Elmar Bonaccurso

List of Publications by Year
in descending order

111 papers	5,365 citations	94433 37 h-index	88630 70 g-index
115 all docs	115 docs citations	115 times ranked	4987 citing authors

#	Article	IF	Citations
1	Propeller-integrated airfoil heater system for small multirotor drones in icing environments: Anti-icing feasibility study. Cold Regions Science and Technology, 2022, 201, 103616.	3.5	12
2	Development of nanostructured icephobic aluminium oxide surfaces for aeronautic applications. Surface and Coatings Technology, 2021, 405, 126652.	4.8	15
3	Icephobic Performance of Multi-Scale Laser-Textured Aluminum Surfaces for Aeronautic Applications. Nanomaterials, 2021, 11, 135.	4.1	13
4	What Can Probing Liquidâ€“Air Menisci Inside Nanopores Teach Us About Macroscopic Wetting Phenomena?. ACS Applied Materials & Interfaces, 2021, 13, 6897-6905.	8.0	3
5	Silicone nanofilaments grown on aircraft alloys for low ice adhesion. Surface and Coatings Technology, 2021, 410, 126971.	4.8	13
6	Macrodropâ€Impactâ€Mediated Fluid Microdispensing. Advanced Science, 2021, 8, e2101331.	11.2	26
7	Characterizing Microscopic Ice Particle Impacts onto a Rigid Surface: Wind Tunnel Setup and Analysis. , 2021, , .		0
8	Icing Mitigation by MEMS-Fabricated Surface Dielectric Barrier Discharge. Applied Sciences (Switzerland), 2021, 11, 11106.	2.5	6
9	Elasticity-to-Capillarity Transition in Soft Substrate Deformation. Nano Letters, 2021, 21, 10361-10367.	9.1	6
10	Selfâ€Limited Ice Formation and Efficient Deâ€Icing on Superhydrophobic Microâ€Structured Airfoils through Direct Laser Interference Patterning. Advanced Materials Interfaces, 2020, 7, 2001231.	3.7	38
11	Durability of Superamphiphobic Polyester Fabrics in Simulated Aerodynamic Icing Conditions. Coatings, 2020, 10, 1058.	2.6	5
12	Molecular Dynamics Simulations of Nano-scale Icing Phenomena (Invited). , 2020, , .		0
13	Aircraft Icing Mitigation by DBD-based Micro Plasma Actuators. , 2020, , .		2
14	Design Rules for Laserâ€Treated Icephobic Metallic Surfaces for Aeronautic Applications. Advanced Functional Materials, 2020, 30, 1910268.	14.9	109
15	Resolving the Apparent Line Tension of Sessile Droplets and Understanding its Sign Change at a Critical Wetting Angle. Physical Review Letters, 2019, 123, 094501.	7.8	19
16	A survey of icephobic coatings and their potential use in a hybrid coating/active ice protection system for aerospace applications. Progress in Aerospace Sciences, 2019, 105, 74-97.	12.1	145
17	Durability of superhydrophobic laser-treated metal surfaces under icing conditions. Materials Letters: X, 2019, 3, 100021.	0.7	12
18	Analysis and modelling of icing of air intake protection grids of aircraft engines. Cold Regions Science and Technology, 2019, 160, 265-272.	3.5	15

