

RÃ¼diger Berger

List of Publications by Year in descending order

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papers

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147801
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133252
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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 lipidâ€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 Wettingâ€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. Plasma Processes and Polymers, 2010, 7, 915-925.	3.0	13
56	Frequency Response of Polymer Films Made from a Precursor Colloidal Monolayer on a Nanomechanical Cantilever. Macromolecules, 2012, 45, 862-871.	4.8	12
57	Photoinduced Charge Separation of Self-Organized Semiconducting Superstructures Composed of a Functional Polymer-TiO ₂ Hybrid. Macromolecular Chemistry and Physics, 2013, 214, 975-984.	2.2	12
58	Adaptation of a Styrene-Acrylic Acid Copolymer Surface to Water. Langmuir, 2021, 37, 1571-1577.	3.5	12
59	Stable Lignin-Rich Nanofibers for Binder-Free Carbon Electrodes in Supercapacitors. ACS Applied Nano Materials, 2021, 4, 13099-13111.	5.0	12
60	Controlled Mutual Diffusion between Fullerene and Conjugated Polymer Nanopillars in Ordered Heterojunction Solar Cells. Advanced Materials Interfaces, 2016, 3, 1600264.	3.7	11
61	Stability of a Split Streptomycin Binding Aptamer. Journal of Physical Chemistry B, 2016, 120, 6479-6489.	2.6	11
62	“Liquid-like” Water in Clathrates Induced by Host-Guest Hydrogen Bonding. Journal of Physical Chemistry C, 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. Journal of Materials Chemistry, 2010, 20, 5325.	6.7	10
64	Investigating morphology and electronic properties of self-assembled hybrid systems for solar cells. Journal of Materials Chemistry, 2011, 21, 7765.	6.7	10
65	Surface morphologies in polymers by irradiation with argon ions and consecutive swelling. Microelectronic Engineering, 2006, 83, 819-822.	2.4	9
66	Surface stress control using ultraviolet light irradiation of plasma-polymerized thin films. Applied Physics Letters, 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. Plasma Processes and Polymers, 2007, 4, S790-S793.	3.0	9
68	Hygroscopic properties of NaCl nanoparticles on the surface: a scanning force microscopy study. Physical Chemistry Chemical Physics, 2020, 22, 9967-9973.	2.8	8
69	Electrical tip-sample contact in scanning conductive torsion mode. Applied Physics Letters, 2013, 102, 163105.	3.3	6
70	Thermal Characterization of Dynamic Silicon Cantilever Array Sensors by Digital Holographic Microscopy. Sensors, 2017, 17, 1191.	3.8	6
71	Shuffling gait motion of an aerodynamically driven wall-bound drop. Physical Review Fluids, 2020, 5, .	2.5	6
72	Oriented nanometer surface morphologies by thermal relaxation of locally cross-linked and stretched polymer samples. Microelectronic Engineering, 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 (16-22) 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