Simon Cox

List of Publications by Year
in descending order

112 papers	1,983 citations	279487 23 h-index	301761 39 g-index
113 all docs	113 docs citations	113 times ranked	1335 citing authors

#	Article	IF	Citations
1	Detection of First-Order Liquid/Liquid Phase Transitions in Yttrium Oxide-Aluminum Oxide Melts. Science, 2008, 322, 566-570.	6.0	184
2	Rheology of ordered foamsâ€"on the way to Discrete Microfluidics. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2005, 263, 52-64.	2.3	100
3	Two-dimensional viscous froth model for foam dynamics. Physical Review E, 2004, 70, 041411.	0.8	94
4	The fluid dynamics of foams. Journal of Physics Condensed Matter, 2003, 15, S65-S73.	0.7	73
5	Comparative study of non-invasive force and stress inference methods in tissue. European Physical Journal E, 2013, 36, 9859.	0.7	64
6	Applications and generalizations of the foam drainage equation. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2000, 456, 2441-2464.	1.0	63
7	Yield drag in a two-dimensional foam flow around a circular obstacle: Effect of liquid fraction. European Physical Journal E, 2007, 23, 217-228.	0.7	53
8	A viscous froth model for dry foams in the Surface Evolver. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2005, 263, 81-89.	2.3	47
9	The rheology of two-dimensional foams. Rheologica Acta, 2004, 43, 442-448.	1.1	44
10	Analysis of a model for foam improved oil recovery. Journal of Fluid Mechanics, 2014, 751, 346-405.	1.4	43
11	Visualization for the Physical Sciences. Computer Graphics Forum, 2012, 31, 2317-2347.	1.8	42
12	Foam drainage in two dimensions. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2005, 263, 178-183.	2.3	41
13	Inferring cellular forces from image stacks. Philosophical Transactions of the Royal Society B: Biological Sciences, 2017, 372, 20160261.	1.8	41
14	The transition from two-dimensional to three-dimensional foam structures. European Physical Journal E, 2002, 7, 311-315.	0.7	34
15	Simulations of two-dimensional foam rheology: Localization in linear Couette flow and the interaction of settling discs. European Physical Journal E, 2008, 26, 81-89.	0.7	29
16	A theory of the effective yield stress of foam in porous media: the motion of a soap film traversing a three-dimensional pore. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2004, 245, 143-151.	2.3	28
17	Topological and geometrical disorders correlate robustly in two-dimensional foams. Philosophical Magazine Letters, 2008, 88, 651-660.	0.5	28
18	Topological changes in a two-dimensional foam cluster. European Physical Journal E, 2003, 11, 29-35.	0.7	26

#	Article	IF	Citations
19	Dry three-dimensional bubbles: growth-rate, scaling state and correlations. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2005, 263, 18-26.	2.3	26
20	Discrete rearranging disordered patterns: Prediction of elastic and plastic behavior, and application to two-dimensional foams. Physical Review E, 2010, 81, 031404.	0.8	26
21	Minimal perimeter for N identical bubbles in two dimensions: Calculations and simulations. Philosophical Magazine, 2003, 83, 1393-1406.	0.7	25
22	Properties of three-dimensional bubbles of constant mean curvature. Philosophical Magazine Letters, 2003, 83, 281-293.	0.5	25
23	The demonstration of conformal maps with two-dimensional foams. European Journal of Physics, 2004, 25, 429-438.	0.3	25
24	Statistical Mechanics of Two-Dimensional Shuffled Foams: Prediction of the Correlation between Geometry and Topology. Physical Review Letters, 2011, 107, 168304.	2.9	25
25	Capillary rise in foams under microgravity. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2005, 261, 131-134.	2.3	24
26	Vertex corrections in the theory of foam drainage. Journal of Physics Condensed Matter, 2001, 13, 4863-4869.	0.7	23
27	Shear modulus of two-dimensional foams: The effect of area dispersity and disorder. European Physical Journal E, 2006, 21, 49-56.	0.7	23
28	Foam flow around an obstacle: simulations of obstacleâ€“wall interaction. Rheologica Acta, 2006, 45, 403-410.	1.1	23
29	The dynamics of a topological change in a system of soap films. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2008, 323, 123-131.	2.3	23
30	Structure-dependent mobility of a dry aqueous foam flowing along two parallel channels. Physics of Fluids, 2013, 25, .	1.6	22
31	What is the Shape of an Air Bubble on a Liquid Surface?. Langmuir, 2015, 31, 13708-13717.	1.6	22
32	Large two-dimensional clusters of equal-area bubbles: The influence of the boundary in determining the minimum-energy configuration. Philosophical Magazine, 2003, 83, 2573-2584.	0.7	21
33	An analytic velocity profile for pressure-driven flow of a Bingham fluid in a curved channel. Journal of Non-Newtonian Fluid Mechanics, 2020, 280, 104278.	1.0	21
34	Two-bubble instabilities in quasi-two-dimensional foams. Philosophical Magazine Letters, 2005, 85, 415-425.	0.5	20
35	Metallic foam processing from the liquid state. EPJ Applied Physics, 2001, 14, 87-96.	0.3	19
36	Liquid flow in foams under microgravity. Microgravity Science and Technology, 2003, 14, 45-52.	0.7	19

