Stefan A L Weber

List of Publications by Year
in descending order

61 papers	2,890 citations	186265 28 h-index	168389 53 g-index
64 all docs	64 docs citations	64 times ranked	4461 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	Two birds with one stone: dual grain-boundary and interface passivation enables >22% efficient inverted methylammonium-free perovskite solar cells. Energy and Environmental Science, 2021, 14, 5875-5893.	30.8	180
4	Ferroelastic Fingerprints in Methylammonium Lead Iodide Perovskite. Journal of Physical Chemistry C, 2016, 120, 5724-5731.	3.1	154
5	Thermodynamics of nanosecond nanobubble formation at laser-excited metal nanoparticles. New Journal of Physics, 2011, 13, 043018.	2.9	138
6	Local Time-Dependent Charging in a Perovskite Solar Cell. ACS Applied Materials & Interfaces, 2016, 8, 19402-19409.	8.0	109
7	The application of atomic force microscopy in mineral flotation. Advances in Colloid and Interface Science, 2018, 256, 373-392.	14.7	108
8	Humidity-Induced Grain Boundaries in MAPbI₃ Perovskite Films. Journal of Physical Chemistry C, 2016, 120, 6363-6368.	3.1	103
9	Probing charge screening dynamics and electrochemical processes at the solidâ€“liquid interface with electrochemical force microscopy. Nature Communications, 2014, 5, 3871.	12.8	97
10	Characterization of Quantum Dot/Conducting Polymer Hybrid Films and Their Application to Lightâ€Emitting Diodes. Advanced Materials, 2009, 21, 5022-5026.	21.0	90
11	Electrical Modes in Scanning Probe Microscopy. Macromolecular Rapid Communications, 2009, 30, 1167-1178.	3.9	77
12	Grafting Silicone at Room Temperatureâ€"a Transparent, Scratch-resistant Nonstick Molecular Coating. Langmuir, 2020, 36, 4416-4431.	3.5	76
13	The Interplay of Contact Layers: How the Electron Transport Layer Influences Interfacial Recombination and Hole Extraction in Perovskite Solar Cells. Journal of Physical Chemistry Letters, 2018, 9, 6249-6256.	4.6	68
14	Adaptive Wettingâ€"Adaptation in Wetting. Langmuir, 2018, 34, 11292-11304.	3.5	66
15	Slide electrification: charging of surfaces by moving water drops. Soft Matter, 2019, 15, 8667-8679.	2.7	66
16	Open loop Kelvin probe force microscopy with single and multi-frequency excitation. Nanotechnology, 2013, 24, 475702.	2.6	63
17	Spontaneous charging affects the motion of sliding drops. Nature Physics, 2022, 18, 713-719.	16.7	62
18	Photoreduction of SERS-Active Metallic Nanostructures on Chemically Patterned Ferroelectric Crystals. ACS Nano, 2012, 6, 7373-7380.	14.6	59

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19	Ion Specificity on Electric Energy Generated by Flowing Water Droplets. Angewandte Chemie - International Edition, 2018, 57, 2091-2095.	13.8	58
20	Removal of Surface Oxygen Vacancies Increases Conductance Through TiO₂ Thin Films for Perovskite Solar Cells. Journal of Physical Chemistry C, 2019, 123, 13458-13466.	3.1	54
21	Dual harmonic Kelvin probe force microscopy at the grapheneâ€“liquid interface. Applied Physics Letters, 2014, 104, .	3.3	50
22	Orientation of Ferroelectric Domains and Disappearance upon Heating Methylammonium Lead Triiodide Perovskite from Tetragonal to Cubic Phase. ACS Applied Energy Materials, 2018, 1, 1534-1539.	5.1	49
23	Know your full potential: Quantitative Kelvin probe force microscopy on nanoscale electrical devices. Beilstein Journal of Nanotechnology, 2018, 9, 1809-1819.	2.8	47
24	Electrical characterization of organic solar cell materials based on scanning force microscopy. European Polymer Journal, 2013, 49, 1907-1915.	5.4	46
25	Kelvin Probe Force Microscopy in Nonpolar Liquids. Langmuir, 2012, 28, 13892-13899.	3.5	35
26	Photoinduced Degradation Studies of Organic Solar Cell Materials Using Kelvin Probe Force and Conductive Scanning Force Microscopy. Journal of Physical Chemistry C, 2011, 115, 19994-20001.	3.1	33
27	Evidence of Tailoring the Interfacial Chemical Composition in Normal Structure Hybrid Organohalide Perovskites by a Self-Assembled Monolayer. ACS Applied Materials & Interfaces, 2018, 10, 5511-5518.	8.0	32
28	Light Induced Charging of Polymer Functionalized Nanorods. Nano Letters, 2010, 10, 2812-2816.	9.1	29
29	Surface Modification of TiO₂ Photoanodes with Fluorinated Self-Assembled Monolayers for Highly Efficient Dye-Sensitized Solar Cells. ACS Applied Materials & Interfaces, 2015, 7, 25741-25747.	8.0	29
30	Fine Customization of Calcium Phosphate Nanostructures with Site-Specific Modification by DNA Templated Mineralization. ACS Nano, 2021, 15, 1555-1565.	14.6	29
31	Detaching Microparticles from a Liquid Surface. Physical Review Letters, 2018, 121, 048002.	7.8	27
32	Anisotropic carrier diffusion in single MAPbI3 grains correlates to their twin domains. Energy and Environmental Science, 2020, 13, 4168-4177.	30.8	27
33	Mapping of Local Conductivity Variations on Fragile Nanopillar Arrays by Scanning Conductive Torsion Mode Microscopy. Nano Letters, 2010, 10, 1194-1197.	9.1	25
34	Integrated blocking layers for hybrid organic solar cells. Energy and Environmental Science, 2009, 2, 783.	30.8	23
35	Template-Based Preparation of Free-Standing Semiconducting Polymeric Nanorod Arrays on Conductive Substrates. ACS Applied Materials & Interfaces, 2010, 2, 1573-1580.	8.0	23
36	Irradiation uniformity at the Laser MegaJoule facility in the context of the shock ignition scheme. High Power Laser Science and Engineering, 2014, 2, .	4.6	23

