

# Michael F Crommie

## List of Publications by Year in descending order

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106  
papers

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31976

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112  
docs citations

112  
times ranked

19604  
citing authors

#	ARTICLE	IF	CITATIONS
1	Tunable Orbital Ferromagnetism at Noninteger Filling of a Moiré Superlattice. Nano Letters, 2022, 22, 238-245.	9.1	17
2	Large-gap insulating dimer ground state in monolayer IrTe <sub>2</sub> . Nature Communications, 2022, 13, 906.	12.8	11
3	Charge transport in topological graphene nanoribbons and nanoribbon heterostructures. Physical Review B, 2022, 105, .	3.2	10
4	Imaging gate-tunable Tomonaga-Luttinger liquids in 1H-MoSe <sub>2</sub> mirror twin boundaries. Nature Materials, 2022, 21, 748-753.	27.5	17
5	Kirigami Engineering of Suspended Graphene Transducers. Nano Letters, 2022, 22, 5301-5306.	9.1	5
6	Tuning colour centres at a twisted hexagonal boron nitride interface. Nature Materials, 2022, 21, 896-902.	27.5	31
7	Imaging moiré flat bands in three-dimensional reconstructed WSe <sub>2</sub> /WS <sub>2</sub> superlattices. Nature Materials, 2021, 20, 945-950.	27.5	118
8	Local Electronic Properties of Coherent Single-Layer WS <sub>2</sub> /WSe <sub>2</sub> Lateral Heterostructures. Nano Letters, 2021, 21, 2363-2369.	9.1	17
9	Synergetic Bottom-Up Synthesis of Graphene Nanoribbons by Matrix-Assisted Direct Transfer. Journal of the American Chemical Society, 2021, 143, 4174-4178.	13.7	23
10	Visualizing delocalized correlated electronic states in twisted double bilayer graphene. Nature Communications, 2021, 12, 2516.	12.8	30
11	Graphene Electric Field Sensor Enables Single Shot Label-Free Imaging of Bioelectric Potentials. Nano Letters, 2021, 21, 4944-4949.	9.1	6
12	Evidence for quantum spin liquid behaviour in single-layer 1T-TaSe <sub>2</sub> from scanning tunnelling microscopy. Nature Physics, 2021, 17, 1154-1161.	16.7	74
13	Imaging local discharge cascades for correlated electrons in WS <sub>2</sub> /WSe <sub>2</sub> moiré superlattices. Nature Physics, 2021, 17, 1114-1119.	16.7	36
14	Bottom-Up Synthesized Nanoporous Graphene Transistors. Advanced Functional Materials, 2021, 31, 2103798.	14.9	15
15	Imaging two-dimensional generalized Wigner crystals. Nature, 2021, 597, 650-654.	27.8	147
16	Transfer-Free Synthesis of Atomically Precise Graphene Nanoribbons on Insulating Substrates. ACS Nano, 2021, 15, 2635-2642.	14.6	27
17	Imaging Reconfigurable Molecular Concentration on a Graphene Field-Effect Transistor. Nano Letters, 2021, 21, 8770-8776.	9.1	6
18	Imaging Quantum Interference in Stadium-Shaped Monolayer and Bilayer Graphene Quantum Dots. Nano Letters, 2021, 21, 8993-8998.	9.1	7

