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	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
2	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
3	Characterisation and optimisation of foams for varicose vein sclerotherapy. Biorheology, 2021, 57, 77-85.	1.2	5
4	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
5	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
6	Actuating water droplets on liquid infused surfaces: A rickshaw for droplets. Physical Review Fluids, 2021, 6, .	1.0	1
7	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
8	Bubble entrainment by a sphere falling through a horizontal soap foam. Europhysics Letters, 2020, 130, 14002.	0.7	2
9	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
10	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
11	Least perimeter partition of the disc into N bubbles of two different areas. European Physical Journal E, 2019, 42, 92.	0.7	0
12	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
13	Stability of a twisted Plateau border with line tension and bending stiffness. IMA Journal of Applied Mathematics, 2019, 84, 385-415.	0.8	0
14	Demonstration and interpretation of â€˜scutoidâ€™ cells formed in a quasi-2D soap froth. Philosophical Magazine Letters, 2018, 98, 358-364.	0.5	13
15	When is a surface foam-phobic or foam-philic?. Soft Matter, 2018, 14, 5369-5382.	1.2	4
16	Ideal wet two-dimensional foams and emulsions with finite contact angle. Soft Matter, 2018, 14, 5922-5929.	1.2	12
17	Simulation of surfactant transport during the rheological relaxation of two-dimensional dry foams. Physical Review E, 2018, 98, 022801.	0.8	5
18	Curvature driven motion of a bubble in a toroidal Hele-Shaw cell. Interface Focus, 2017, 7, 20160106.	1.5	3

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19	A viscous froth model adapted to wet foams. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2017, 534, 8-15.	2.3	8
20	Inferring cellular forces from image stacks. Philosophical Transactions of the Royal Society B: Biological Sciences, 2017, 372, 20160261.	1.8	41
21	Quasicrystalline three-dimensional foams. Journal of Physics Condensed Matter, 2017, 29, 114001.	0.7	5
22	Simulations of quasi-static foam flow through a diverging-converging channel. Korea Australia Rheology Journal, 2016, 28, 181-186.	0.7	3
23	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
24	What is the Shape of an Air Bubble on a Liquid Surface?. Langmuir, 2015, 31, 13708-13717.	1.6	22
25	Effect of Gas Diffusion on Mobility of Foam for Enhanced Oil Recovery. Transport in Porous Media, 2015, 106, 669-689.	1.2	15
26	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
27	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
28	Instability of stretched and twisted soap films in a cylinder. Journal of Engineering Mathematics, 2014, 86, 1-7.	0.6	4
29	Analysis of a model for foam improved oil recovery. Journal of Fluid Mechanics, 2014, 751, 346-405.	1.4	43
30	Comparative study of non-invasive force and stress inference methods in tissue. European Physical Journal E, 2013, 36, 9859.	0.7	64
31	Structure-dependent mobility of a dry aqueous foam flowing along two parallel channels. Physics of Fluids, 2013, 25, .	1.6	22
32	Reconstruction of tomographic images of dry aqueous foams. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2013, 438, 33-40.	2.3	5
33	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
34	Visualizing the dynamics of two-dimensional foams with FoamVis. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2013, 438, 28-32.	2.3	2
35	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
36	Methods for modelling food cellular structures and the relationship between microstructure and mechanical and rheological properties. , 2013, , 310-324.		0

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37	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
38	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
39	Multiple states of finger propagation in partially occluded tubes. Physics of Fluids, 2013, 25, .	1.6	10
40	Effect of Gas Diffusion on Mobility of Foam for EOR. , 2012, , .		5
41	Visualization for the Physical Sciences. Computer Graphics Forum, 2012, 31, 2317-2347.	1.8	42
42	Deformation of a free interface pierced by a tilted cylinder. Europhysics Letters, 2012, 99, 24001.	0.7	18
43	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
44	Sphere motion in ordered three-dimensional foams. Journal of Rheology, 2012, 56, 473-483.	1.3	6
45	FoamVis: Visualization of 2D Foam Simulation Data. IEEE Transactions on Visualization and Computer Graphics, 2011, 17, 2096-2105.	2.9	6
46	The transition from three-dimensional to two-dimensional foam structures. European Physical Journal E, 2011, 34, 82.	0.7	2
47	Characterisation, modification and mathematical modelling of sudsing. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2011, 382, 50-57.	2.3	10
48	Two-dimensional constriction flows of foams. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2011, 382, 18-23.	2.3	19
49	Statistical Mechanics of Two-Dimensional Shuffled Foams: Prediction of the Correlation between Geometry and Topology. Physical Review Letters, 2011, 107, 168304.	2.9	25
50	Elastoplastic flow of a foam around an obstacle. Physical Review E, 2011, 83, 041404.	0.8	7
51	Cyclic deformation of bidisperse two-dimensional foams. Philosophical Magazine, 2011, 91, 4345-4356.	0.7	2
52	Sedimentation of an elliptical object in a two-dimensional foam. Journal of Non-Newtonian Fluid Mechanics, 2010, 165, 793-799.	1.0	5
53	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
54	Simulation of defects in bubble clusters. Journal of Physics Condensed Matter, 2010, 22, 065101.	0.7	0