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37	Enhanced power conversion efficiency of inverted organic solar cells by using solution processed Sn-doped TiO2 as an electron transport layer. Journal of Materials Chemistry A, 2014, 2, 11426.	10.3	20
38	Preparing DNA-mimicking multi-line nanocaterpillars <i>via in situ</i> nanoparticlisation of fully conjugated polymers. Polymer Chemistry, 2016, 7, 1422-1428.	3.9	19
39	IM30 IDPs form a membrane-protective carpet upon super-complex disassembly. Communications Biology, 2020, 3, 595.	4.4	16
40	Quantitative comparison of closed-loop and dual harmonic Kelvin probe force microscopy techniques. Review of Scientific Instruments, 2018, 89, 123708.	1.3	13
41	Charging of drops impacting onto superhydrophobic surfaces. Soft Matter, 2022, 18, 1628-1635.	2.7	12
42	Investigating morphology and electronic properties of self-assembled hybrid systems for solar cells. Journal of Materials Chemistry, 2011, 21, 7765.	6.7	10
43	Tuning the Charge of Sliding Water Drops. Langmuir, 2022, 38, 6224-6230.	3.5	10
44	Martini 3 Model of Cellulose Microfibrils: On the Route to Capture Large Conformational Changes of Polysaccharides. Molecules, 2022, 27, 976.	3.8	7
45	Electrical tip-sample contact in scanning conductive torsion mode. Applied Physics Letters, 2013, 102, 163105.	3.3	6
46	Alignment of solid targets under extreme tight focus conditions generated by an ellipsoidal plasma mirror. Matter and Radiation at Extremes, 2019, 4, 024402.	3.9	6
47	High viscosity environments: an unexpected route to obtain true atomic resolution with atomic force microscopy. Nanotechnology, 2014, 25, 175701.	2.6	5
48	Electrical Scanning Probe Microscopy of an Integrated Blocking Layer. Journal of Nanoscience and Nanotechnology, 2010, 10, 6840-6844.	0.9	4
49	Ion Specificity on Electric Energy Generated by Flowing Water Droplets. Angewandte Chemie, 2018, 130, 2113-2117.	2.0	4
50	Electrodeposition of ZnO nanorods on opaline replica as hierarchically structured systems. Journal of Materials Chemistry, 2011, 21, 1079-1085.	6.7	3
51	Electrical Characterization of Solar Cell Materials Using Scanning Probe Microscopy. Nanoscience and Technology, 2012, , 551-573.	1.5	3
52	Applications of KPFM-Based Approaches for Surface Potential and Electrochemical Measurements in Liquid. Springer Series in Surface Sciences, 2018, , 391-433.	0.3	3
53	Wave-based laser absorption method for high-order transportâ€“hydrodynamic codes. Advances in Computational Mathematics, 2019, 45, 1953-1976.	1.6	3
54	Recent progress in atomic and molecular physics for controlled fusion and astrophysics. Matter and Radiation at Extremes, 2021, 6, 023002.	3.9	3

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55	On the Shape-Selected, Ligand-Free Preparation of Hybrid Perovskite (CH3NH3PbBr3) Microcrystals and Their Suitability as Model-System for Single-Crystal Studies of Optoelectronic Properties. Nanomaterials, 2021, 11, 3057.	4.1	3
56	Preface to Special Topic: Extreme High-Field Physics Driven by Lasers. Matter and Radiation at Extremes, 2019, 4, 063002.	3.9	0
57	Watching Ions Move: Scanning Probe Microscopy on Perovskite Solar Cells. , 0, , .		0
58	Two Birds with One Stone: Dual Grain-Boundary and Interface Passivation Enables > 22% Efficient Inverted Methylammonium-Free Perovskite Solar Cells. , 0, , .		0
59	Correlating Cathodoluminescence and Kelvin Probe Force Microscopy Measurements of Methylammonium-Free 2D Ruddlesden Popper Passivated Perovskite Absorbers. , 0, , .		0
60	Anisotropic Charge Carrier Diffusion Correlated to Ferroelastic Twin Domains in MAPbI3 Perovskite. , 0, , .		0
61	Watching Ions Move: Scanning Probe Microscopy on Perovskite Solar Cells. , 0, , .		0