Philip J Moriarty

List of Publications by Year in descending order

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141 papers	4,014 citations	136950 32 h-index	138484 58 g-index
145 all docs	145 docs citations	145 times ranked	3819 citing authors

#	Article	IF	Citations
1	Gender issues in fundamental physics: Strumiaâ€™s bibliometric analysis fails to account for key confounders and confuses correlation with causation. Quantitative Science Studies, 2021, 2, 263-272.	3.3	3
2	Chemical shielding of H2O and HF encapsulated inside a C60 cage. Communications Chemistry, 2021, 4, .	4.5	7
3	Improving the segmentation of scanning probe microscope images using convolutional neural networks. Machine Learning: Science and Technology, 2021, 2, 015015.	5.0	11
4	Cyclic Single Atom Vertical Manipulation on a Nonmetallic Surface. Journal of Physical Chemistry Letters, 2021, 12, 11383-11390.	4.6	0
5	Origin of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mrow><mml:mi mathvariant="normal">C</mml:mi></mml:mrow><mml:mn>60</mml:mn></mml:msub></mml:math> surface reconstruction resolved by atomic force microscopy. Physical Review B, 2021, 104, .	3.2	2
6	Flights of fancy, feet on the ground. Physics World, 2021, 34, 46-47.	0.0	0
7	A LEGOTM dynamic force â€œmacroscopeâ€• American Journal of Physics, 2020, 88, 906-917.	0.7	2
8	Automated Searching and Identification of Self-Organized Nanostructures. Nano Letters, 2020, 20, 7688-7693.	9.1	36
9	Quadruped Molecular Anchoring to an Insulator: Functionalized Ferrocene on CaF₂ Bulk and Thin Film Surfaces. Journal of Physical Chemistry C, 2020, 124, 9900-9907.	3.1	6
10	Embedding human heuristics in machine-learning-enabled probe microscopy. Machine Learning: Science and Technology, 2020, 1, 015001.	5.0	16
11	Machine learning at the (sub)atomic scale: next generation scanning probe microscopy. Machine Learning: Science and Technology, 2020, 1, 023001.	5.0	24
12	Scanning tunneling state recognition with multi-class neural network ensembles. Review of Scientific Instruments, 2019, 90, .	1.3	32
13	Automated extraction of single H atoms with STM: tip state dependency. Nanotechnology, 2017, 28, 075302.	2.6	36
14	Mechano-chemical manipulation of Sn chains on Si(1â€‰0â€‰0) by NC-AFM. Journal of Physics Condensed Matter, 2017, 29, 074003.	1.8	4
15	A little learning is a dangerous thing. Physics World, 2017, 30, 33-34.	0.0	0
16	Visualizing the orientational dependence of an intermolecular potential. Nature Communications, 2016, 7, 10621.	12.8	12
17	A Combined Monte Carlo and HÃ¼ckel Theory Simulation of Orientational Ordering in C₆₀ Assemblies. Journal of Physical Chemistry C, 2016, 120, 8139-8147.	3.1	12
18	Measuring the reactivity of a silicon-terminated probe. Physical Review B, 2016, 94, .	3.2	5

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19	Pushing the Potential of Probe Microscopy. Physics Magazine, 2015, 8, .	0.1	0
20	Intermolecular artifacts in probe microscope images of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi mathvariant="normal">C</mml:mi><mml:mn>60</mml:mn></mml:msub></mml:math>assemblies. Physical Review B, 2015, 92, .	3.2	11
21	Nano-contact microscopy of supracrystals. Beilstein Journal of Nanotechnology, 2015, 6, 1229-1236.	2.8	2
22	Physisorption Controls the Conformation and Density of States of an Adsorbed Porphyrin. Journal of Physical Chemistry C, 2015, 119, 27982-27994.	3.1	34
23	Simulated structure and imaging of NTCDI on Si(1 1 1)-7 Ã— 7â€‰:â€‰a combined STM, NC-AFM and DFT study. Journal of Physics Condensed Matter, 2015, 27, 054004.	1.8	9
24	Methodological Queries Regarding â€œExploratory Quantum Resonance Spectrometryâ€•(Zhang et al.,) Tj ETQq0 0 0 rgBT /Overlock 10	1.0	0
25	Measuring the mechanical properties of molecular conformers. Nature Communications, 2015, 6, 8338.	12.8	22
26	Visualizing the â€˜Invisibleâ€™. Leonardo, 2015, 48, 64-65.	0.3	0
27	Highlights of the Faraday Discussion on Nanoparticle Synthesis and Assembly, Argonne, USA, April 2015. Chemical Communications, 2015, 51, 13725-13730.	4.1	2
28	Pauliâ€™s Principle in Probe Microscopy. Advances in Atom and Single Molecule Machines, 2015, , 1-24.	0.0	1
29	Mechanochemistry at Silicon Surfaces. Nanoscience and Technology, 2015, , 247-274.	1.5	0
30	Critical Assessment of the Evidence for Striped Nanoparticles. PLoS ONE, 2014, 9, e108482.	2.5	41
31	Intramolecular bonds resolved on a semiconductor surface. Physical Review B, 2014, 90, .	3.2	29
32	Mapping the force field of a hydrogen-bonded assembly. Nature Communications, 2014, 5, 3931.	12.8	133
33	Unique Determination of â€œSubatomicâ€•Contrast by Imaging Covalent Backbonding. Nano Letters, 2014, 14, 2265-2270.	9.1	12
34	The power of YouTube. Physics World, 2014, 27, 31-34.	0.0	3
35	Identifying tips for intramolecular NC-AFM imaging via in situ fingerprinting. Scientific Reports, 2014, 4, 6678.	3.3	16
36	Recovering molecular orientation from convoluted orbitals. Physical Review B, 2013, 88, .	3.2	17

