Pierre Colinet

List of Publications by Year
in descending order

107 papers	2,733 citations	185998 28 h-index	243296 44 g-index
115 all docs	115 docs citations	115 times ranked	1699 citing authors

#	Article	IF	Citations
1	Water–propylene glycol sessile droplet shapes and migration: Marangoni mixing and separation of scales. Journal of Fluid Mechanics, 2022, 933, .	1.4	3
2	Experimental study on evaporation of droplets in microgravity and in the presence of electric field. Journal of Physics: Conference Series, 2022, 2177, 012047.	0.3	1
3	Two-dimensional modelling of transient capillary driven damped micro-oscillations and self-alignment of objects in microassembly. Journal of Fluid Mechanics, 2021, 910, .	1.4	2
4	Controlling the wetting and evaporation dynamics of non-ideal volatile binary solutions. Journal of Colloid and Interface Science, 2021, 592, 319-328.	5.0	10
5	Evaporation induced demixing in binary sessile drops. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2020, 602, 125052.	2.3	14
6	Self-induced flows enhance the levitation of Leidenfrost drops on liquid baths. Physical Review Fluids, 2020, 5, .	1.0	14
7	Contact angles for perfectly wetting pure liquids evaporating into air: Between de Gennes-type and other classical models. Physical Review Fluids, 2020, 5, .	1.0	2
8	Effect of Magnetic Susceptibility Gradient on the Magnetomigration of Rare-Earth Ions. Journal of Physical Chemistry C, 2019, 123, 23131-23139.	1.5	8
9	Asymptotic theory for a Leidenfrost drop on a liquid pool. Journal of Fluid Mechanics, 2019, 863, 1157-1189.	1.4	18
10	Contact line stick-slip motion and meniscus evolution on micrometer-size wavy fibres. Journal of Colloid and Interface Science, 2019, 540, 544-553.	5.0	7
11	Mathematical modeling of the drying of a spherical colloidal drop. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2019, 576, 110-122.	2.3	10
12	Final fate of a Leidenfrost droplet: Explosion or takeoff. Science Advances, 2019, 5, eaav8081.	4.7	51
13	Vapor-Mediated versus Substrate-Mediated Interactions between Volatile Droplets. Langmuir, 2019, 35, 7060-7065.	1.6	17
14	Influence of Bénard–Marangoni instability on the morphology of drying colloidal films. Soft Matter, 2019, 15, 2381-2390.	1.2	17
15	Contact-line singularities resolved exclusively by the Kelvin effect: volatile liquids in air. Journal of Fluid Mechanics, 2019, 858, 881-916.	1.4	13
16	Explosive Leidenfrost droplets. Physical Review Fluids, 2019, 4, .	1.0	14
17	Contact angle hysteresis in a microchannel: Statics. Physical Review Fluids, 2019, 4, .	1.0	10
18	Magnetophoretic Sprinting: A Study on the Magnetic Properties of Aqueous Lanthanide Solutions. Journal of Physical Chemistry C, 2018, 122, 23675-23682.	1.5	13