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19	Rationally Designed Topological Quantum Dots in Bottom-Up Graphene Nanoribbons. ACS Nano, 2021, 15, 20633-20642.	14.6	22
20	Bottom-Up Synthesized Nanoporous Graphene Transistors (Adv. Funct. Mater. 47/2021). Advanced Functional Materials, 2021, 31, 2170348.	14.9	2
21	Pseudo-atomic orbital behavior in graphene nanoribbons with four-membered rings. Science Advances, 2021, 7, eabl5892.	10.3	11
22	Revealing the Local Electronic Structure of a Single-Layer Covalent Organic Framework through Electronic Decoupling. Nano Letters, 2020, 20, 963-970.	9.1	28
23	Strong correlations and orbital texture in single-layer 1T-TaSe <sub>2</sub> . Nature Physics, 2020, 16, 218-224.	16.7	126
24	Graphene-Sealed Flow Cells for <i>In Situ</i> Transmission Electron Microscopy of Liquid Samples. ACS Nano, 2020, 14, 9637-9643.	14.6	29
25	Tunneling Spectroscopy in Carbon Nanotube-Hexagonal Boron Nitride-Carbon Nanotube Heterojunctions. Nano Letters, 2020, 20, 6712-6718.	9.1	6
26	Structural and electronic switching of a single crystal 2D metal-organic framework prepared by chemical vapor deposition. Nature Communications, 2020, 11, 5524.	12.8	37
27	Inducing metallicity in graphene nanoribbons via zero-mode superlattices. Science, 2020, 369, 1597-1603.	12.6	127
28	Mechanism of Formation of Benzotrithiophene-Based Covalent Organic Framework Monolayers on Coinage-Metal Surfaces: C-C Coupling Selectivity and Monomer-Metal Interactions. Chemistry of Materials, 2020, 32, 10688-10696.	6.7	6
29	Ultrahigh-resolution scanning microwave impedance microscopy of moiré lattices and superstructures. Science Advances, 2020, 6, .	10.3	23
30	Mott and generalized Wigner crystal states in WSe <sub>2</sub> /WS <sub>2</sub> moiré superlattices. Nature, 2020, 579, 359-363.	27.8	536
31	Bottom-up Assembly of Nanoporous Graphene with Emergent Electronic States. Journal of the American Chemical Society, 2020, 142, 13507-13514.	13.7	77
32	Soliton-Dependent Electronic Transport across Bilayer Graphene Domain Wall. Nano Letters, 2020, 20, 5936-5942.	9.1	6
33	Reversible writing of high-mobility and high-carrier-density doping patterns in two-dimensional van der Waals heterostructures. Nature Electronics, 2020, 3, 99-105.	26.0	64
34	A molecular shift register made using tunable charge patterns in one-dimensional molecular arrays on graphene. Nature Electronics, 2020, 3, 598-603.	26.0	12
35	Manipulating Topological Domain Boundaries in the Single-Layer Quantum Spin Hall Insulator 1T'-WSe <sub>2</sub> . Nano Letters, 2019, 19, 5634-5639.	9.1	30
36	Identifying substitutional oxygen as a prolific point defect in monolayer transition metal dichalcogenides. Nature Communications, 2019, 10, 3382.	12.8	196

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37	Frustrated supercritical collapse in tunable charge arrays on graphene. Nature Communications, 2019, 10, 477.	12.8	23
38	Simulating the Nanomechanical Response of Cyclooctatetraene Molecules on a Graphene Device. ACS Nano, 2019, 13, 1713-1718.	14.6	6
39	Length-Dependent Evolution of Type II Heterojunctions in Bottom-Up-Synthesized Graphene Nanoribbons. Nano Letters, 2019, 19, 3221-3228.	9.1	41
40	Catalyst-Free and Morphology-Controlled Growth of 2D Perovskite Nanowires for Polarized Light Detection. Advanced Optical Materials, 2019, 7, 1900039.	7.3	35
41	Geometry and electronic structure of iridium adsorbed on graphene. Physical Review B, 2019, 99, .	3.2	14
42	Local Electronic Structure of Molecular Heterojunctions in a Single-Layer 2D Covalent Organic Framework. Advanced Materials, 2019, 31, e1805941.	21.0	74
43	Hierarchical On-Surface Synthesis of Graphene Nanoribbon Heterojunctions. ACS Nano, 2018, 12, 2193-2200.	14.6	75
44	Local Electronic Structure of a Single-Layer Porphyrin-Containing Covalent Organic Framework. ACS Nano, 2018, 12, 385-391.	14.6	68
45	Persistent Charge-Density-Wave Order in Single-Layer TaSe <sub>2</sub> . Nano Letters, 2018, 18, 689-694.	9.1	108
46	Microscopy of hydrogen and hydrogen-vacancy defect structures on graphene devices. Physical Review B, 2018, 98, .	3.2	5
47	Concentration Dependence of Dopant Electronic Structure in Bottom-up Graphene Nanoribbons. Nano Letters, 2018, 18, 3550-3556.	9.1	31
48	Visualization and Control of Single-Electron Charging in Bilayer Graphene Quantum Dots. Nano Letters, 2018, 18, 5104-5110.	9.1	41
49	Observation of topologically protected states at crystalline phase boundaries in single-layer WSe <sub>2</sub> . Nature Communications, 2018, 9, 3401.	12.8	107
50	Topological band engineering of graphene nanoribbons. Nature, 2018, 560, 204-208.	27.8	452
51	Imaging structural transitions in organometallic molecules on Ag(100) for solar thermal energy storage. Journal of the Korean Physical Society, 2017, 70, 586-590.	0.7	1
52	Coupled One-Dimensional Plasmons and Two-Dimensional Phonon Polaritons in Hybrid Silver Nanowire/Silicon Carbide Structures. Nano Letters, 2017, 17, 3662-3667.	9.1	15
53	Molecular Arrangement and Charge Transfer in C <sub>60</sub> /Graphene Heterostructures. ACS Nano, 2017, 11, 4686-4693.	14.6	60
54	Atomically precise graphene nanoribbon heterojunctions from a single molecular precursor. Nature Nanotechnology, 2017, 12, 1077-1082.	31.5	162

