

Markus Morgenstern

List of Publications by Year in descending order

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77
papers

4,349
citations

109137

35
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102304

66
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78
all docs

78
docs citations

78
times ranked

4973
citing authors

#	ARTICLE	IF	CITATIONS
1	Direct Observation of Internal Spin Structure of Magnetic Vortex Cores. <i>Science</i> , 2002, 298, 577-580.	6.0	841
2	New Approach for Determination of Diffusion Parameters of Adatoms. <i>Physical Review Letters</i> , 1996, 76, 1304-1307.	2.9	208
3	Anisotropy in the Adsorption of H ₂ O at Low Coordination Sites on Pt(111). <i>Physical Review Letters</i> , 1996, 77, 703-706.	2.9	191
4	Giant Rashba-type Spin Splitting in Ferroelectric GeTe(111). <i>Advanced Materials</i> , 2016, 28, 560-565.	11.1	155
5	Quantum Hall Transition in Real Space: From Localized to Extended States. <i>Physical Review Letters</i> , 2008, 101, 256802.	2.9	132
6	A 300 mK ultra-high vacuum scanning tunneling microscope for spin-resolved spectroscopy at high energy resolution. <i>Review of Scientific Instruments</i> , 2004, 75, 4871-4879.	0.6	130
7	Wave-Function Mapping of InAs Quantum Dots by Scanning Tunneling Spectroscopy. <i>Physical Review Letters</i> , 2003, 91, 196804.	2.9	125
8	The Ice Bilayer on Pt(111): Nucleation, Structure and Melting. <i>Zeitschrift Fur Physikalische Chemie</i> , 1997, 198, 43-72.	1.4	120
9	Tip-induced band bending by scanning tunneling spectroscopy of the states of the tip-induced quantum dot on InAs(110). <i>Physical Review B</i> , 1999, 59, 8043-8048.	1.1	116
10	Subnanometre-wide electron channels protected by topology. <i>Nature Physics</i> , 2015, 11, 338-343.	6.5	114
11	Tuning the Pseudospin Polarization of Graphene by a Pseudomagnetic Field. <i>Nano Letters</i> , 2017, 17, 2240-2245.	4.5	113
12	Atomic Processes in Low Temperature Pt-Dendrite Growth on Pt(111). <i>Physical Review Letters</i> , 1996, 76, 2366-2369.	2.9	111
13	Bistability and Oscillatory Motion of Natural Nanomembranes Appearing within Monolayer Graphene on Silicon Dioxide. <i>Nano Letters</i> , 2010, 10, 461-465.	4.5	101
14	Electrostatically Confined Monolayer Graphene Quantum Dots with Orbital and Valley Splittings. <i>Nano Letters</i> , 2016, 16, 5798-5805.	4.5	93
15	Scattering States of Ionized Dopants Probed by Low Temperature Scanning Tunneling Spectroscopy. <i>Physical Review Letters</i> , 1998, 81, 5616-5619.	2.9	85
16	Probing two topological surface bands of Sb ₂ Te ₃ by spin-polarized photoemission spectroscopy. <i>Physical Review B</i> , 2012, 86, .	1.1	78
17	Direct Comparison between Potential Landscape and Local Density of States in a Disordered Two-Dimensional Electron System. <i>Physical Review Letters</i> , 2002, 89, 136806.	2.9	72
18	Local Electronic Structure near Mn Acceptors in InAs: Surface-Induced Symmetry Breaking and Coupling to Host States. <i>Physical Review Letters</i> , 2007, 99, 157202.	2.9	70