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19	Marangoni bursting: Evaporation-induced emulsification of a two-component droplet. Physical Review Fluids, 2018, 3, .	1.0	10
20	Fragmentation de Marangoni : les gouttes qui s'éclatent. , 2018, , 32-35.	0.1	0
21	Experimental and numerical analysis of buoyancy-induced instability during CO_2 absorption in $NaHCO_3$–Na_2CO_3 aqueous solutions. Chemical Engineering Science, 2017, 157, 232-246.	1.9	17
22	Marangoni Bursting: Evaporation-Induced Emulsification of Binary Mixtures on a Liquid Layer. Physical Review Letters, 2017, 118, 074504.	2.9	97
23	Magnetomigration of Rare-Earth Ions Triggered by Concentration Gradients. Journal of Physical Chemistry Letters, 2017, 8, 5301-5305.	2.1	21
24	Leidenfrost drops cooling surfaces: theory and interferometric measurement. Journal of Fluid Mechanics, 2017, 827, 614-639.	1.4	38
25	Self-propelled Leidenfrost drops on a thermal gradient: A theoretical study. Physics of Fluids, 2017, 29, .	1.6	25
26	Asymptotic analysis of the evaporation dynamics of partially wetting droplets. Journal of Fluid Mechanics, 2017, 824, 574-623.	1.4	13
27	Evaporation dynamics of completely wetting drops on geometrically textured surfaces. Europhysics Letters, 2017, 120, 16001.	0.7	12
28	Impact of an insoluble surfactant on the thresholds of evaporative Bénard-Marangoni instability under air. European Physical Journal E, 2017, 40, 90.	0.7	3
29	Contact line arrest in solidifying spreading drops. Physical Review Fluids, 2017, 2, .	1.0	37
30	Asymptotic analysis of the contact-line microregion for a perfectly wetting volatile liquid in a pure-vapor atmosphere. Physical Review Fluids, 2017, 2, .	1.0	9
31	Measuring contact angles of small spherical particles at planar fluid interfaces by Light Extinction. Applied Physics Letters, 2016, 108, 201605.	1.5	6
32	Thermal transients during the evaporation of a spherical liquid drop. International Journal of Heat and Mass Transfer, 2016, 97, 803-817.	2.5	22
33	Assessment of the light extinction spectroscopy technique for submicron particle characterization. Powder Technology, 2016, 291, 375-382.	2.1	8
34	Improving speed and precision of local frequency analysis using Gaussian ridge interpolation for wavelet and windowed Fourier ridge algorithms. Optics and Lasers in Engineering, 2016, 77, 54-63.	2.0	7
35	Leidenfrost drops on a heated liquid pool. Physical Review Fluids, 2016, 1, .	1.0	46
36	Importance of wave-number dependence of Biot numbers in one-sided models of evaporative Marangoni instability: Horizontal layer and spherical droplet. Physical Review E, 2015, 91, 053018.	0.8	9

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37	Interferometric profiling of transparent objects in zero-fringe mode using 2D Fan Wavelets. , 2015, , .		0
38	Precursor Films and Contact Line Microstructures. , 2015, , 31-56.		0
39	Leidenfrost Drops. , 2015, , 85-99.		1
40	Complex Fluids Droplets in Leidenfrost State. , 2015, , 369-379.		0
41	Leidenfrost drops: Effect of gravity. Europhysics Letters, 2015, 110, 24001.	0.7	14
42	Analyzing closed-fringe images using two-dimensional Fan wavelets. Applied Optics, 2015, 54, 2939.	0.9	15
43	Effect of Marangoni Flows on the Shape of Thin Sessile Droplets Evaporating into Air. Langmuir, 2015, 31, 13334-13340.	1.6	65
44	A comprehensive analysis of the evaporation of a liquid spherical drop. Journal of Colloid and Interface Science, 2015, 438, 306-317.	5.0	52
45	Universality of Tip Singularity Formation in Freezing Water Drops. Physical Review Letters, 2014, 113, 054301.	2.9	188
46	Leidenfrost effect: Accurate drop shape modeling and refined scaling laws. Physical Review E, 2014, 90, 053011.	0.8	66
47	Lubrication-type analysis of thermo-hydraulic transport in a model grooved heat pipe. Heat and Mass Transfer, 2014, 50, 415-425.	1.2	6
48	Organization of microbeads in Leidenfrost drops. Soft Matter, 2014, 10, 4061.	1.2	8
49	Nonequilibrium Gibbs' Criterion for Completely Wetting Volatile Liquids. Langmuir, 2014, 30, 11847-11852.	1.6	21
50	Vapor-Based Interferometric Measurement of Local Evaporation Rate and Interfacial Temperature of Evaporating Droplets. Langmuir, 2014, 30, 2002-2008.	1.6	84
51	Nonmonotonic Rayleigh-Taylor Instabilities Driven by Gas–Liquid CO_2 Chemisorption. Journal of Physical Chemistry B, 2014, 118, 11323-11329.	1.2	45
52	Time-dependent Marangoni-Bénard instability of an evaporating binary-liquid layer including gas transients. Physics of Fluids, 2013, 25, .	1.6	15
53	Evaporation Rates and Bénard-Marangoni Supercriticality Levels for Liquid Layers Under an Inert Gas Flow. Microgravity Science and Technology, 2013, 25, 251-265.	0.7	16
54	CO_2 absorption in aqueous solutions of N-(2-hydroxyethyl)piperazine: Experimental characterization using interferometry and modeling. Chemical Engineering Science, 2013, 100, 249-258.	1.9	17