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55	Observation of ultralong valley lifetime in WSe <sub>2</sub> /MoS <sub>2</sub> heterostructures. Science Advances, 2017, 3, e1700518.	10.3	226
56	Graphene: Preventing Thin Film Dewetting via Graphene Capping (Adv. Mater. 36/2017). Advanced Materials, 2017, 29, .	21.0	0
57	Short-channel field-effect transistors with 9-atom and 13-atom wide graphene nanoribbons. Nature Communications, 2017, 8, 633.	12.8	312
58	Preventing Thin Film Dewetting via Graphene Capping. Advanced Materials, 2017, 29, 1701536.	21.0	23
59	Spatially resolving density-dependent screening around a single charged atom in graphene. Physical Review B, 2017, 95, .	3.2	16
60	Iodine versus Bromine Functionalization for Bottom-Up Graphene Nanoribbon Growth: Role of Diffusion. Journal of Physical Chemistry C, 2017, 121, 18490-18495.	3.1	31
61	Quantum spin Hall state in monolayer 1T'-WTe <sub>2</sub> . Nature Physics, 2017, 13, 683-687.	16.7	596
62	Sequence-defined oligo(ortho-arylene) foldamers derived from the benzannulation of ortho(arylene ethynylene)s. Chemical Science, 2016, 7, 6357-6364.	7.4	40
63	Imaging electric field dynamics with graphene optoelectronics. Nature Communications, 2016, 7, 13704.	12.8	14
64	Charge density wave order in 1D mirror twin boundaries of single-layer MoSe <sub>2</sub> . Nature Physics, 2016, 12, 751-756.	16.7	209
65	Imaging single-molecule reaction intermediates stabilized by surface dissipation and entropy. Nature Chemistry, 2016, 8, 678-683.	13.6	130
66	Selenium capped monolayer NbSe <sub>2</sub> for two-dimensional superconductivity studies. Physica Status Solidi (B): Basic Research, 2016, 253, 2396-2399.	1.5	17
67	Noncovalent Dimerization after Eneidyne Cyclization on Au(111). Journal of the American Chemical Society, 2016, 138, 10963-10967.	13.7	15
68	Tuning charge and correlation effects for a single molecule on a graphene device. Nature Communications, 2016, 7, 13553.	12.8	82
69	Imaging electrostatically confined Dirac fermions in graphene quantum dots. Nature Physics, 2016, 12, 1032-1036.	16.7	176
70	Soliton-dependent plasmon reflection at bilayer graphene domain walls. Nature Materials, 2016, 15, 840-844.	27.5	124
71	Bottom-Up Synthesis of N = 13 Sulfur-Doped Graphene Nanoribbons. Journal of Physical Chemistry C, 2016, 120, 2684-2687.	3.1	119
72	Electronic Structure, Surface Doping, and Optical Response in Epitaxial WSe <sub>2</sub> Thin Films. Nano Letters, 2016, 16, 2485-2491.	9.1	147