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37	Simultaneous noncontact AFM and STM of Ag:Si(111)-(<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>R</mml:mi><mml:msup><mml:mn>30</mml:mn><mml:mo>â˜</mml:mo></mml:msup></mml:mrow	3.2	18
38	Scanning probe image wizard: A toolbox for automated scanning probe microscopy data analysis. Review of Scientific Instruments, 2013, 84, 113701.	1.3	13
39	Structural development and energy dissipation in simulated silicon apices. Beilstein Journal of Nanotechnology, 2013, 4, 941-948.	2.8	4
40	Submolecular Resolution Imaging of $$ext{C}_{60}$$ C 60 : From Orbital Density to Bond Order. Advances in Atom and Single Molecule Machines, 2013, , 195-206.	0.0	1
41	Imaging and manipulation of the Si(100) surface by small-amplitude NC-AFM at zero and very low applied bias. Journal of Physics Condensed Matter, 2012, 24, 084009.	1.8	10
42	Role of orbital overlap in atomic manipulation. Physical Review B, 2012, 85, .	3.2	28
43	Precise Orientation of a Single<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi mathvariant="normal">C</mml:mi><mml:mn>60</mml:mn></mml:msub></mml:math>Molecule on the Tip of a Scanning Probe Microscope. Physical Review Letters, 2012, 108, 268302.	7.8	55
44	Identifying passivated dynamic force microscopy tips on H:Si(100). Applied Physics Letters, 2012, 100, .	3.3	22
45	Mono- and multi-layer adsorption of an ionic liquid on Au(110). Physical Chemistry Chemical Physics, 2012, 14, 6054.	2.8	64
46	Effect of the tip state during qPlus noncontact atomic force microscopy of Si(100) at 5 K: Probing the probe. Beilstein Journal of Nanotechnology, 2012, 3, 25-32.	2.8	26
47	Combining nanoscale manipulation with macroscale relocation of single quantum dots. Beilstein Journal of Nanotechnology, 2012, 3, 324-328.	2.8	1
48	Atom-technology and beyond: manipulating matter using scanning probes. SPR Nanoscience, 2012, , 116-144.	0.6	2
49	Dewetting of Au nanoparticle assemblies. Journal of Materials Chemistry, 2011, 21, 16983.	6.7	12
50	Toggling Bistable Atoms via Mechanical Switching of Bond Angle. Physical Review Letters, 2011, 106, 136101.	7.8	77
51	Manipulating Si(100) at 5 K using qPlus frequency modulated atomic force microscopy: Role of defects and dynamics in the mechanical switching of atoms. Physical Review B, 2011, 84, .	3.2	19
52	Automated probe microscopy via evolutionary optimization at the atomic scale. Applied Physics Letters, 2011, 98, .	3.3	30
53	Fullerene adsorption on semiconductor surfaces. Surface Science Reports, 2010, 65, 175-227.	7.2	66
54	Directing the Formation of Nanostructured Rings via Local Oxidation. Langmuir, 2010, 26, 13892-13896.	3.5	9

