

RÃ¼diger Berger

List of Publications by Year in descending order

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85
papers

3,725
citations

147786

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h-index

133244

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93
all docs

93
docs citations

93
times ranked

5397
citing authors

#	ARTICLE	IF	CITATIONS
1	Real-space observation of unbalanced charge distribution inside a perovskite-sensitized solar cell. Nature Communications, 2014, 5, 5001.	12.8	294
2	How the formation of interfacial charge causes hysteresis in perovskite solar cells. Energy and Environmental Science, 2018, 11, 2404-2413.	30.8	289
3	When and how self-cleaning of superhydrophobic surfaces works. Science Advances, 2020, 6, eaaw9727.	10.3	242
4	How drops start sliding over solid surfaces. Nature Physics, 2018, 14, 191-196.	16.7	240
5	Yttrium-substituted nanocrystalline TiO ₂ photoanodes for perovskite based heterojunction solar cells. Nanoscale, 2014, 6, 1508-1514.	5.6	162
6	DNA-Templated Synthesis in Three Dimensions: Introducing a Micellar Scaffold for Organic Reactions. Angewandte Chemie - International Edition, 2006, 45, 4206-4210.	13.8	161
7	Engineering the Structural Properties of DNA Block Copolymer Micelles by Molecular Recognition. Angewandte Chemie - International Edition, 2007, 46, 1172-1175.	13.8	151
8	Local Time-Dependent Charging in a Perovskite Solar Cell. ACS Applied Materials & Interfaces, 2016, 8, 19402-19409.	8.0	109
9	Contact angle hysteresis. Current Opinion in Colloid and Interface Science, 2022, 59, 101574.	7.4	81
10	Genetically encoded lipid-polypeptide hybrid biomaterials that exhibit temperature-triggered hierarchical self-assembly. Nature Chemistry, 2018, 10, 496-505.	13.6	79
11	Electrical Modes in Scanning Probe Microscopy. Macromolecular Rapid Communications, 2009, 30, 1167-1178.	3.9	77
12	Enzymatic Control of the Size of DNA Block Copolymer Nanoparticles. Angewandte Chemie - International Edition, 2008, 47, 974-976.	13.8	76
13	Synthesis and Characterization of Polymer Brushes on Micromechanical Cantilevers. Macromolecular Chemistry and Physics, 2004, 205, 1713-1720.	2.2	75
14	Glucose-responsive polymer brushes for microcantilever sensing. Journal of Materials Chemistry, 2010, 20, 3391.	6.7	74
15	Micromechanics senses biomolecules. Materials Today, 2002, 5, 22-29.	14.2	68
16	Adaptive Wetting—Adaptation in Wetting. Langmuir, 2018, 34, 11292-11304.	3.5	66
17	Spontaneous charging affects the motion of sliding drops. Nature Physics, 2022, 18, 713-719.	16.7	62
18	Reliable Work Function Determination of Multicomponent Surfaces and Interfaces: The Role of Electrostatic Potentials in Ultraviolet Photoelectron Spectroscopy. Advanced Materials Interfaces, 2017, 4, 1700324.	3.7	61