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19	Static and dynamic wetting of soft substrates. Current Opinion in Colloid and Interface Science, 2018, 36, 46-57.	7.4	63
20	Electromechanical Resonant Ice Protection Systems: Initiation of Fractures with Piezoelectric Actuators. AIAA Journal, 2018, 56, 4400-4411.	2.6	34
21	Initial Development of a Model to Predict Impact Ice Adhesion Stress. , 2018, , .		2
22	Electromechanical Resonant Ice Protection Systems: Analysis of Fracture Propagation Mechanisms. AIAA Journal, 2018, 56, 4412-4422.	2.6	23
23	Droplet on an elastic substrate: Finite Element Method coupled with lubrication approximation. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2017, 521, 13-21.	4.7	16
24	Vortex formation in coalescence of droplets with a reservoir using molecular dynamics simulations. Journal of Colloid and Interface Science, 2016, 479, 189-198.	9.4	8
25	Droplet impact on soft viscoelastic surfaces. Physical Review E, 2016, 94, 063117.	2.1	65
26	Surfactant-Enhanced Spreading of Sessile Water Drops on Polypropylene Surfaces. Langmuir, 2016, 32, 8322-8328.	3.5	18
27	Theoretical and Experimental Investigation of the Melting Process of Ice Particles. Journal of Thermophysics and Heat Transfer, 2016, 30, 946-954.	1.6	30
28	Mechanism for Asymmetric Nanoscale Electrowetting of an Ionic Liquid on Graphene. Langmuir, 2016, 32, 140-150.	3.5	23
29	Deposition of drops containing surfactants on liquid pools: Movement of the contact line, Marangoni ridge, capillary waves and interfacial particles. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2015, 486, 53-59.	4.7	19
30	Inscribing wettability gradients onto polymer substrates with different stiffness using corona discharge in point-to-plane geometry. Applied Surface Science, 2015, 330, 104-110.	6.1	13
31	Comparison of spontaneous wetting and drop impact dynamics of aqueous surfactant solutions on hydrophobic polypropylene surfaces: scaling of the contact radius. Colloid and Polymer Science, 2015, 293, 257-265.	2.1	20
32	Ice crystal impact onto a dry solid wall. Particle fragmentation. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2015, 471, 20150399.	2.1	47
33	Scanning Conductive Torsion Mode Microscopy. , 2015, , 199-225.		0
34	Effects of Surface Characteristics and Droplet Diameter on the Freezing of Supercooled Water Droplets Impacting a Cooled Substrate. , 2014, , .		1
35	Effects of surface wettability and liquid viscosity on the dynamic wetting of individual drops. Physical Review E, 2014, 90, 022401.	2.1	84
36	Study of morphology and mechanical properties of polystyreneâ€“polybutadiene blends with nanometre resolution using AFM and forceâ€“distance curves. European Polymer Journal, 2014, 55, 123-134.	5.4	21

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37	Electrowetting â€" From statics to dynamics. Advances in Colloid and Interface Science, 2014, 210, 2-12.	14.7	146
38	Mechanical properties of silicone methacrylate microparticles determined by AFM Colloidal Probe Technique. Polymer, 2014, 55, 1209-1216.	3.8	3
39	General Frost Growth Mechanism on Solid Substrates with Different Stiffness. Langmuir, 2014, 30, 1160-1168.	3.5	59
40	Temperature-Responsive Thin Films from Cellulose Stearoyl Triester. Journal of Physical Chemistry C, 2014, 118, 2408-2417.	3.1	13
41	Transparent Slippery Surfaces Made with Sustainable Porous Cellulose Lauroyl Ester Films. ACS Applied Materials & Interfaces, 2014, 6, 6969-6976.	8.0	64
42	Direct thermal noise calibration of colloidal probe cantilevers. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2014, 443, 377-383.	4.7	12
43	Influence of substrate elasticity on particle deposition patterns from evaporating waterâ€"silica suspension droplets. Soft Matter, 2013, 9, 7942.	2.7	38
44	Influence of the substrate thermal properties on sessile droplet evaporation: Effect of transient heat transport. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2013, 432, 64-70.	4.7	49
45	Initial Electrospreading of Aqueous Electrolyte Drops. Physical Review Letters, 2013, 110, 026103.	7.8	26
46	Conductivity of individual particles measured by a microscopic four-point-probe method. Scientific Reports, 2013, 3, 1991.	3.3	14
47	Surface-mediated buckling of coreâ€"shell spheres for the formation of oriented anisotropic particles with tunable morphologies. Soft Matter, 2013, 9, 2589.	2.7	8
48	Influence of surfactant transport suppression on dynamic contact angle hysteresis. Colloid and Polymer Science, 2013, 291, 361-366.	2.1	10
49	Dynamic Wetting of Hydrophobic Polymers by Aqueous Surfactant and Superspreader Solutions. Langmuir, 2013, 29, 14855-14864.	3.5	45
50	Inertial to Viscoelastic Transition in Early Drop Spreading on Soft Surfaces. Langmuir, 2013, 29, 1893-1898.	3.5	67
51	Superhydrophobic surfaces fabricated from nano- and microstructured cellulose stearoyl esters. Chemical Communications, 2013, 49, 4962.	4.1	51
52	Drop impact on surfactant films and solutions. Colloid and Polymer Science, 2013, 291, 1963-1976.	2.1	13
53	Measurement of Line Tension on Droplets in the Submicrometer Range. Langmuir, 2013, 29, 14147-14153.	3.5	53
54	PREFACE: DROP EVAPORATION, SPREADING, AND STABILITY. Interfacial Phenomena and Heat Transfer, 2013, 1, v.	0.8	0