#	Article	IF	Citations
37	On the structure of quasi-two-dimensional foams. Philosophical Magazine Letters, 2008, 88, 693-701.	0.5	19
38	Two-dimensional constriction flows of foams. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2011, 382, 18-23.	2.3	19
39	Three-dimensional bubble clusters: Shape, packing, and growth rate. Physical Review E, 2004, 69, 031409.	0.8	18
40	Deformation of a free interface pierced by a tilted cylinder. Europhysics Letters, 2012, 99, 24001.	0.7	18
41	Drainage induced convection rolls in foams. European Physical Journal E, 2006, 19, 17-22.	0.7	16
42	Interfacial properties, film dynamics and bulk rheology: A multi-scale approach to dairy protein foams. Journal of Colloid and Interface Science, 2019, 542, 222-232.	5.0	16
43	Drainage induced convection rolls in foams. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2007, 309, 33-37.	2.3	15
44	Effect of Gas Diffusion on Mobility of Foam for Enhanced Oil Recovery. Transport in Porous Media, 2015, 106, 669-689.	1.2	15
45	Sedimenting discs in a two-dimensional foam. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2009, 344, 8-14.	2.3	14
46	Statistical mechanics of two-dimensional shuffled foams: Geometry-topology correlation in small or large disorder limits. Physical Review E, 2014, 89, 062309.	0.8	14
47	The viscous froth model: steady states and the high-velocity limit. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2009, 465, 2391-2405.	1.0	13
48	Demonstration and interpretation of â€˜scutoidâ€™ cells formed in a quasi-2D soap froth. Philosophical Magazine Letters, 2018, 98, 358-364.	0.5	13
49	Experimental and numerical analysis of the drainage of aluminium foams. Journal of Physics Condensed Matter, 2005, 17, 6353-6362.	0.7	12
50	Screening in dry two-dimensional foams. Soft Matter, 2008, 4, 1871.	1.2	12
51	Deformation of a free interface pierced by a tilted cylinder: Variation of the contact angle. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2013, 438, 126-131.	2.3	12
52	Ideal wet two-dimensional foams and emulsions with finite contact angle. Soft Matter, 2018, 14, 5922-5929.	1.2	12
53	Potential flow past a sphere touching a tangent plane. , 2000, 38, 355-370.		11
54	Minimum energy configurations of small bidisperse bubble clusters. Journal of Physics Condensed Matter, 2004, 16, 4165-4175.	0.7	11