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55	qPlus atomic force microscopy of the Si(100) surface: Buckled, split-off, and added dimers. Applied Physics Letters, 2009, 95, .	3.3	12
56	Langmuirâ€“Blodgett films of C60 and C60O on Silicon: Islands, rings and grains. Thin Solid Films, 2009, 517, 1650-1654.	1.8	6
57	C60 submonolayers on the Si(111)-(7Ã—7) surface: Does a mixture of physisorbed and chemisorbed states exist?. Surface Science, 2009, 603, 2896-2901.	1.9	6
58	Modelling approaches to the dewetting of evaporating thin films of nanoparticle suspensions. Journal of Physics Condensed Matter, 2009, 21, 264016.	1.8	42
59	The economic-impact fallacy. Physics World, 2009, 22, 16-17.	0.0	0
60	Nanofluids on solid substrates. Journal of Physics Condensed Matter, 2009, 21, 260302.	1.8	2
61	Reclaiming academia from post-academia. Nature Nanotechnology, 2008, 3, 60-62.	31.5	15
62	Dual-Scale Pattern Formation in Nanoparticle Assemblies. Journal of Physical Chemistry C, 2008, 112, 15195-15203.	3.1	44
63	AFM of self-organised nanoparticle arrays: frequency modulation, amplitude modulation, and force spectroscopy. Proceedings of SPIE, 2008, , .	0.8	1
64	A compact combined ultrahigh vacuum scanning tunnelling microscope (UHV STM) and near-field optical microscope. Measurement Science and Technology, 2008, 19, 045301.	2.6	5
65	Fingering Instabilities in Dewetting Nanofluids. Physical Review Letters, 2008, 100, 176102.	7.8	110
66	Chapter 1 Self-Organised Nanoparticle Assemblies: A Panoply of Patterns. Studies in Multidisciplinarity, 2008, 5, 1-20.	0.0	5
67	ANISOTROPIC ASSEMBLY OF COLLOIDAL NANOPARTICLES: EXPLOITING SUBSTRATE CRYSTALLINITY. Nano, 2007, 02, 361-365.	1.0	3
68	Controlling Pattern Formation in Nanoparticle Assemblies via Directed Solvent Dewetting. Physical Review Letters, 2007, 99, 116103.	7.8	112
69	Resonant processes and Coulomb interactions in (C59N)2. Journal of Chemical Physics, 2007, 126, 184707.	3.0	14
70	A Genetic Algorithm Approach to Probing the Evolution of Self-Organized Nanostructured Systems. Nano Letters, 2007, 7, 1985-1990.	9.1	22
71	Meniscus-Mediated Organization of Colloidal Nanoparticles. Journal of Physical Chemistry C, 2007, 111, 16255-16260.	3.1	32
72	Charge Transport in Cellular Nanoparticle Networks:Â Meandering through Nanoscale Mazes. Nano Letters, 2007, 7, 855-860.	9.1	40

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73	Adsorbed molecular shuttlecocks: An NIXSW study of Sn phthalocyanine on Ag(111) using Auger electron detection. Surface Science, 2007, 601, 1231-1238.	1.9	21
74	Coerced mechanical coarsening of nanoparticle assemblies. Nature Nanotechnology, 2007, 2, 167-170.	31.5	41
75	Lateral translation of covalently bound fullerenes. Journal of Physics Condensed Matter, 2006, 18, S1837-S1846.	1.8	2
76	(C6H5)5C60HatSi(111)â€(7Ã—7)andAg:Si(111)â€(3Ã—3)R30Â°surfaces. Physical Review B, 2005, 72, .	3.2	6
77	Comment on â€œX-Ray Studies of the Structure and Electronic Behavior of Alkanethiolate-Capped Gold Nanoparticles: The Interplay of Size and Surface Effectsâ€• Physical Review Letters, 2004, 92, 109601; author reply 109602.	7.8	13
78	Morphology, structure, and electronic properties of Ce@C82 films on Ag:Si(111)-(âˆš3Ã—âˆš3)R30Â°. Surface Science, 2004, 564, 156-164.	1.9	18
79	Nanopore Formation by Self-Assembly of the Model Genetically Engineered Elastin-like Polymer [(VPGVG)2(VPGEG)(VPGVG)2]15. Journal of the American Chemical Society, 2004, 126, 13212-13213.	13.7	85
80	Does an Encapsulated Atom â€˜feel' the Effects of Adsorption?: X-ray Standing Wave Spectroscopy of Ce@C82on Ag(111). Nano Letters, 2004, 4, 361-364.	9.1	15
81	Nanoparticle Networks on Silicon:Â Self-Organized or Disorganized?. Nano Letters, 2004, 4, 2389-2392.	9.1	66
82	Iron Wheels on Silicon:Â Wetting Behavior and Electronic Structure of Adsorbed Organostannoxane Clusters. Langmuir, 2004, 20, 6421-6429.	3.5	11
83	Scanning tunneling microscopy study of pentacene adsorption on Ag/Si(1 1 1)-(âˆš3 Ã— âˆš3)R30Â°. Applied Surface Science, 2003, 212-213, 537-541.	6.1	27
84	Graphical computing in the undergraduate laboratory: Teaching and interfacing with LabVIEW. American Journal of Physics, 2003, 71, 1062-1074.	0.7	26
85	Empirical density functional and the adsorption of organic molecules on Si(100). Physical Review B, 2003, 67, .	3.2	18
86	Competing interactions of noble metals and fullerenes with the Si(111)7Ã—7 surface. Journal of Chemical Physics, 2003, 119, 13046-13052.	3.0	10
87	Nanostructured Cellular Networks. Physical Review Letters, 2002, 89, 248303.	7.8	90
88	Colloidal particle foams: Templates for Au nanowire networks?. Applied Physics Letters, 2002, 81, 5039-5041.	3.3	19
89	Attractive mode manipulation of covalently bound molecules. Chemical Physics Letters, 2002, 366, 300-304.	2.6	31
90	Nanostructured materials. Reports on Progress in Physics, 2001, 64, 297-381.	20.1	703

