Leo Gross

List of Publications by Year
in descending order

98 papers	9,142 citations	53751 45 h-index	39638 94 g-index
98 all docs	98 docs citations	98 times ranked	6575 citing authors

#	Article	IF	Citations
1	Visualization and identification of single meteoritic organic molecules by atomic force microscopy. Meteoritics and Planetary Science, 2022, 57, 644-656.	0.7	4
2	Nonbenzenoid High-Spin Polycyclic Hydrocarbons Generated by Atom Manipulation. ACS Nano, 2022, 16, 3264-3271.	7.3	22
3	Selectivity in single-molecule reactions by tip-induced redox chemistry. Science, 2022, 377, 298-301.	6.0	36
4	Imaging Titanâ€™s Organic Haze at Atomic Scale. Astrophysical Journal Letters, 2021, 908, L13.	3.0	11
5	Probing Molecular Excited States by Atomic Force Microscopy. Physical Review Letters, 2021, 126, 176801.	2.9	9
6	Atomically resolved single-molecule triplet quenching. Science, 2021, 373, 452-456.	6.0	27
7	Ï€-Diradical Aromatic Soot Precursors in Flames. Journal of the American Chemical Society, 2021, 143, 12212-12219.	6.6	41
8	The Role of Methyl Groups in the Early Stage of Thermal Polymerization of Polycyclic Aromatic Hydrocarbons Revealed by Molecular Imaging. Energy & Fuels, 2021, 35, 2224-2233.	2.5	21
9	An onâ€surface Dielsâ€“Alder reaction. Angewandte Chemie - International Edition, 2021, 60, 26346-26350.	7.2	9
10	An onâ€surface Dielsâ€Alder reaction. Angewandte Chemie, 2021, 133, 26550.	1.6	2
11	Intramolecular Coupling of Terminal Alkynes by Atom Manipulation. Angewandte Chemie - International Edition, 2020, 59, 22989-22993.	7.2	15
12	Intramolecular Coupling of Terminal Alkynes by Atom Manipulation. Angewandte Chemie, 2020, 132, 23189-23193.	1.6	0
13	Overview of Asphaltene Nanostructures and Thermodynamic Applications. Energy & Fuels, 2020, 34, 15082-15105.	2.5	101
14	Synthesis of Cyclo[18]carbon via Debromination of C₁₈Br₆. Journal of the American Chemical Society, 2020, 142, 12921-12924.	6.6	71
15	An sp-hybridized molecular carbon allotrope, cyclo[18]carbon. Science, 2019, 365, 1299-1301.	6.0	412
16	Of limited length. Nature Physics, 2019, 15, 1102-1102.	6.5	0
17	Revisiting Kekulene: Synthesis and Single-Molecule Imaging. Journal of the American Chemical Society, 2019, 141, 15488-15493.	6.6	54
18	Elucidating the Geometric Substitution of Petroporphyrins by Spectroscopic Analysis and Atomic Force Microscopy Molecular Imaging. Energy & Fuels, 2019, 33, 6088-6097.	2.5	45