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19	Mn ²⁺ Rich MnSb ₂ Te ₄ : A Topological Insulator with Magnetic Gap Closing at High Curie Temperatures of 45–50 K. <i>Advanced Materials</i> , 2021, 33, e2102935.	11.1	70
20	Probing variations of the Rashba spin-orbit coupling at the nanometre scale. <i>Nature Physics</i> , 2016, 12, 920-925.	6.5	68
21	Networks of ABA and ABC stacked graphene on mica observed by scanning tunneling microscopy. <i>Surface Science</i> , 2013, 610, 53-58.	0.8	66
22	Electronic and Magnetic Properties of Zigzag Graphene Nanoribbons on the (111) Surface of Cu, Ag, and Au. <i>Physical Review Letters</i> , 2013, 110, 216804.	2.9	66
23	Thickness dependent magnetization states of Fe islands on W(110): From single domain to vortex and diamond patterns. <i>Applied Physics Letters</i> , 2004, 84, 948-950.	1.5	65
24	Molecular structure of the H_2O layer on Pt(111). <i>Physical Review B</i> , 2010, 82, .		
25	Large tunable valley splitting in edge-free graphene quantum dots on boron nitride. <i>Nature Nanotechnology</i> , 2018, 13, 392-397.	15.6	58
26	Nucleation and morphology of homoepitaxial Pt(111)-films grown with ion beam assisted deposition. <i>Surface Science</i> , 1996, 365, 187-204.	0.8	55
27	Direct observation of confined states in metallic single-walled carbon nanotubes. <i>Applied Physics Letters</i> , 2003, 83, 1011-1013.	1.5	43
28	Collective effects in the adatom production by 4.5 keV rare-gas impacts on Pt(111): A low-temperature scanning tunnelling microscopy analysis. <i>Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties</i> , 1999, 79, 775-794.	0.8	42
29	Absence of Edge States in Covalently Bonded Zigzag Edges of Graphene on Ir(111). <i>Advanced Materials</i> , 2013, 25, 1967-1972.	11.1	42
30	Effect of energetic particles on island formation in sputter deposition of Pt on Pt(111). <i>Applied Physics Letters</i> , 1997, 70, 182-184.	1.5	40
31	PROBING THE LOCAL DENSITY OF STATES OF DILUTE ELECTRON SYSTEMS IN DIFFERENT DIMENSIONS. <i>Surface Review and Letters</i> , 2003, 10, 933-962.	0.5	40
32	Tuning the Dirac point to the Fermi level in the ternary topological insulator (Bi _{1-x} Sb _x) ₂ Te ₃ . <i>Applied Physics Letters</i> , 2015, 107, .	1.5	40
33	Coverage dependence of the Fe-induced Fermi-level shift and the two-dimensional electron gas on InAs(110). <i>Physical Review B</i> , 2000, 61, 13805-13812.	1.1	38
34	Low temperature scanning tunneling spectroscopy on InAs(110). <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 2000, 109, 127-145.	0.8	36
35	Desorption of H ₂ O from Flat and Stepped Pt(111). <i>Journal of Physical Chemistry C</i> , 2009, 113, 691-697.	1.5	35
36	Scanning tunneling microscopy and spectroscopy of graphene on insulating substrates. <i>Physica Status Solidi (B): Basic Research</i> , 2011, 248, 2423-2434.	0.7	35

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37	STM measurements on the InAs(110) surface directly compared with surface electronic structure calculations. <i>Physical Review B</i> , 2003, 68, .	1.1	33
38	Experimental identification of two distinct skyrmion collapse mechanisms. <i>Nature Physics</i> , 2021, 17, 395-402.	6.5	32
39	Origin of Landau oscillations observed in scanning tunneling spectroscopy on InAs(110). <i>Physical Review B</i> , 2000, 62, 7257-7263.	1.1	31
40	Spatial Fluctuations of the Density of States in Magnetic Fields Observed with Scanning Tunneling Spectroscopy. <i>Physical Review Letters</i> , 2000, 84, 5588-5591.	2.9	30
41	Manipulating InAs nanowires with submicrometer precision. <i>Review of Scientific Instruments</i> , 2011, 82, 113705.	0.6	30
42	Local Density of States of a Three-Dimensional Conductor in the Extreme Quantum Limit. <i>Physical Review Letters</i> , 2001, 86, 1582-1585.	2.9	28
43	Evidence for topological band inversion of the phase change material Ge ₂ Sb ₂ Te ₅ . <i>Applied Physics Letters</i> , 2013, 103, .	1.5	28
44	Robust Nodal Structure of Landau Level Wave Functions Revealed by Fourier Transform Scanning Tunneling Spectroscopy. <i>Physical Review Letters</i> , 2012, 109, 116805.	2.9	27
45	Scanning tunneling spectroscopy on Co(0001): Spectroscopic signature of stacking faults and dislocation lines. <i>Physical Review B</i> , 2004, 70, .	1.1	25
46	Scanning tunneling microscopy of two-dimensional semiconductors: Spin properties and disorder. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2012, 44, 1795-1814.	1.3	25
47	Scanning tunneling spectroscopy of a dilute two-dimensional electron system exhibiting Rashba spin splitting. <i>Physical Review B</i> , 2010, 81, .	1.1	24
48	Onset of Interstitial Diffusion Determined by Scanning Tunneling Microscopy. <i>Physical Review Letters</i> , 1997, 79, 1305-1308.	2.9	23
49	Probing Electron-Electron Interaction in Quantum Hall Systems with Scanning Tunneling Spectroscopy. <i>Physical Review Letters</i> , 2011, 106, 156805.	2.9	22
50	Electronic Structure of the Dark Surface of the Weak Topological Insulator Bi ₁₄ Rh ₃ I ₉ . <i>ACS Nano</i> , 2016, 10, 3995-4003.	7.3	22
51	Probing the pinning strength of magnetic vortex cores with sub-nanometer resolution. <i>Nature Communications</i> , 2020, 11, 2833.	5.8	19
52	From quantized states to percolation: Scanning tunneling spectroscopy of a strongly disordered two-dimensional electron system. <i>Physical Review B</i> , 2003, 68, .	1.1	18
53	Chemical Tuning of Carrier Type and Concentration in a Homologous Series of Crystalline Chalcogenides. <i>Chemistry of Materials</i> , 2017, 29, 6749-6757.	3.2	18
54	Gundlach oscillations and Coulomb blockade of Co nanoislands on MgO/Mo(100) investigated by scanning tunneling spectroscopy at 300 K. <i>Physical Review B</i> , 2010, 81, .	1.1	17