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91	Polydisperse Au nanoclusters on silicon: fractal aggregates via spinodal decomposition?. Chemical Physics Letters, 2001, 348, 27-33.	2.6	5
92	Atomic scale protection using fullerene encapsulation. Applied Physics Letters, 2001, 78, 126-128.	3.3	3
93	Chemisorption of azafullerene on silicon: isolating C59N monomers. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2000, 74, 202-205.	3.5	5
94	Core-level photoemission study of the Bîî—¸GaAs(111)A interface. Applied Surface Science, 2000, 158, 292-300.	6.1	8
95	Deposition of Fe clusters on Si surfaces. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2000, 18, 2646.	1.6	29
96	Doping of covalently bound fullerene monolayers: Ag clusters on C60/Si(111). Applied Physics Letters, 2000, 77, 1144-1146.	3.3	10
97	On the synthesis and manipulation of InAs quantum dots. Journal of Materials Chemistry, 2000, 10, 1939-1943.	6.7	31
98	C59N on silicon surfaces: monomers, dimers and multilayers. , 1999, , .		0
99	C59NMonomers: Stabilization through Immobilization. Physical Review Letters, 1999, 83, 3478-3481.	7.8	24
100	Room temperature manipulation of the heterofullerene C59N on Si(100)-2Ã—1. Applied Physics Letters, 1999, 75, 1074-1076.	3.3	27
101	Oscillations in the valence-band photoemission spectrum of the heterofullereneC59N:A photoelectron interference phenomenon. Physical Review B, 1999, 59, 9834-9837.	3.2	7
102	The interaction of bismuth with the GaAs(111)B surface. Applied Surface Science, 1999, 152, 169-176.	6.1	12
103	Adsorption of cobalt phthalocyanine on Ag terminated Si(111). Surface Science, 1999, 441, 21-25.	1.9	57
104	C60 adsorption on the Si(110)-(16 Ã— 2) surface. Surface Science, 1998, 397, 421-425.	1.9	10
105	Reconstruction dependent adsorption of C60 on GaAs(111)B. Surface Science, 1998, 405, 21-26.	1.9	8
106	Translation, rotation and removal of C60 on Si(100)-2 Ã— 1 using anisotropic molecular manipulation. Surface Science, 1998, 407, 27-35.	1.9	76
107	Functionalized fullerenes on silicon surfaces. Surface Science, 1998, 405, L526-L531.	1.9	8
108	Optical anisotropy in arrow-shaped InAs quantum dots. Physical Review B, 1998, 57, R6815-R6818.	3.2	80

