Michael F Crommie

List of Publications by Year in Descending Order

100 papers	13,657 citations	45 h-index	112 g-index
112 ext. papers	15,936 ext. citations	15.5 avg, IF	6.1 L-index

#	Paper	IF	Citations
100	Large-gap insulating dimer ground state in monolayer IrTe.. *Nature Communications*, **2022**, 13, 906	17.4	1
99	Bottom-Up Synthesized Nanoporous Graphene Transistors (Adv. Funct. Mater. 47/2021). *Advanced Functional Materials*, **2021**, 31, 2170348	15.6	1
98	Imaging Reconfigurable Molecular Concentration on a Graphene Field-Effect Transistor. *Nano Letters*, **2021**, 21, 8770-8776	11.5	1
97	Imaging Quantum Interference in Stadium-Shaped Monolayer and Bilayer Graphene Quantum Dots. *Nano Letters*, **2021**, 21, 8993-8998	11.5	0
96	Local Electronic Properties of Coherent Single-Layer WS/WSe Lateral Heterostructures. *Nano Letters*, **2021**, 21, 2363-2369	11.5	4
95	Synergetic Bottom-Up Synthesis of Graphene Nanoribbons by Matrix-Assisted Direct Transfer. *Journal of the American Chemical Society*, **2021**, 143, 4174-4178	16.4	4
94	Visualizing delocalized correlated electronic states in twisted double bilayer graphene. *Nature Communications*, **2021**, 12, 2516	17.4	7
93	Graphene Electric Field Sensor Enables Single Shot Label-Free Imaging of Bioelectric Potentials. *Nano Letters*, **2021**, 21, 4944-4949	11.5	0
92	Imaging moir flat bands in three-dimensional reconstructed WSe/WS superlattices. *Nature Materials*, **2021**, 20, 945-950	27	41
91	Bottom-Up Synthesized Nanoporous Graphene Transistors. *Advanced Functional Materials*, **2021**, 31, 2103798	15.6	1
90	Imaging two-dimensional generalized Wigner crystals. *Nature*, **2021**, 597, 650-654	50.4	19
89	Transfer-Free Synthesis of Atomically Precise Graphene Nanoribbons on Insulating Substrates. *ACS Nano*, **2021**, 15, 2635-2642	16.7	4
88	Pseudo-atomic orbital behavior in graphene nanoribbons with four-membered rings.. *Science Advances*, **2021**, 7, eabl5892	14.3	1
87	Mechanism of Formation of Benzotrithiophene-Based Covalent Organic Framework Monolayers on Coinage-Metal Surfaces: C Coupling Selectivity and Monomer Metal Interactions. *Chemistry of Materials*, **2020**, 32, 10688-10696	9.6	3
86	Ultrahigh-resolution scanning microwave impedance microscopy of moir lattices and superstructures. *Science Advances*, **2020**, 6,	14.3	11
85	Mott and generalized Wigner crystal states in WSe/WS moir superlattices. *Nature*, **2020**, 579, 359-363	50.4	212
84	Bottom-up Assembly of Nanoporous Graphene with Emergent Electronic States. *Journal of the American Chemical Society*, **2020**, 142, 13507-13514	16.4	29