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73	Nanoscale Control of Rewriteable Doping Patterns in Pristine Graphene/Boron Nitride Heterostructures. <i>Nano Letters</i> , 2016, 16, 1620-1625.	9.1	60
74	Characterization of collective ground states in single-layer NbSe <sub>2</sub> . <i>Nature Physics</i> , 2016, 12, 92-97.	16.7	536
75	Local spectroscopy of moiré-induced electronic structure in gate-tunable twisted bilayer graphene. <i>Physical Review B</i> , 2015, 92, .	3.2	114
76	Fabrication of Gate-tunable Graphene Devices for Scanning Tunneling Microscopy Studies with Coulomb Impurities. <i>Journal of Visualized Experiments</i> , 2015, , e52711.	0.3	7
77	Closing the Nanographene Gap: Surface-Assisted Synthesis of Peripentacene from 6,6-Bipentacene Precursors. <i>Angewandte Chemie - International Edition</i> , 2015, 54, 15143-15146.	13.8	124
78	Molecular bandgap engineering of bottom-up synthesized graphene nanoribbon heterojunctions. <i>Nature Nanotechnology</i> , 2015, 10, 156-160.	31.5	414
79	Site-Specific Substitutional Boron Doping of Semiconducting Armchair Graphene Nanoribbons. <i>Journal of the American Chemical Society</i> , 2015, 137, 8872-8875.	13.7	213
80	Probing the Role of Interlayer Coupling and Coulomb Interactions on Electronic Structure in Few-Layer MoSe <sub>2</sub> Nanostructures. <i>Nano Letters</i> , 2015, 15, 2594-2599.	9.1	136
81	Molecular Self-Assembly in a Poorly Screened Environment: F <sub>4</sub> TCNQ on Graphene/BN. <i>ACS Nano</i> , 2015, 9, 12168-12173.	14.6	45
82	Characterization and manipulation of individual defects in insulating hexagonal boron nitride using scanning tunnelling microscopy. <i>Nature Nanotechnology</i> , 2015, 10, 949-953.	31.5	192
83	Direct Growth of Single- and Few-Layer MoS <sub>2</sub> on h-BN with Preferred Relative Rotation Angles. <i>Nano Letters</i> , 2015, 15, 6324-6331.	9.1	172
84	Giant bandgap renormalization and excitonic effects in a monolayer transition metal dichalcogenide semiconductor. <i>Nature Materials</i> , 2014, 13, 1091-1095.	27.5	1,470
85	Imaging and Tuning Molecular Levels at the Surface of a Gated Graphene Device. <i>ACS Nano</i> , 2014, 8, 5395-5401.	14.6	39
86	Statistical Characterization of High Angle Graphene Grain Boundaries at Atomic Resolution. <i>Microscopy and Microanalysis</i> , 2014, 20, 1056-1057.	0.4	0
87	Bottom-up graphene nanoribbon field-effect transistors. <i>Applied Physics Letters</i> , 2013, 103, .	3.3	218
88	Observing Atomic Collapse Resonances in Artificial Nuclei on Graphene. <i>Science</i> , 2013, 340, 734-737.	12.6	223
89	Tuning the Band Gap of Graphene Nanoribbons Synthesized from Molecular Precursors. <i>ACS Nano</i> , 2013, 7, 6123-6128.	14.6	510
90	Intermolecular interactions and substrate effects for an adamantane monolayer on a Au(111) surface. <i>Physical Review B</i> , 2013, 88, .	3.2	6

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91	Polymer-free, low tension graphene mechanical resonators. <i>Physica Status Solidi - Rapid Research Letters</i> , 2013, 7, 1064-1066.	2.4	7
92	Mapping Dirac quasiparticles near a single Coulomb impurity on graphene. <i>Nature Physics</i> , 2012, 8, 653-657.	16.7	111
93	High-Resolution EM of Colloidal Nanocrystal Growth Using Graphene Liquid Cells. <i>Science</i> , 2012, 336, 61-64.	12.6	989
94	Local Electronic Properties of Graphene on a BN Substrate via Scanning Tunneling Microscopy. <i>Nano Letters</i> , 2011, 11, 2291-2295.	9.1	539
95	Drude conductivity of Dirac fermions in graphene. <i>Physical Review B</i> , 2011, 83, .	3.2	447
96	Gate-controlled ionization and screening of cobalt adatoms on a graphene surface. <i>Nature Physics</i> , 2011, 7, 43-47.	16.7	233
97	Spatially resolving edge states of chiral graphene nanoribbons. <i>Nature Physics</i> , 2011, 7, 616-620.	16.7	628
98	Observation of Carrier-Density-Dependent Many-Body Effects in Graphene via Tunneling Spectroscopy. <i>Physical Review Letters</i> , 2010, 104, 036805.	7.8	106
99	Optical spectroscopy of bilayer graphene. <i>Physica Status Solidi (B): Basic Research</i> , 2010, 247, 2931-2934.	1.5	3
100	A direct transfer of layer-area graphene. <i>Applied Physics Letters</i> , 2010, 96, .	3.3	335
101	Direct observation of a widely tunable bandgap in bilayer graphene. <i>Nature</i> , 2009, 459, 820-823.	27.8	3,148
102	Origin of spatial charge inhomogeneity in graphene. <i>Nature Physics</i> , 2009, 5, 722-726.	16.7	630
103	Giant phonon-induced conductance in scanning tunnelling spectroscopy of gate-tunable graphene. <i>Nature Physics</i> , 2008, 4, 627-630.	16.7	404
104	Measuring reversible photomechanical switching rates for a molecule at a surface. <i>Applied Physics Letters</i> , 2008, 92, .	3.3	55
105	Scanning tunneling spectroscopy of inhomogeneous electronic structure in monolayer and bilayer graphene on SiC. <i>Applied Physics Letters</i> , 2007, 91, .	3.3	238
106	PHYSICS: Manipulating Magnetism in a Single Molecule. <i>Science</i> , 2005, 309, 1501-1502.	12.6	25