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55	Singularity-free description of moving contact lines for volatile liquids. Physical Review E, 2013, 87, 010401.	0.8	35
56	Analyzing Droplets through Digital Holography and a 1D Wavelet Transform Technique. , 2013, , .		4
57	Genesis of Bénard–Marangoni Patterns in Thin Liquid Films Drying into Air. Understanding Complex Systems, 2013, , 95-104.	0.3	0
58	Threshold of Bénard-Marangoni instability in drying liquid films. Europhysics Letters, 2012, 99, 34001.	0.7	28
59	Disorder-induced hysteresis and nonlocality of contact line motion in chemically heterogeneous microchannels. Physics of Fluids, 2012, 24, .	1.6	29
60	Evaporation-driven Contact Angles in a Pure-vapor Atmosphere : the Effect of Vapor Pressure Non-uniformity. Mathematical Modelling of Natural Phenomena, 2012, 7, 53-63.	0.9	4
61	On the boundary immobilization and variable space grid methods for transient heat conduction problems with phase change: Discussion and refinement. Comptes Rendus - Mecanique, 2012, 340, 501-511.	2.1	18
62	Gas absorption into a spherical liquid droplet: Numerical and theoretical study. Chemical Engineering Journal, 2012, 207-208, 851-864.	6.6	20
63	Onset of thermal ripples at the interface of an evaporating liquid under a flow of inert gas. Experiments in Fluids, 2012, 52, 1107-1119.	1.1	24
64	Measuring Vapour Cloud Concentrations with Digital Holography. , 2012, , .		3
65	Truncated versus Extended Microfilms at a Vapor~Liquid Contact Line on a Heated Substrate. Langmuir, 2011, 27, 1758-1769.	1.6	29
66	Bénard instabilities in a binary-liquid layer evaporating into an inert gas: Stability of quasi-stationary and time-dependent reference profiles. European Physical Journal: Special Topics, 2011, 192, 71-81.	1.2	13
67	On integrable singularities and apparent contact angles within a classical paradigm. European Physical Journal: Special Topics, 2011, 197, 89-113.	1.2	32
68	Experimental study of gas–liquid mass transfer coupled with chemical reactions by digital holographic interferometry. Chemical Engineering Science, 2011, 66, 3400-3412.	1.9	38
69	Direct numerical simulation of bubble-liquid mass transfer coupled with chemical reactions: Influence of bubble shape and interface contamination. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2011, 381, 130-138.	2.3	18
70	Vapor-Liquid Steady Meniscus at a Superheated Wall: Asymptotics in an Intermediate Zone Near the Contact Line. Microgravity Science and Technology, 2010, 22, 249-255.	0.7	14
71	Bénard instabilities in a binary-liquid layer evaporating into an inert gas. Journal of Colloid and Interface Science, 2010, 349, 331-353.	5.0	48
72	Direct numerical simulation of the transfer from spherical bubbles to and aqueous solutions with clean and fully contaminated interface. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2010, 365, 28-35.	2.3	8

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73	Experimental study of dispersion and miscible viscous fingering of initially circular samples in Hele-Shaw cells. Physics of Fluids, 2010, 22, .	1.6	29
74	Interfacial patterns and waves in liquid layers and thin films. CISM International Centre for Mechanical Sciences, Courses and Lectures, 2010, , 1-56.	0.3	0
75	STEADY MICROSTRUCTURE OF A CONTACT LINE FOR A LIQUID ON A HEATED SURFACE OVERLAID WITH ITS PURE VAPOR: PARAMETRIC STUDY FOR A CLASSICAL MODEL. Multiphase Science and Technology, 2009, 21, 213-248.	0.2	17
76	Chemo-Hydrodynamical Instability Created by CO_2 Absorption in an Aqueous Solution of $NaHCO_3$ and Na_2CO_3. Microgravity Science and Technology, 2008, 20, 171-175.	0.7	15
77	Multi-scale Numerical Modeling of Radial Heat Transfer in Grooved Heat Pipe Evaporators. Microgravity Science and Technology, 2008, 20, 293-297.	0.7	11
78	Interaction of three-dimensional hydrodynamic and thermocapillary instabilities in film flows. Physical Review E, 2008, 78, 066311.	0.8	37
79	Coupling between Mass Transfer and Chemical Reactions during the Absorption of CO_2 in a $NaHCO_3$-Na_2CO_3 Brine : Experimental and Theoretical Study. International Journal of Chemical Reactor Engineering, 2008, 6, .	0.6	10
80	Spontaneous channeling of solitary pulses in heated-film flows. Europhysics Letters, 2008, 84, 64002.	0.7	11
81	Bubbles, drops, films: transferring heat in space. Europhysics News, 2008, 39, 23-25.	0.1	20
82	A Flexible Multi-Scale Two-Dimensional Model for Calculating the Radial Heat Transfer in Grooved Heat Pipes. , 2008, , .		0
83	Some advances in lubrication-type theories. European Physical Journal: Special Topics, 2007, 146, 377-389.	1.2	3
84	Marangoni effect from density variations in apolar ultrathin films. Europhysics Letters, 2006, 74, 861-867.	0.7	9
85	On the refined integral method for the one-phase Stefan problem with time-dependent boundary conditions. Applied Mathematical Modelling, 2006, 30, 531-544.	2.2	69
86	Nonlinear Marangoni convection with the inclined temperature gradient in multilayer systems. Physical Review E, 2006, 73, 066310.	0.8	6
87	Surface-tension-driven instabilities of a pure liquid layer evaporating into an inert gas. Journal of Colloid and Interface Science, 2005, 285, 296-305.	5.0	96
88	Validity domain of the Benney equation including the Marangoni effect for closed and open flows. Journal of Fluid Mechanics, 2005, 527, 303-335.	1.4	95
89	Thermo-diffusion revisited: A comparative approach between two recent thermodynamic formalisms. Journal of Non-Equilibrium Thermodynamics, 2004, 29, .	2.4	1
90	Interfacial turbulence in evaporating liquids: Theory and preliminary results of the ITEL-master 9 sounding rocket experiment. Advances in Space Research, 2003, 32, 119-127.	1.2	39