#	ARTICLE	IF	CITATIONS
19	Micromechanical Cantilever Technique: A Tool for Investigating the Swelling of Polymer Brushes. <i>Langmuir</i> , 2007, 23, 2203-2207.	3.5	57
20	Energy Dissipation of Moving Drops on Superhydrophobic and Superoleophobic Surfaces. <i>Langmuir</i> , 2017, 33, 107-116.	3.5	57
21	Removal of Surface Oxygen Vacancies Increases Conductance Through TiO ₂ Thin Films for Perovskite Solar Cells. <i>Journal of Physical Chemistry C</i> , 2019, 123, 13458-13466.	3.1	54
22	Adaptive Wetting of Polydimethylsiloxane. <i>Langmuir</i> , 2020, 36, 7236-7245.	3.5	50
23	Swelling signals of polymer films measured by a combination of micromechanical cantilever sensor and surface plasmon resonance spectroscopy. <i>Sensors and Actuators B: Chemical</i> , 2006, 117, 43-49.	7.8	48
24	Electrical characterization of organic solar cell materials based on scanning force microscopy. <i>European Polymer Journal</i> , 2013, 49, 1907-1915.	5.4	46
25	Phenothiazine-functionalized redox polymers for a new cathode-active material. <i>RSC Advances</i> , 2015, 5, 22947-22950.	3.6	42
26	Atomic Force Spectroscopy of Thermoresponsive Photo-Cross-Linked Hydrogel Films. <i>Langmuir</i> , 2010, 26, 7262-7269.	3.5	40
27	Engineering Proteins at Interfaces: From Complementary Characterization to Material Surfaces with Designed Functions. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 12626-12648.	13.8	40
28	Kelvin Probe Force Microscopy in Nonpolar Liquids. <i>Langmuir</i> , 2012, 28, 13892-13899.	3.5	35
29	Photoinduced Degradation Studies of Organic Solar Cell Materials Using Kelvin Probe Force and Conductive Scanning Force Microscopy. <i>Journal of Physical Chemistry C</i> , 2011, 115, 19994-20001.	3.1	33
30	Nanopatterns of polymer brushes for understanding protein adsorption on the nanoscale. <i>RSC Advances</i> , 2014, 4, 45059-45064.	3.6	32
31	Electronic effects of nano-confinement in functional organic and inorganic materials for optoelectronics. <i>Chemical Society Reviews</i> , 2021, 50, 3585-3628.	38.1	32
32	Generation of Multiblock Copolymers by PCR: Synthesis, Visualization and Nanomechanical Properties. <i>Nano Letters</i> , 2009, 9, 3658-3662.	9.1	30
33	Light Induced Charging of Polymer Functionalized Nanorods. <i>Nano Letters</i> , 2010, 10, 2812-2816.	9.1	29
34	Response Characteristics of Thermoresponsive Polymers Using Nanomechanical Cantilever Sensors. <i>Macromolecular Chemistry and Physics</i> , 2009, 210, 1339-1345.	2.2	28
35	Effect of the Molecular Structure on the Hierarchical Self-Assembly of Semifluorinated Alkanes at the Air/Water Interface. <i>Langmuir</i> , 2011, 27, 8776-8786.	3.5	28
36	Nanoscale heterogeneity and workfunction variations in ZnO thin films. <i>Applied Surface Science</i> , 2016, 363, 516-521.	6.1	27