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19	A Single-Molecule Chemical Reaction Studied by High-Resolution Atomic Force Microscopy and Scanning Tunneling Microscopy Induced Light Emission. ACS Nano, 2019, 13, 6947-6954.	7.3	27
20	On the early stages of soot formation: Molecular structure elucidation by high-resolution atomic force microscopy. Combustion and Flame, 2019, 205, 154-164.	2.8	134
21	Exploring a Route to Cyclic Acenes by Onâ€Surface Synthesis. Angewandte Chemie, 2019, 131, 9136-9140.	1.6	22
22	Exploring a Route to Cyclic Acenes by Onâ€Surface Synthesis. Angewandte Chemie - International Edition, 2019, 58, 9038-9042.	7.2	52
23	Molecular structure elucidation with charge-state control. Science, 2019, 365, 142-145.	6.0	62
24	Rasterkraftmikroskopie fÃ¼r die molekulare StrukturaufklÃ¤rung. Angewandte Chemie, 2018, 130, 3950-3972.	1.6	12
25	Atomic Force Microscopy for Molecular Structure Elucidation. Angewandte Chemie - International Edition, 2018, 57, 3888-3908.	7.2	135
26	Damping by sequentially tunneling electrons. Surface Science, 2018, 678, 112-117.	0.8	8
27	Reorganization energy upon charging a single molecule on an insulator measured by atomic force microscopy. Nature Nanotechnology, 2018, 13, 376-380.	15.6	77
28	Studying an antiaromatic polycyclic hydrocarbon adsorbed on different surfaces. Nature Communications, 2018, 9, 1198.	5.8	42
29	Addressing Long-Standing Chemical Challenges by AFM with Functionalized Tips. Advances in Atom and Single Molecule Machines, 2018, , 209-227.	0.0	2
30	Atomic and electronic structure of Si dangling bonds in quasi-free-standing monolayer graphene. Nano Research, 2018, 11, 864-873.	5.8	14
31	Controlled Fragmentation of Single Molecules with Atomic Force Microscopy by Employing Doubly Charged States. Physical Review Letters, 2018, 121, 226101.	2.9	7
32	Understanding the Effects of Sample Preparation on the Chemical Structures of Petroleum Imaged with Noncontact Atomic Force Microscopy. Industrial & Engineering Chemistry Research, 2018, 57, 15935-15941.	1.8	38
33	[19]Dendriphene: A 19â€Ring Dendritic Nanographene. Chemistry - A European Journal, 2018, 24, 17697-17700.	1.7	14
34	Polyyne formation via skeletal rearrangement induced by atomic manipulation. Nature Chemistry, 2018, 10, 853-858.	6.6	105
35	Direct Visualization of Individual Aromatic Compound Structures in Low Molecular Weight Marine Dissolved Organic Carbon. Geophysical Research Letters, 2018, 45, 5590-5598.	1.5	26
36	Atomic Force Microscopy Identifying Fuel Pyrolysis Products and Directing the Synthesis of Analytical Standards. Journal of the American Chemical Society, 2018, 140, 8156-8161.	6.6	27

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37	Generation, manipulation and characterization of molecules by atomic force microscopy. Nature Reviews Chemistry, 2017, 1, .	13.8	147
38	Synthesis and characterization of triangulene. Nature Nanotechnology, 2017, 12, 308-311.	15.6	351
39	Heavy Oil Based Mixtures of Different Origins and Treatments Studied by Atomic Force Microscopy. Energy & Fuels, 2017, 31, 6856-6861.	2.5	206
40	Characterizing aliphatic moieties in hydrocarbons with atomic force microscopy. Chemical Science, 2017, 8, 2315-2320.	3.7	102
41	Generation and Characterization of a meta-Aryne on Cu and NaCl Surfaces. ACS Nano, 2017, 11, 10768-10773.	7.3	31
42	Tip-induced passivation of dangling bonds on hydrogenated Si(100)-2 Ã— 1. Applied Physics Letters, 2017, 111, .	1.5	31
43	Identical Binding Energies and Work Functions for Distinct Adsorption Structures: Olympicenes on the Cu(111) Surface. Journal of Physical Chemistry Letters, 2016, 7, 1022-1027.	2.1	22
44	Synthesis of a Naphthodiazaborinine and Its Verification by Planarization with Atomic Force Microscopy. ACS Nano, 2016, 10, 5340-5345.	7.3	39
45	Charge-State-Dependent Diffusion of Individual Gold Adatoms on Ionic Thin NaCl Films. Physical Review Letters, 2016, 117, 146102.	2.9	21
46	Reversible Bergman cyclization by atomic manipulation. Nature Chemistry, 2016, 8, 220-224.	6.6	169
47	The Electric Field of CO Tips and Its Relevance for Atomic Force Microscopy. Nano Letters, 2016, 16, 1974-1980.	4.5	79
48	Tetracene Formation by On-Surface Reduction. ACS Nano, 2016, 10, 4538-4542.	7.3	60
49	Effect of electron-phonon interaction on the formation of one-dimensional electronic states in coupled Cl vacancies. Physical Review B, 2015, 91, .	1.1	14
50	Local tunneling decay length and Kelvin probe force spectroscopy. Physical Review B, 2015, 92, .	1.1	8
51	Interactions between two C₆₀molecules measured by scanning probe microscopies. Nanotechnology, 2015, 26, 445703.	1.3	4
52	Manipulation of the Charge State of Single Au Atoms on Insulating Multilayer Films. Physical Review Letters, 2015, 114, 036801.	2.9	48
53	The Synthesis and STM/AFM Imaging of â€˜Olympiceneâ€™ Benzo[cd]pyrenes. Chemistry - A European Journal, 2015, 21, 2011-2018.	1.7	39
54	On-surface generation and imaging of arynes by atomic force microscopy. Nature Chemistry, 2015, 7, 623-628.	6.6	176