#	Article	IF	Citations
55	Pre-empting Plateau: The nature of topological transitions in foam. Europhysics Letters, 2007, 77, 28002.	0.7	11
56	Simulations of bubble division in the flow of a foam past an obstacle in a narrow channel. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2015, 473, 104-108.	2.3	11
57	The motion of a rigid body impelled by sea-wave impact. Applied Ocean Research, 1999, 21, 113-125.	1.8	10
58	The Rheology of Foams. , 2006, , 100-105.		10
59	The mixing of bubbles in two-dimensional bidisperse foams under extensional shear. Journal of Non-Newtonian Fluid Mechanics, 2006, 137, 39-45.	1.0	10
60	Characterisation, modification and mathematical modelling of sudsing. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2011, 382, 50-57.	2.3	10
61	Multiple states of finger propagation in partially occluded tubes. Physics of Fluids, 2013, 25, .	1.6	10
62	Experiments and simulations of liquid imbibition in aqueous foams under microgravity. Microgravity Science and Technology, 2006, 18, 108-111.	0.7	9
63	Calculations of the minimal perimeter forNdeformable cells of equal area confined in a circle. Philosophical Magazine Letters, 2006, 86, 569-578.	0.5	9
64	Steady drainage in emulsions: corrections for surface Plateau borders and a model for high aqueous volume fraction. European Physical Journal E, 2007, 22, 341-351.	0.7	9
65	Micro-mechanical prediction of the effect of surfactant concentration and external friction on the visco-elasto-plastic response of an aqueous foam. Soft Matter, 2020, 16, 8861-8870.	1.2	9
66	Comment on â€œFoam imbibition in microgravity. An experimental studyâ€• by H. Caps, H. Decauwer, M.-L. Chevalier, G. Soyez, M. Ausloos and N. Vandewalle. European Physical Journal B, 2004, 40, 119-121.	0.6	8
67	A viscous froth model adapted to wet foams. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2017, 534, 8-15.	2.3	8
68	Effect of surfactant redistribution on the flow and stability of foam films. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2020, 476, 20190637.	1.0	8
69	Variation of average coordination number with liquid fraction for two-dimensional foams with finite contact angle. Philosophical Magazine, 2021, 101, 1048-1060.	0.7	8
70	Instabilities in two-dimensional flower and chain clusters of bubbles. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2007, 309, 64-70.	2.3	7
71	Elastoplastic flow of a foam around an obstacle. Physical Review E, 2011, 83, 041404.	0.8	7
72	The motion of a foam lamella traversing an idealised bi-conical pore with a rounded central region. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2013, 438, 56-62.	2.3	7

#	Article	IF	Citations
73	The Minimal Perimeter for N Confined Deformable Bubbles of Equal Area. Electronic Journal of Combinatorics, 2010, 17, .	0.2	7
74	FoamVis: Visualization of 2D Foam Simulation Data. IEEE Transactions on Visualization and Computer Graphics, 2011, 17, 2096-2105.	2.9	6
75	On the effectiveness of a quasistatic bubble-scale simulation in predicting the constriction flow of a two-dimensional foam. Journal of Rheology, 2012, 56, 457-471.	1.3	6
76	Sphere motion in ordered three-dimensional foams. Journal of Rheology, 2012, 56, 473-483.	1.3	6
77	The deformation of soap film junctions by applied forces. Philosophical Magazine Letters, 1999, 79, 887-896.	0.5	5
78	Localization of Topological Changes in Couette and Poiseuille Flows of Two-Dimensional Foams. AIP Conference Proceedings, 2008, , .	0.3	5
79	Sedimentation of an elliptical object in a two-dimensional foam. Journal of Non-Newtonian Fluid Mechanics, 2010, 165, 793-799.	1.0	5
80	Effect of Gas Diffusion on Mobility of Foam for EOR. , 2012, , .		5
81	Reconstruction of tomographic images of dry aqueous foams. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2013, 438, 33-40.	2.3	5
82	Diffusion of curvature on a sheared semi-infinite film. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2013, 469, 20130359.	1.0	5
83	Quasicrystalline three-dimensional foams. Journal of Physics Condensed Matter, 2017, 29, 114001.	0.7	5
84	Simulation of surfactant transport during the rheological relaxation of two-dimensional dry foams. Physical Review E, 2018, 98, 022801.	0.8	5
85	Characterisation and optimisation of foams for varicose vein sclerotherapy. Biorheology, 2021, 57, 77-85.	1.2	5
86	The pressure impulse in a fluid saturated crack in a sea wall. Coastal Engineering, 2001, 42, 241-256.	1.7	4
87	Are large perimeter- minimizing two-dimensional clusters of equal-area bubbles hexagonal or circular?. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2013, 469, 20120392.	1.0	4
88	Instability of stretched and twisted soap films in a cylinder. Journal of Engineering Mathematics, 2014, 86, 1-7.	0.6	4
89	When is a surface foam-phobic or foam-philic?. Soft Matter, 2018, 14, 5369-5382.	1.2	4
90	Remarks on the accuracy of algorithms for motion by mean curvature in bounded domains. Journal of Mechanics of Materials and Structures, 2009, 4, 1555-1572.	0.4	4