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37	On the micromechanics of micro-cantilever sensors: Property analysis and eigenstrain modeling. <i>Sensors and Actuators A: Physical</i> , 2007, 139, 70-77.	4.1	26
38	Control of surface properties of self-assembled monolayers by tuning the degree of molecular asymmetry. <i>Surface Science</i> , 2006, 600, 2847-2856.	1.9	25
39	Mapping of Local Conductivity Variations on Fragile Nanopillar Arrays by Scanning Conductive Torsion Mode Microscopy. <i>Nano Letters</i> , 2010, 10, 1194-1197.	9.1	25
40	In-Situ Visualization of the Enzymatic Growth of Surface-Immobilized DNA Block Copolymer Micelles by Scanning Force Microscopy. <i>Macromolecules</i> , 2008, 41, 2914-2919.	4.8	24
41	Premelting-Induced Agglomeration of Hydrates: Theoretical Analysis and Modeling. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 14599-14606.	8.0	24
42	Surface Stress, Thickness, and Mass of the First Few Layers of Polyelectrolyte. <i>Langmuir</i> , 2008, 24, 3191-3198.	3.5	23
43	Template-Based Preparation of Free-Standing Semiconducting Polymeric Nanorod Arrays on Conductive Substrates. <i>ACS Applied Materials & Interfaces</i> , 2010, 2, 1573-1580.	8.0	23
44	Enhanced Vertical Charge Transport of Homo- and Blended Semiconducting Polymers by Nanoconfinement. <i>Advanced Materials</i> , 2020, 32, 1908087.	21.0	22
45	Polymer patchy colloids with sticky patches. <i>Polymer Chemistry</i> , 2014, 5, 365-371.	3.9	21
46	Stress-Structure Correlation in PS-PMMA Mixed Polymer Brushes. <i>Macromolecules</i> , 2012, 45, 3129-3136.	4.8	19
47	Surface Premelting and Interfacial Interactions of Semi-Clathrate Hydrate. <i>Journal of Physical Chemistry C</i> , 2019, 123, 24080-24086.	3.1	19
48	Invisible high workfunction materials on heterogeneous surfaces. <i>Applied Surface Science</i> , 2015, 327, 22-26.	6.1	18
49	Clathrate Adhesion Induced by Quasi-Liquid Layer. <i>Journal of Physical Chemistry C</i> , 2021, 125, 21293-21300.	3.1	18
50	Surface polymerization of (3,4-ethylenedioxythiophene) probed by in situ scanning tunneling microscopy on Au(111) in ionic liquids. <i>Nanoscale</i> , 2011, 3, 251-257.	5.6	17
51	Scanning force microscopy as a tool to investigate the properties of polyglycerol ester foams. <i>Journal of Colloid and Interface Science</i> , 2012, 374, 164-175.	9.4	17
52	Readout of micromechanical cantilever sensor arrays by Fabry-Perot interferometry. <i>Review of Scientific Instruments</i> , 2007, 78, 104105.	1.3	16
53	Determination of Cross-Link Density in Ion-Irradiated Polystyrene Surfaces from Rippling. <i>Langmuir</i> , 2009, 25, 3108-3114.	3.5	14
54	Thermal Response of Surface Grafted Two-Dimensional Polystyrene (PS)/Polyvinylmethylether (PVME) Blend Films. <i>Macromolecules</i> , 2010, 43, 1108-1116.	4.8	14

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55	Reactions of Plasma-Polymerised Pentafluorophenyl Methacrylate with Simple Amines. <i>Plasma Processes and Polymers</i> , 2010, 7, 915-925.	3.0	13
56	Frequency Response of Polymer Films Made from a Precursor Colloidal Monolayer on a Nanomechanical Cantilever. <i>Macromolecules</i> , 2012, 45, 862-871.	4.8	12
57	Photoinduced Charge Separation of Self-Organized Semiconducting Superstructures Composed of a Functional Polymer-TiO ₂ Hybrid. <i>Macromolecular Chemistry and Physics</i> , 2013, 214, 975-984.	2.2	12
58	Adaptation of a Styrene-Acrylic Acid Copolymer Surface to Water. <i>Langmuir</i> , 2021, 37, 1571-1577.	3.5	12
59	Stable Lignin-Rich Nanofibers for Binder-Free Carbon Electrodes in Supercapacitors. <i>ACS Applied Nano Materials</i> , 2021, 4, 13099-13111.	5.0	12
60	Controlled Mutual Diffusion between Fullerene and Conjugated Polymer Nanopillars in Ordered Heterojunction Solar Cells. <i>Advanced Materials Interfaces</i> , 2016, 3, 1600264.	3.7	11
61	Stability of a Split Streptomycin Binding Aptamer. <i>Journal of Physical Chemistry B</i> , 2016, 120, 6479-6489.	2.6	11
62	“Liquid-like” Water in Clathrates Induced by Host-Guest Hydrogen Bonding. <i>Journal of Physical Chemistry C</i> , 2021, 125, 15751-15757.	3.1	11
63	Electrical field assisted growth of poly(3-hexylthiophene) layers employing ionic liquids: microstructure elucidated by scanning force and electron microscopy. <i>Journal of Materials Chemistry</i> , 2010, 20, 5325.	6.7	10
64	Investigating morphology and electronic properties of self-assembled hybrid systems for solar cells. <i>Journal of Materials Chemistry</i> , 2011, 21, 7765.	6.7	10
65	Surface morphologies in polymers by irradiation with argon ions and consecutive swelling. <i>Microelectronic Engineering</i> , 2006, 83, 819-822.	2.4	9
66	Surface stress control using ultraviolet light irradiation of plasma-polymerized thin films. <i>Applied Physics Letters</i> , 2006, 88, 143119.	3.3	9
67	Investigation into the Chemical Reactivity of Plasma-Deposited Perfluorophenyl Methacrylate Using Infrared Reflection Absorption Spectroscopy and Microcantilever Studies. <i>Plasma Processes and Polymers</i> , 2007, 4, S790-S793.	3.0	9
68	Hygroscopic properties of NaCl nanoparticles on the surface: a scanning force microscopy study. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 9967-9973.	2.8	8
69	Electrical tip-sample contact in scanning conductive torsion mode. <i>Applied Physics Letters</i> , 2013, 102, 163105.	3.3	6
70	Thermal Characterization of Dynamic Silicon Cantilever Array Sensors by Digital Holographic Microscopy. <i>Sensors</i> , 2017, 17, 1191.	3.8	6
71	Shuffling gait motion of an aerodynamically driven wall-bound drop. <i>Physical Review Fluids</i> , 2020, 5, .	2.5	6
72	Oriented nanometer surface morphologies by thermal relaxation of locally cross-linked and stretched polymer samples. <i>Microelectronic Engineering</i> , 2007, 84, 797-801.	2.4	5

