

Bruno Schuler

List of Publications by Year in descending order

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43
papers

3,775
citations

186209

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243529

44
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47
all docs

47
docs citations

47
times ranked

3902
citing authors

#	ARTICLE	IF	CITATIONS
1	Unraveling the Molecular Structures of Asphaltenes by Atomic Force Microscopy. Journal of the American Chemical Society, 2015, 137, 9870-9876.	6.6	545
2	Bond-Order Discrimination by Atomic Force Microscopy. Science, 2012, 337, 1326-1329.	6.0	457
3	Heavy Oil Based Mixtures of Different Origins and Treatments Studied by Atomic Force Microscopy. Energy & Fuels, 2017, 31, 6856-6861.	2.5	206
4	Identifying substitutional oxygen as a prolific point defect in monolayer transition metal dichalcogenides. Nature Communications, 2019, 10, 3382.	5.8	196
5	On-surface generation and imaging of arynes by atomic force microscopy. Nature Chemistry, 2015, 7, 623-628.	6.6	176
6	Reversible Bergman cyclization by atomic manipulation. Nature Chemistry, 2016, 8, 220-224.	6.6	169
7	Adsorption Geometry Determination of Single Molecules by Atomic Force Microscopy. Physical Review Letters, 2013, 111, 106103.	2.9	162
8	Different tips for high-resolution atomic force microscopy and scanning tunneling microscopy of single molecules. Applied Physics Letters, 2013, 102, .	1.5	141
9	Atomic Force Microscopy for Molecular Structure Elucidation. Angewandte Chemie - International Edition, 2018, 57, 3888-3908.	7.2	135
10	Large Spin-Orbit Splitting of Deep In-Gap Defect States of Engineered Sulfur Vacancies in Monolayer WS_2 . Physical Review Letters, 2019, 123, 076801.	2.9	120
11	Characterizing aliphatic moieties in hydrocarbons with atomic force microscopy. Chemical Science, 2017, 8, 2315-2320.	3.7	102
12	Overview of Asphaltene Nanostructures and Thermodynamic Applications. Energy & Fuels, 2020, 34, 15082-15105.	2.5	101
13	From Perylene to a 22-Ring Aromatic Hydrocarbon in One-Pot. Angewandte Chemie - International Edition, 2014, 53, 9004-9006.	7.2	94
14	The role of chalcogen vacancies for atomic defect emission in MoS ₂ . Nature Communications, 2021, 12, 3822.	5.8	94
15	A Combined Atomic Force Microscopy and Computational Approach for the Structural Elucidation of Breitfussin A and B: Highly Modified Halogenated Dipeptides from <i>Thuiaria breitfussi</i> . Angewandte Chemie - International Edition, 2012, 51, 12238-12241.	7.2	92
16	How Substitutional Point Defects in Two-Dimensional WS_2 Induce Charge Localization, Spin-Orbit Splitting, and Strain. ACS Nano, 2019, 13, 10520-10534.	7.3	86
17	The Electric Field of CO Tips and Its Relevance for Atomic Force Microscopy. Nano Letters, 2016, 16, 1974-1980.	4.5	79
18	Contrast Formation in Kelvin Probe Force Microscopy of Single π -Conjugated Molecules. Nano Letters, 2014, 14, 3342-3346.	4.5	77