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55	Toggling the Local Electric Field with an Embedded Adatom Switch. Nano Letters, 2015, 15, 5564-5568.	4.5	5
56	Unraveling the Molecular Structures of Asphaltenes by Atomic Force Microscopy. Journal of the American Chemical Society, 2015, 137, 9870-9876.	6.6	545
57	Probe-based measurement of lateral single-electron transfer between individual molecules. Nature Communications, 2015, 6, 8353.	5.8	56
58	Freestanding single-crystalline magnetic structures fabricated by ion bombardment. Applied Physics Letters, 2015, 106, 032410.	1.5	1
59	Resistless nanofabrication by stencil lithography: A review. Microelectronic Engineering, 2015, 132, 236-254.	1.1	88
60	Local thickness determination of thin insulator films via localized states. Applied Physics Letters, 2014, 104, .	1.5	19
61	A variable-temperature nanostencil compatible with a low-temperature scanning tunneling microscope/atomic force microscope. Review of Scientific Instruments, 2014, 85, 023706.	0.6	6
62	Image correction for atomic force microscopy images with functionalized tips. Physical Review B, 2014, 89, .	1.1	57
63	Investigating atomic contrast in atomic force microscopy and Kelvin probe force microscopy on ionic systems using functionalized tips. Physical Review B, 2014, 90, .	1.1	59
64	Contrast Formation in Kelvin Probe Force Microscopy of Single Ï€-Conjugated Molecules. Nano Letters, 2014, 14, 3342-3346.	4.5	77
65	Image Distortions of a Partially Fluorinated Hydrocarbon Molecule in Atomic Force Microscopy with Carbon Monoxide Terminated Tips. Nano Letters, 2014, 14, 6127-6131.	4.5	73
66	From Perylene to a 22â€Ring Aromatic Hydrocarbon in Oneâ€Pot. Angewandte Chemie - International Edition, 2014, 53, 9004-9006.	7.2	94
67	Adsorption Geometry Determination of Single Molecules by Atomic Force Microscopy. Physical Review Letters, 2013, 111, 106103.	2.9	162
68	Different tips for high-resolution atomic force microscopy and scanning tunneling microscopy of single molecules. Applied Physics Letters, 2013, 102, .	1.5	141
69	Force and conductance during contact formation to a C₆₀molecule. New Journal of Physics, 2012, 14, 073032.	1.2	46
70	Scanning Probe Microscopy of Atoms and Molecules on Insulating Films: From Imaging to Molecular Manipulation. Chimia, 2012, 66, 10-15.	0.3	9
71	A Combined Atomic Force Microscopy and Computational Approach for the Structural Elucidation of Breitfussin A and B: Highly Modified Halogenated Dipeptides from Thuiaria breitfussi. Angewandte Chemie - International Edition, 2012, 51, 12238-12241.	7.2	92
72	Bond-Order Discrimination by Atomic Force Microscopy. Science, 2012, 337, 1326-1329.	6.0	457