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73	Vitamin C Loaded Polyethylene: Synthesis and Properties of Precise Polyethylene with Vitamin C Defects via Acyclic Diene Metathesis Polycondensation. <i>Macromolecules</i> , 2020, 53, 2932-2941.	4.8	5
74	Properties of amphiphilic oligonucleotide films at the air/water interface and after film transfer. <i>Colloids and Surfaces B: Biointerfaces</i> , 2013, 111, 439-445.	5.0	4
75	Pinning forces of sliding drops at defects. <i>Europhysics Letters</i> , 2022, 139, 47001.	2.0	4
76	Electrodeposition of ZnO nanorods on opaline replica as hierarchically structured systems. <i>Journal of Materials Chemistry</i> , 2011, 21, 1079-1085.	6.7	3
77	Electrical Characterization of Solar Cell Materials Using Scanning Probe Microscopy. <i>Nanoscience and Technology</i> , 2012, , 551-573.	1.5	3
78	Temperature dependence of surface reorganization characteristics of amphiphilic block copolymer in air and in water studied by scanning force microscopy. <i>Journal of Plastic Film and Sheeting</i> , 2015, 31, 434-448.	2.2	3
79	Engineering von Proteinen an Oberflächen: Von komplementärer Charakterisierung zu Materialoberflächen mit maßgeschneiderten Funktionen. <i>Angewandte Chemie</i> , 2018, 130, 12806-12830.	2.0	3
80	Scanning probe microscopy for energy-related materials. <i>Beilstein Journal of Nanotechnology</i> , 2019, 10, 132-134.	2.8	3
81	Acidic pH Promotes Refolding and Macroscopic Assembly of Amyloid β^2 (16 β 22) Peptides at the Air-Water Interface. <i>Journal of Physical Chemistry Letters</i> , 2022, 13, 6674-6679.	4.6	3
82	Two-Stage Collapse of PNIPAM Brushes: Viscoelastic Changes Revealed by an Interferometric Laser Technique. <i>Langmuir</i> , 2019, 35, 15776-15783.	3.5	2
83	Adaptation and Recovery of a Styrene-Acrylic Acid Copolymer Surface to Water. <i>Macromolecular Rapid Communications</i> , 2022, , 2100733.	3.9	2
84	Thermal properties of nanocapsules measured by scanning force microscopy methods. <i>Microelectronic Engineering</i> , 2012, 97, 223-226.	2.4	1
85	Simplifying cantilever sensors: Segmental analysis, a way to multiply your output. <i>Sensors and Actuators B: Chemical</i> , 2013, 177, 1142-1148.	7.8	0