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55	Scanning tunneling microscopy and spectroscopy of the phase change alloy Ge ₁ Sb ₂ Te ₄ . Applied Physics Letters, 2009, 95, .	1.5	15
56	Co on p-InAs(110): An island-induced two-dimensional electron system consisting of electron droplets. Physical Review B, 2002, 65, .	1.1	12
57	Coulomb pseudogap caused by partial localization of a three-dimensional electron system in the extreme quantum limit. Physical Review B, 2002, 66, .	1.1	12
58	H ₂ O on Pt(111): structure and stability of the first wetting layer. Journal of Physics Condensed Matter, 2012, 24, 124103.	0.7	12
59	Evidence for Local Spots of Viscous Electron Flow in Graphene at Moderate Mobility. Nano Letters, 2021, 21, 9365-9373.	4.5	11
60	Analyzing multiple encounter as a possible origin of electron spin resonance signals in scanning tunneling microscopy on Si(111) featuring C and O defects. Surface Science, 2014, 623, 47-54.	0.8	10
61	Graphene Quantum Dots Probed by Scanning Tunneling Microscopy. Annalen Der Physik, 2017, 529, 1700018.	0.9	10
62	STM Ready for the Time Domain. Science, 2010, 329, 1609-1610.	6.0	8
63	Raman imaging of twist angle variations in twisted bilayer graphene at intermediate angles. 2D Materials, 2022, 9, 045009.	2.0	8
64	High spin polarization at the interface between a Fe monolayer and InAs(110). Physical Review B, 2004, 69, .	1.1	7
65	Catalytic growth of N-doped MgO on Mo(001). Physical Review B, 2012, 86, .	1.1	7
66	Graphene quantum dots: wave function mapping by scanning tunneling spectroscopy and transport spectroscopy of quantum dots prepared by local anodic oxidation. Physica Status Solidi - Rapid Research Letters, 2016, 10, 24-38.	1.2	7
67	Scanning tunneling microscopy with InAs nanowire tips. Applied Physics Letters, 2012, 101, .	1.5	5
68	Exfoliated hexagonal BN as gate dielectric for InSb nanowire quantum dots with improved gate hysteresis and charge noise. Applied Physics Letters, 2020, 116, 253101.	1.5	4
69	Anisotropic superexchange in one-dimensional Fe-chains on InAs(110). Surface Science, 2008, 602, 3297-3302.	0.8	3
70	Contributions of the escape depth to the photoelectron intensity of a well-defined initial state. Physical Review B, 2004, 70, .	1.1	2
71	Apparent rippling with honeycomb symmetry and tunable periodicity observed by scanning tunneling microscopy on suspended graphene. Physical Review B, 2016, 94, .	1.1	2
72	Strong and Weak 3D Topological Insulators Probed by Surface Science Methods. Physica Status Solidi (B): Basic Research, 2021, 258, 2000060.	0.7	2

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73	Influence of potential fluctuations on Landau quantization and spin splitting studied by low temperature scanning tunneling spectroscopy on InAs(110). Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2002, 20, 2032.	1.6	1
74	Comparing the local density of states of three- and two-dimensional electron systems by low-temperature scanning tunneling spectroscopy. Physica E: Low-Dimensional Systems and Nanostructures, 2003, 16, 121-128.	1.3	1
75	Metal-insulator transition in graphite: A comparison to heterostructures with high carrier mobility. Technical Physics Letters, 2008, 34, 30-33.	0.2	1
76	Real-space mapping of a disordered two-dimensional electron system in the quantum Hall regime. Journal of Physics: Conference Series, 2011, 334, 012008.	0.3	1
77	Jenseits des Gleichgewichts. Physik in Unserer Zeit, 2011, 42, 168-175.	0.0	1