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55	Snap-in dynamics of single particles to water drops. Applied Physics Letters, 2012, 101, .	3.3	30
56	Evaporation control of sessile water drops by soft viscoelastic surfaces. Soft Matter, 2012, 8, 7875.	2.7	92
57	Drop profile analysis tensiometry under highly dynamic conditions. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2012, 413, 292-297.	4.7	33
58	Influence of Surfactant Concentration and Background Salt on Forced Dynamic Wetting and Dewetting. Langmuir, 2011, 27, 2112-2117.	3.5	24
59	Short time wetting dynamics on soft surfaces. Soft Matter, 2011, 7, 9084.	2.7	65
60	Water diffusion in polymer nano-films measured with microcantilevers. Sensors and Actuators B: Chemical, 2011, 160, 32-38.	7.8	13
61	Fast dynamic wetting of polymer surfaces by miscible and immiscible liquids. Colloid and Polymer Science, 2011, 289, 1609-1615.	2.1	23
62	Influence of Relative Humidity on the Nanoscopic Topography and Dielectric Constant of Thin Films of PPy:PSS. Small, 2011, 7, 950-956.	10.0	9
63	Superhydrophilic and superhydrophobic nanostructured surfaces via plasma treatment. Journal of Colloid and Interface Science, 2011, 357, 234-238.	9.4	128
64	Superviscosity and electroviscous effects at an electrode/aqueous electrolyte interface: An atomic force microscope study. Journal of Colloid and Interface Science, 2011, 360, 800-804.	9.4	34
65	Hydrodynamic drainage force in a highly confined geometry: role of surface roughness on different length scales. Microfluidics and Nanofluidics, 2010, 8, 653-663.	2.2	40
66	Influence of the spring constant of cantilevers on hydrodynamic force measurements by the colloidal probe technique. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2010, 354, 72-80.	4.7	23
67	Dynamics of condensation and evaporation: Effect of inter-drop spacing. Europhysics Letters, 2010, 89, 36004.	2.0	52
68	Microcantilever sensors for monitoring the evaporation of microdrops of pure liquids and mixtures. Review of Scientific Instruments, 2010, 81, 013702.	1.3	20
69	Cantilever contribution to the total electrostatic force measured with the atomic force microscope. Measurement Science and Technology, 2010, 21, 025502.	2.6	24
70	Interaction of a Microsphere with a Solid-Supported Liquid Film. Langmuir, 2010, 26, 11797-11803.	3.5	42
71	The Softer the Better: Fast Condensation on Soft Surfaces. Langmuir, 2010, 26, 1544-1547.	3.5	108
72	Nanoelectronic Properties of a Model System and of a Conjugated Polymer: A Study by Kelvin Probe Force Microscopy and Scanning Conductive Torsion Mode Microscopy. Journal of Physical Chemistry C, 2010, 114, 7161-7168.	3.1	20

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73	Dynamic Wetting of Polyisoprene Melts: Influence of the End Group. Langmuir, 2010, 26, 2544-2549.	3.5	9
74	Diffusion of water into SU-8 microcantilevers. Physical Chemistry Chemical Physics, 2010, 12, 10577.	2.8	26
75	Construction of Redispersible Polypyrrole Coreâ€“Shell Nanoparticles for Application in Polymer Electronics. Advanced Materials, 2009, 21, 1137-1141.	21.0	60
76	Facile Synthesis of Spherical Polyelectrolyte Brushes as Carriers for Conducting Polymers to be Used in Plastic Electronics. Macromolecular Chemistry and Physics, 2009, 210, 1504-1509.	2.2	12
77	Transition in the Evaporation Kinetics of Water Microdrops on Hydrophilic Surfaces. Langmuir, 2009, 25, 75-78.	3.5	58
78	Solid-supported thin elastomer films deformed by microdrops. Soft Matter, 2009, 5, 3611.	2.7	115
79	Atomic Force Microscope Cantilevers Used as Sensors for Monitoring Microdrop Evaporation. Nanoscience and Technology, 2009, , 17-38.	1.5	0
80	Microstructuring of Polystyrene Surfaces with Nonsolvent Sessile Droplets. ChemPhysChem, 2008, 9, 1738-1746.	2.1	32
81	Thin liquid films studied by atomic force microscopy. Current Opinion in Colloid and Interface Science, 2008, 13, 107-119.	7.4	48
82	Influence of wettability and surface charge on the interaction between an aqueous electrolyte solution and a solid surface. Physical Chemistry Chemical Physics, 2008, 10, 4871.	2.8	20
83	Evaporation of sessile water/ethanol drops in a controlled environment. Physical Chemistry Chemical Physics, 2008, 10, 7150.	2.8	128
84	Effect of Capillary Pressure and Surface Tension on the Deformation of Elastic Surfaces by Sessile Liquid Microdrops: An Experimental Investigation. Langmuir, 2008, 24, 10565-10568.	3.5	168
85	Evaporative cooling of sessile water microdrops measured with atomic force microscope cantilevers. Journal of Micromechanics and Microengineering, 2008, 18, 095026.	2.6	14
86	Microdrops Evaporating on AFM Cantilevers. , 2008, , 57-65.		0
87	Evaporation of Solvent Microdrops on Polymer Substrates: From Well Controlled Experiments To Mathematical Models and Back. Nanoscale and Microscale Thermophysical Engineering, 2007, 11, 31-41.	2.6	8
88	Nondestructive and noncontact method for determining the spring constant of rectangular cantilevers. Review of Scientific Instruments, 2007, 78, 043705.	1.3	24
89	Arrays of microlenses with variable focal lengths fabricated by restructuring polymer surfaces with an ink-jet device. Optics Express, 2007, 15, 9877.	3.4	27
90	Influence of Synapsin I on Synaptic Vesicles: An Analysis by Force-Volume Mode of the Atomic Force Microscope and Dynamic Light Scattering. Biophysical Journal, 2007, 93, 1051-1060.	0.5	25