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109	A self-assembled InAs quantum dot used as a quantum microscope looking into a two-dimensional electron gas. Physics-Uspekhi, 1998, 41, 122-125.	2.2	13
110	Probing the interactions of on Si(100)- using anisotropic molecular manipulation. Semiconductor Science and Technology, 1998, 13, A47-A50.	2.0	1
111	C60-terminated Si surfaces: Charge transfer, bonding, and chemical passivation. Physical Review B, 1998, 57, 362-369.	3.2	69
112	Molecular scale alignment strategies: An investigation of Ag adsorption on patterned fullerene layers. Applied Physics Letters, 1997, 71, 2937-2939.	3.3	12
113	Disorder-Order Ripening ofC60Islands. Physical Review Letters, 1997, 78, 2588-2591.	7.8	10
114	Nanometer scale patterning of C60 multilayers using molecular manipulation. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1997, 15, 1478-1481.	2.1	8
115	Double domain ordering and selective removal ofC60onAg/Si(111)âˆ'(3Ã—3)R30Â°. Physical Review B, 1997, 56, R1704-R1707.	3.2	53
116	Absence of long-range ordered reconstruction on the GaAs(311)A surface. Physical Review B, 1997, 55, 15397-15400.	3.2	24
117	Investigation and Manipulation of C60on a Si Surface Using a Scanning Tunneling Microscope. Fullerenes, Nanotubes, and Carbon Nanostructures, 1997, 5, 769-780.	0.6	1
118	Measurement and manipulation of Mn clusters on clean and fullerene terminated Si(111)-7Ã—7. Applied Physics Letters, 1997, 70, 2114-2116.	3.3	25
119	Adsorption of Sb on GaAs(111)B studied by photoemission and low energy electron diffraction. Surface Science, 1997, 377-379, 130-134.	1.9	5
120	Structural and optical characterization of self-assembled InAs-GaAs quantum dots grown on high index surfaces. Microelectronics Journal, 1997, 28, 933-938.	2.0	45
121	Resonant magnetotunneling through individual self-assembled InAs quantum dots. Superlattices and Microstructures, 1997, 21, 255-258.	3.1	8
122	Room temperature manipulation of C60 molecules on a Si surface. Surface Science, 1996, 361-362, 878-881.	1.9	25
123	Sb-induced GaAs(111)B surface reconstructions: success and failure of the electron-counting rule. Surface Science, 1996, 365, L663-L668.	1.9	14
124	Resonant magnetotunneling through individual self-assembled InAs quantum dots. Physical Review B, 1996, 54, 16401-16404.	3.2	114
125	Passivation of Si(111)â€7Ã—7 by a C60 monolayer. Applied Physics Letters, 1996, 69, 506-508.	3.3	22
126	Adsorbed and substituted Sb dimers on GaAs(001). Physical Review B, 1996, 53, R16148-R16151.	3.2	32

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127	STM investigation and manipulation of molecules adsorbed on an Si(111) surface. Semiconductor Science and Technology, 1996, 11, 1563-1568.	2.0	4
128	(2Ã—4)/c(2Ã—8) to (4Ã—2)/c(8Ã—2) transition on GaAs(001) surfaces. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1996, 14, 943.	1.6	26
129	C60 manipulation and cluster formation using a scanning tunneling microscope. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1996, 14, 1596.	1.6	17
130	Chemical bonding and structure of the sulfur treated GaAs(111)B surface. Applied Physics Letters, 1995, 67, 383-385.	3.3	24
131	Manipulation of C60 molecules on a Si surface. Applied Physics Letters, 1995, 67, 1075-1077.	3.3	135
132	Double chain structures on the Sb-terminated GaAs(111)Bsurface. Physical Review B, 1995, 51, 7950-7953.	3.2	17
133	Atomic scale modifications of GaAs using a scanning tunneling microscope. Applied Physics Letters, 1995, 66, 1515-1517.	3.3	7
134	Photoelectron core-level spectroscopy and scanning-tunneling-microscopy study of the sulfur-treated GaAs(100) surface. Physical Review B, 1994, 50, 14237-14245.	3.2	82
135	Chemical and structural studies of the interactions of molecular sulfur with the GaAs(111)A and GaAs(111)B surfaces. Surface Science, 1994, 317, 73-83.	1.9	35
136	Vacancy creation on the Si(111)â˜7 Ã— 7 surface due to sulfur desorption studied by scanning tunneling microscopy. Surface Science, 1993, 297, L113-L118.	1.9	11
137	Wave function imaging of the PbS(001) surface with scanning tunneling microscopy. Surface Science, 1993, 287-288, 1106-1111.	1.9	9
138	Scanning tunneling microscopy study of the ambient oxidation of passivated GaAs(100) surfaces. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1993, 11, 1099-1105.	2.1	8
139	Sulfur-inducedc(4Ã—4) reconstruction of the Si(001) surface studied by scanning tunneling microscopy. Physical Review B, 1993, 47, 15950-15953.	3.2	45
140	Atomic resolved material displacement on graphite surfaces by scanning tunnelling microscopy. Applied Physics Letters, 1992, 60, 2338-2340.	3.3	20
141	An investigation of the early stages of native oxide growth on chemically etched and sulfur-treated GaAs(100) and InP(100) surfaces by scanning tunnelling microscopy. Ultramicroscopy, 1992, 42-44, 956-961.	1.9	12