#	ARTICLE	IF	CITATIONS
19	Reorganization energy upon charging a single molecule on an insulator measured by atomic force microscopy. <i>Nature Nanotechnology</i> , 2018, 13, 376-380.	15.6	77
20	Image Distortions of a Partially Fluorinated Hydrocarbon Molecule in Atomic Force Microscopy with Carbon Monoxide Terminated Tips. <i>Nano Letters</i> , 2014, 14, 6127-6131.	4.5	73
21	Investigating atomic contrast in atomic force microscopy and Kelvin probe force microscopy on ionic systems using functionalized tips. <i>Physical Review B</i> , 2014, 90, .	1.1	59
22	Electrically driven photon emission from individual atomic defects in monolayer WS ₂ . <i>Science Advances</i> , 2020, 6, .	4.7	53
23	Atomistic Positioning of Defects in Helium Ion Treated Single-Layer MoS ₂ . <i>Nano Letters</i> , 2020, 20, 4437-4444.	4.5	48
24	Multimodal spectromicroscopy of monolayer WS ₂ enabled by ultra-clean van der Waals epitaxy. <i>2D Materials</i> , 2018, 5, 045010.	2.0	40
25	Controllable p-Type Doping of 2D WSe ₂ via Vanadium Substitution. <i>Advanced Functional Materials</i> , 2021, 31, 2105252.	7.8	40
26	The Synthesis and STM/AFM Imaging of C_{54} Olympicene TM Benzo[<i>a</i>]pyrenes. <i>Chemistry - A European Journal</i> , 2015, 21, 2011-2018.	1.7	39
27	Understanding the Effects of Sample Preparation on the Chemical Structures of Petroleum Imaged with Noncontact Atomic Force Microscopy. <i>Industrial & Engineering Chemistry Research</i> , 2018, 57, 15935-15941.	1.8	38
28	Scalable Substitutional Re δ Doping and its Impact on the Optical and Electronic Properties of Tungsten Diselenide. <i>Advanced Materials</i> , 2020, 32, e2005159.	11.1	32
29	Atomic Force Microscopy Identifying Fuel Pyrolysis Products and Directing the Synthesis of Analytical Standards. <i>Journal of the American Chemical Society</i> , 2018, 140, 8156-8161.	6.6	27
30	Resonant and bound states of charged defects in two-dimensional semiconductors. <i>Physical Review B</i> , 2020, 101, .	1.1	23
31	Identical Binding Energies and Work Functions for Distinct Adsorption Structures: Olympicenes on the Cu(111) Surface. <i>Journal of Physical Chemistry Letters</i> , 2016, 7, 1022-1027.	2.1	22
32	Intentional carbon doping reveals CH as an abundant charged impurity in nominally undoped synthetic WS ₂ and WSe ₂ . <i>2D Materials</i> , 2020, 7, 031003.	2.0	22
33	The Role of Methyl Groups in the Early Stage of Thermal Polymerization of Polycyclic Aromatic Hydrocarbons Revealed by Molecular Imaging. <i>Energy & Fuels</i> , 2021, 35, 2224-2233.	2.5	21
34	Spin-dependent vibronic response of a carbon radical ion in two-dimensional WS ₂ . <i>Nature Communications</i> , 2021, 12, 7287.	5.8	15
35	Effect of electron-phonon interaction on the formation of one-dimensional electronic states in coupled Cl vacancies. <i>Physical Review B</i> , 2015, 91, .	1.1	14
36	Rasterkraftmikroskopie für die molekulare Strukturaufklärung. <i>Angewandte Chemie</i> , 2018, 130, 3950-3972.	1.6	12

#	ARTICLE	IF	CITATIONS
37	Charge-Induced Structural Changes in a Single Molecule Investigated by Atomic Force Microscopy. Physical Review Letters, 2019, 123, 066001.	2.9	11
38	Engineering and probing atomic quantum defects in 2D semiconductors: A perspective. Applied Physics Letters, 2021, 119, .	1.5	11
39	Toggling the Local Electric Field with an Embedded Adatom Switch. Nano Letters, 2015, 15, 5564-5568.	4.5	5
40	Atomic Resolution on Molecules with Functionalized Tips. Nanoscience and Technology, 2015, , 223-246.	1.5	5
41	Chemische Bindungen visualisiert. Physik in Unserer Zeit, 2013, 44, 6-7.	0.0	3
42	Addressing Long-Standing Chemical Challenges by AFM with Functionalized Tips. Advances in Atom and Single Molecule Machines, 2018, , 209-227.	0.0	2
43	Chapter 13. Prospects and Challenges in Molecular Structure Identification by Atomic Force Microscopy. , 2015, , 306-320.		2