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55	The Minimal Perimeter for N Confined Deformable Bubbles of Equal Area. Electronic Journal of Combinatorics, 2010, 17, .	0.2	7
56	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
57	Sedimenting discs in a two-dimensional foam. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2009, 344, 8-14.	2.3	14
58	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
59	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
60	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
61	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
62	Screening in dry two-dimensional foams. Soft Matter, 2008, 4, 1871.	1.2	12
63	Detection of First-Order Liquid/Liquid Phase Transitions in Yttrium Oxide-Aluminum Oxide Melts. Science, 2008, 322, 566-570.	6.0	184
64	Localization of Topological Changes in Couette and Poiseuille Flows of Two-Dimensional Foams. AIP Conference Proceedings, 2008, , .	0.3	5
65	Topological and geometrical disorders correlate robustly in two-dimensional foams. Philosophical Magazine Letters, 2008, 88, 651-660.	0.5	28
66	On the structure of quasi-two-dimensional foams. Philosophical Magazine Letters, 2008, 88, 693-701.	0.5	19
67	British Society of Rheology Mid-winter Meeting on â€œThe Rheology of Foams and Emulsionsâ€• Applied Rheology, 2008, 18, 193-195.	3.5	0
68	Pre-empting Plateau: The nature of topological transitions in foam. Europhysics Letters, 2007, 77, 28002.	0.7	11
69	Drainage induced convection rolls in foams. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2007, 309, 33-37.	2.3	15
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	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
72	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

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73	The Rheology of Foams. , 2006, , 100-105.		10
74	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
75	Drainage induced convection rolls in foams. European Physical Journal E, 2006, 19, 17-22.	0.7	16
76	Shear modulus of two-dimensional foams: The effect of area dispersity and disorder. European Physical Journal E, 2006, 21, 49-56.	0.7	23
77	Foam flow around an obstacle: simulations of obstacleâ€"wall interaction. Rheologica Acta, 2006, 45, 403-410.	1.1	23
78	Experiments and simulations of liquid imbibition in aqueous foams under microgravity. Microgravity Science and Technology, 2006, 18, 108-111.	0.7	9
79	Calculations of the minimal perimeter forNdeformable cells of equal area confined in a circle. Philosophical Magazine Letters, 2006, 86, 569-578.	0.5	9
80	Liquid Foams - Precursors for Solid Foams. , 2006, , 18-29.		3
81	Capillary rise in foams under microgravity. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2005, 261, 131-134.	2.3	24
82	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
83	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
84	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
85	Foam drainage in two dimensions. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2005, 263, 178-183.	2.3	41
86	Experimental and numerical analysis of the drainage of aluminium foams. Journal of Physics Condensed Matter, 2005, 17, 6353-6362.	0.7	12
87	Two-bubble instabilities in quasi-two-dimensional foams. Philosophical Magazine Letters, 2005, 85, 415-425.	0.5	20
88	Foams in Microgravity. , 2005, , 387-394.		0
89	The demonstration of conformal maps with two-dimensional foams. European Journal of Physics, 2004, 25, 429-438.	0.3	25
90	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

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91	The rheology of two-dimensional foams. Rheologica Acta, 2004, 43, 442-448.	1.1	44
92	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
93	Two-dimensional viscous froth model for foam dynamics. Physical Review E, 2004, 70, 041411.	0.8	94
94	Pressures in periodic foams. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2004, 460, 569-579.	1.0	2
95	Three-dimensional bubble clusters: Shape, packing, and growth rate. Physical Review E, 2004, 69, 031409.	0.8	18
96	Minimum energy configurations of small bidisperse bubble clusters. Journal of Physics Condensed Matter, 2004, 16, 4165-4175.	0.7	11
97	Topological changes in a two-dimensional foam cluster. European Physical Journal E, 2003, 11, 29-35.	0.7	26
98	Liquid flow in foams under microgravity. Microgravity Science and Technology, 2003, 14, 45-52.	0.7	19
99	Minimal perimeter for N identical bubbles in two dimensions: Calculations and simulations. Philosophical Magazine, 2003, 83, 1393-1406.	0.7	25
100	Properties of three-dimensional bubbles of constant mean curvature. Philosophical Magazine Letters, 2003, 83, 281-293.	0.5	25
101	The fluid dynamics of foams. Journal of Physics Condensed Matter, 2003, 15, S65-S73.	0.7	73
102	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
103	The transition from two-dimensional to three-dimensional foam structures. European Physical Journal E, 2002, 7, 311-315.	0.7	34
104	Metallic foam processing from the liquid state. EPJ Applied Physics, 2001, 14, 87-96.	0.3	19
105	The pressure impulse in a fluid saturated crack in a sea wall. Coastal Engineering, 2001, 42, 241-256.	1.7	4
106	Vertex corrections in the theory of foam drainage. Journal of Physics Condensed Matter, 2001, 13, 4863-4869.	0.7	23
107	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
108	Potential flow past a sphere touching a tangent plane. , 2000, 38, 355-370.		11

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109	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
110	The deformation of soap film junctions by applied forces. Philosophical Magazine Letters, 1999, 79, 887-896.	0.5	5
111	The motion of a rigid body impelled by sea-wave impact. Applied Ocean Research, 1999, 21, 113-125.	1.8	10
112	The Rheology of Foams. , 0, , 100-105.		0