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91	Evaporation Structures of Solvent Drops Evaporating from Polymer Surfaces: Influence of Molar Mass. Macromolecular Chemistry and Physics, 2007, 208, 2134-2144.	2.2	25
92	Impact of atomic force microscopy on interface and colloid science. Advances in Colloid and Interface Science, 2007, 133, 91-104.	14.7	76
93	On the Derivation of Young's Equation for Sessile Drops:Â Nonequilibrium Effects Due to Evaporation. Journal of Physical Chemistry B, 2007, 111, 5277-5283.	2.6	79
94	Solvent-assisted nanolithography on polystyrene surfaces using the atomic force microscope. Nanotechnology, 2007, 18, 155307.	2.6	14
95	Local Mechanical Properties of Plasma Treated Polystyrene Surfaces. Journal of Physical Chemistry B, 2006, 110, 17918-17924.	2.6	16
96	Quasi-static and hydrodynamic interaction between solid surfaces in polyisoprene studied by atomic force microscopy. Polymer, 2006, 47, 7259-7270.	3.8	16
97	Sessile-drop-induced bending of atomic force microscope cantilevers: a model system for monitoring microdrop evaporation. Journal of Micromechanics and Microengineering, 2006, 16, 2273-2280.	2.6	31
98	Nonconstant piezo velocity in highly dynamic atomic force spectroscopy. Review of Scientific Instruments, 2006, 77, 116107.	1.3	3
99	Electrostatic forces acting on tip and cantilever in atomic force microscopy. Physical Review B, 2006, 74, .	3.2	33
100	Imaging and elasticity measurements of the sarcolemma of fully differentiated skeletal muscle fibres. Microscopy Research and Technique, 2005, 67, 27-35.	2.2	53
101	Fabrication of microvessels and microlenses from polymers by solvent droplets. Applied Physics Letters, 2005, 86, 124101.	3.3	77
102	Microdrops on Atomic Force Microscope Cantilevers:Â Evaporation of Water and Spring Constant Calibration. Journal of Physical Chemistry B, 2005, 109, 253-263.	2.6	70
103	Boundary slip in Newtonian liquids: a review of experimental studies. Reports on Progress in Physics, 2005, 68, 2859-2897.	20.1	946
104	Microarrays by structured substrate swelling. European Polymer Journal, 2004, 40, 975-980.	5.4	16
105	Nanostructuring Effect of Plasma and Solvent Treatment on Polystyrene. Langmuir, 2004, 20, 11183-11190.	3.5	35
106	Revealing Contamination on AFM Cantilevers by Microdrops and Microbubbles. Langmuir, 2004, 20, 11824-11827.	3.5	19
107	Surface Roughness and Hydrodynamic Boundary Slip of a Newtonian Fluid in a Completely Wetting System. Physical Review Letters, 2003, 90, 144501.	7.8	274
108	Confined liquid: Simultaneous observation of a molecularly layered structure and hydrodynamic slip. Journal of Chemical Physics, 2002, 117, 10311-10314.	3.0	53

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109	Hydrodynamic Force Measurements: Boundary Slip of Water on Hydrophilic Surfaces and Electrokinetic Effects. Physical Review Letters, 2002, 88, 076103.	7.8	277
110	Water Induced Dewetting of Ultrathin Polystyrene Films on Hydrophilic Surfaces. Langmuir, 2002, 18, 8056-8061.	3.5	31
111	Measuring normal and friction forces acting on individual fine particles. Review of Scientific Instruments, 2001, 72, 4164-4170.	1.3	66