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91	Influence of a nonlinear reference temperature profile on oscillatory Bénard-Marangoni convection. Physical Review E, 2003, 68, 066310.	0.8	5
92	Interfacial nonequilibrium and Bénard-Marangoni instability of a liquid-vapor system. Physical Review E, 2003, 68, 041601.	0.8	55
93	Two-Phase Flow Pattern and Pressure Drop in a Microchannel. , 2003, , 465.		2
94	Anticonvection with an inclined temperature gradient. Physical Review E, 2002, 66, 056305.	0.8	1
95	Multiplication of defects in hexagonal patterns. Europhysics Letters, 2002, 57, 480-486.	0.7	9
96	Nonlinear evolution of nonuniformly heated falling liquid films. Physics of Fluids, 2002, 14, 4130-4151.	1.6	84
97	Oscillatory Instability and High-Frequency Wave Modes in a Marangoni-Bénard Layer with Deformable Free Surface. Journal of Non-Equilibrium Thermodynamics, 2001, 25, .	2.4	0
98	Oscillatory Instability and High-Frequency Wave Modes in a Marangoni-Bï¿½nard Layer with Deformable Free Surface. Journal of Non-Equilibrium Thermodynamics, 2001, 25, 381-405.	2.4	8
99	Rayleigh–Marangoni oscillatory instability in a horizontal liquid layer heated from above: coupling and mode mixing of internal and surface dilational waves. Journal of Fluid Mechanics, 2000, 405, 57-77.	1.4	34
100	Bénard–Marangoni convection of a binary mixture as an example of an oscillatory bifurcation under strong symmetry-breaking effects. Physica D: Nonlinear Phenomena, 2000, 145, 84-109.	1.3	23
101	Theoretical analysis of a dynamic thermoconvective pattern in a circular container. Physical Review E, 2000, 61, 2663-2668.	0.8	8
102	Two-layer Bénard-Marangoni instability and the limit of transverse and longitudinal waves. Physical Review E, 1998, 57, 2872-2884.	0.8	23
103	Spatially quasiperiodic convection and temporal chaos in two-layer thermocapillary instabilities. Physical Review E, 1996, 54, 514-524.	0.8	16
104	Finite-amplitude regimes of the short-wave Marangoni-Benard convective instability. Physical Review E, 1995, 52, 2603-2616.	0.8	1
105	On the Hopf bifurcation occurring in the two‐layer Rayleigh–Bénard convective instability. Physics of Fluids, 1994, 6, 2631-2639.	1.6	60
106	HEXAGONAL MARANGONI CONVECTION IN A RECTANGULAR BOX WITH SLIPPERY WALLS. Quarterly Journal of Mechanics and Applied Mathematics, 1993, 46, 683-707.	0.5	32
107	The role of the Soret effect on Marangoni-Benard stability. Lecture Notes in Physics, 1991, , 281-294.	0.3	5