#	Article	IF	Citations
91	Liquid Foams - Precursors for Solid Foams. , 2006, , 18-29.		3
92	Simulations of quasi-static foam flow through a diverging-converging channel. Korea Australia Rheology Journal, 2016, 28, 181-186.	0.7	3
93	Curvature driven motion of a bubble in a toroidal Hele-Shaw cell. Interface Focus, 2017, 7, 20160106.	1.5	3
94	Comment on "Free drainage of aqueous foams: Container shape effects on capillarity and vertical gradients" by A. Saint-Jalmes et al.. Europhysics Letters, 2001, 55, 445-446.	0.7	2
95	Pressures in periodic foams. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2004, 460, 569-579.	1.0	2
96	The transition from three-dimensional to two-dimensional foam structures. European Physical Journal E, 2011, 34, 82.	0.7	2
97	Cyclic deformation of bidisperse two-dimensional foams. Philosophical Magazine, 2011, 91, 4345-4356.	0.7	2
98	Visualizing the dynamics of two-dimensional foams with FoamVis. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2013, 438, 28-32.	2.3	2
99	Bubble entrainment by a sphere falling through a horizontal soap foam. Europhysics Letters, 2020, 130, 14002.	0.7	2
100	Effect of the number of shells on the pressure and energy of two-dimensional free bubble clusters. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2009, 344, 33-36.	2.3	1
101	Stability of a helicoidal surface inside a cylinder with pinned diameters. Quarterly Journal of Mechanics and Applied Mathematics, 2015, 68, 23-52.	0.5	1
102	The evolution of numerical methods for predicting the distribution of surfactant in the bubble-scale dynamics of foams. Current Opinion in Colloid and Interface Science, 2021, 53, 101440.	3.4	1
103	Actuating water droplets on liquid infused surfaces: A rickshaw for droplets. Physical Review Fluids, 2021, 6, .	1.0	1
104	Collapse of a hemicatenoid bounded by a solid wall: instability and dynamics driven by surface Plateau border friction. Soft Matter, 2022, 18, 4944-4952.	1.2	1
105	Simulation of defects in bubble clusters. Journal of Physics Condensed Matter, 2010, 22, 065101.	0.7	0
106	Methods for modelling food cellular structures and the relationship between microstructure and mechanical and rheological properties. , 2013, , 310-324.		0
107	Least perimeter partition of the disc into N bubbles of two different areas. European Physical Journal E, 2019, 42, 92.	0.7	0
108	Stability of a twisted Plateau border with line tension and bending stiffness. IMA Journal of Applied Mathematics, 2019, 84, 385-415.	0.8	0

#	Article	IF	Citations
109	British Society of Rheology Mid-winter Meeting on â€œThe Rheology of Foams and Emulsionsâ€• Applied Rheology, 2008, 18, 193-195.	3.5	0
110	Foams in Microgravity. , 2005, , 387-394.		0
111	Prediction of the capillary pressure of fluid surrounding a cylinder representing an idealized rock structure in porous media. European Physical Journal Plus, 2022, 137, .	1.2	0
112	The Rheology of Foams. , 0, , 100-105.		0