin Liquid Films: Interface Forces Unleashed. , 2007, , 1-24.		0
100	Formation of Kinneyia via shear-induced instabilities in microbial mats. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2013, 371, 20120362.	3.4	0