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73	A simple model of molecular imaging with noncontact atomic force microscopy. New Journal of Physics, 2012, 14, 083023.	1.2	41
74	Imaging the charge distribution within a single molecule. Nature Nanotechnology, 2012, 7, 227-231.	15.6	295
75	Single-molecule chemistry and physics explored by low-temperature scanning probe microscopy. Chemical Communications, 2011, 47, 9011.	2.2	46
76	High-Resolution Molecular Orbital Imaging Using a<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>p</mml:mi></mml:math>-Wave STM Tip. Physical Review Letters, 2011, 107, 086101.	2.9	225
77	Recent advances in submolecular resolution with scanning probe microscopy. Nature Chemistry, 2011, 3, 273-278.	6.6	179
78	Measuring the short-range force field above a single molecule with atomic resolution. Applied Physics Letters, 2011, 99, .	1.5	51
79	Organic structure determination using atomic-resolution scanning probe microscopy. Nature Chemistry, 2010, 2, 821-825.	6.6	300
80	Contacting self-ordered molecular wires by nanostencil lithography. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2010, 28, C4D34-C4D39.	0.6	12
81	Reversible Bond Formation in a Gold-Atomâ€“Organic-Molecule Complex as a Molecular Switch. Physical Review Letters, 2010, 105, 266102.	2.9	142
82	Magnetologic devices fabricated by nanostencil lithography. Nanotechnology, 2010, 21, 325301.	1.3	30
83	The mechanisms underlying the enhanced resolution of atomic force microscopy with functionalized tips. New Journal of Physics, 2010, 12, 125020.	1.2	131
84	The Chemical Structure of a Molecule Resolved by Atomic Force Microscopy. Science, 2009, 325, 1110-1114.	6.0	1,489
85	Measuring the Charge State of an Adatom with Noncontact Atomic Force Microscopy. Science, 2009, 324, 1428-1431.	6.0	317
86	Molecular Aggregation within Self-Ordered Monolayers. ChemPhysChem, 2007, 8, 245-249.	1.0	4
87	A rack-and-pinion device at the molecular scale. Nature Materials, 2007, 6, 30-33.	13.3	171
88	Interaction of a long molecular wire with a nanostructured surface: Violet Landers on Cu(211). Chemical Physics Letters, 2006, 428, 331-337.	1.2	9
89	Force induced and electron stimulated STM manipulations: routes to artificial nanostructures as well as to molecular contacts, engines and switches. Journal of Physics: Conference Series, 2005, 19, 175-181.	0.3	5
90	Recording the intramolecular deformation of a 4-legs molecule during its STM manipulation on a Cu(211) surface. Chemical Physics Letters, 2005, 402, 180-185.	1.2	42

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91	Trapping and moving metal atoms with a six-leg molecule. Nature Materials, 2005, 4, 892-895.	13.3	88
92	Contacting a single molecular wire by STM manipulation. Applied Physics A: Materials Science and Processing, 2005, 80, 913-920.	1.1	13
93	Conformations and controlled manipulation of a long molecular wire on Cu(111). Surface Science, 2005, 585, 38-46.	0.8	7
94	Lander on Cu(2 1 1) â€“ selective adsorption and surface restructuring by a molecular wire. Chemical Physics Letters, 2003, 371, 750-756.	1.2	44
95	Organic monolayers with uniform domain orientation and reduced antiphase boundaries â€“ MBE of perylene on Au(110). Organic Electronics, 2002, 3, 1-7.	1.4	23
96	Structural transitions of perylene and coronene on silver and gold surfaces: A molecular-beam epitaxy LEED study. Physical Review B, 2001, 64, .	1.1	76
97	Oxygen-induced restructuring of the TiO2(110) surface: a comprehensive study. Surface Science, 1999, 437, 173-190.	0.8	184
98	3 + 3 makes the ring. , 0, , .		0