83	Soliton-Dependent Electronic Transport across Bilayer Graphene Domain Wall. *Nano Letters*, **2020**, 20, 5936-5942	11.5	4
82	Reversible writing of high-mobility and high-carrier-density doping patterns in two-dimensional van der Waals heterostructures. *Nature Electronics*, **2020**, 3, 99-105	28.4	32
81	A molecular shift register made using tunable charge patterns in one-dimensional molecular arrays on graphene. *Nature Electronics*, **2020**, 3, 598-603	28.4	3
80	Revealing the Local Electronic Structure of a Single-Layer Covalent Organic Framework through Electronic Decoupling. *Nano Letters*, **2020**, 20, 963-970	11.5	10
79	Strong correlations and orbital texture in single-layer 1T-TaSe2. *Nature Physics*, **2020**, 16, 218-224	16.2	56
78	Graphene-Sealed Flow Cells for Transmission Electron Microscopy of Liquid Samples. *ACS Nano*, **2020**, 14, 9637-9643	16.7	13
77	Tunneling Spectroscopy in Carbon Nanotube-Hexagonal Boron Nitride-Carbon Nanotube Heterojunctions. *Nano Letters*, **2020**, 20, 6712-6718	11.5	5
76	Structural and electronic switching of a single crystal 2D metal-organic framework prepared by chemical vapor deposition. *Nature Communications*, **2020**, 11, 5524	17.4	13
75	Inducing metallicity in graphene nanoribbons via zero-mode superlattices. *Science*, **2020**, 369, 1597-1603	33.3	46
74	Frustrated supercritical collapse in tunable charge arrays on graphene. *Nature Communications*, **2019**, 10, 477	17.4	13
73	Simulating the Nanomechanical Response of Cyclooctatetraene Molecules on a Graphene Device. *ACS Nano*, **2019**, 13, 1713-1718	16.7	4
72	Length-Dependent Evolution of Type II Heterojunctions in Bottom-Up-Synthesized Graphene Nanoribbons. *Nano Letters*, **2019**, 19, 3221-3228	11.5	25
71	Catalyst-Free and Morphology-Controlled Growth of 2D Perovskite Nanowires for Polarized Light Detection. *Advanced Optical Materials*, **2019**, 7, 1900039	8.1	18
70	Geometry and electronic structure of iridium adsorbed on graphene. *Physical Review B*, **2019**, 99,	3.3	8
69	Manipulating Topological Domain Boundaries in the Single-Layer Quantum Spin Hall Insulator 1T′-WSe. *Nano Letters*, **2019**, 19, 5634-5639	11.5	18
68	Identifying substitutional oxygen as a prolific point defect in monolayer transition metal dichalcogenides. *Nature Communications*, **2019**, 10, 3382	17.4	117
67	Local Electronic Structure of Molecular Heterojunctions in a Single-Layer 2D Covalent Organic Framework. *Advanced Materials*, **2019**, 31, e1805941	24	35
66	Hierarchical On-Surface Synthesis of Graphene Nanoribbon Heterojunctions. *ACS Nano*, **2018**, 12, 2193-2200	14.7	55

65	Local Electronic Structure of a Single-Layer Porphyrin-Containing Covalent Organic Framework. *ACS Nano*, **2018**, 12, 385-391	16.7	41
64	Persistent Charge-Density-Wave Order in Single-Layer TaSe. *Nano Letters*, **2018**, 18, 689-694	11.5	72
63	Visualization and Control of Single-Electron Charging in Bilayer Graphene Quantum Dots. *Nano Letters*, **2018**, 18, 5104-5110	11.5	27
62	Observation of topologically protected states at crystalline phase boundaries in single-layer WSe. *Nature Communications*, **2018**, 9, 3401	17.4	68
61	Topological band engineering of graphene nanoribbons. *Nature*, **2018**, 560, 204-208	50.4	287
60	Microscopy of hydrogen and hydrogen-vacancy defect structures on graphene devices. *Physical Review B*, **2018**, 98,	3.3	3
59	Concentration Dependence of Dopant Electronic Structure in Bottom-up Graphene Nanoribbons. *Nano Letters*, **2018**, 18, 3550-3556	11.5	19
58	Imaging structural transitions in organometallic molecules on Ag(100) for solar thermal energy storage. *Journal of the Korean Physical Society*, **2017**, 70, 586-590	0.6	
57	Coupled One-Dimensional Plasmons and Two-Dimensional Phonon Polaritons in Hybrid Silver Nanowire/Silicon Carbide Structures. *Nano Letters*, **2017**, 17, 3662-3667	11.5	9
56	Molecular Arrangement and Charge Transfer in C/Graphene Heterostructures. *ACS Nano*, **2017**, 11, 4686-4693	13.7	47
55	Atomically precise graphene nanoribbon heterojunctions from a single molecular precursor. *Nature Nanotechnology*, **2017**, 12, 1077-1082	28.7	118
54	Observation of ultralong valley lifetime in WSe/MoS heterostructures. *Science Advances*, **2017**, 3, e1700518	14.3	160
53	Short-channel field-effect transistors with 9-atom and 13-atom wide graphene nanoribbons. *Nature Communications*, **2017**, 8, 633	17.4	215
52	Preventing Thin Film Dewetting via Graphene Capping. *Advanced Materials*, **2017**, 29, 1701536	24	20
51	Spatially resolving density-dependent screening around a single charged atom in graphene. *Physical Review B*, **2017**, 95,	3.3	12
50	Iodine versus Bromine Functionalization for Bottom-Up Graphene Nanoribbon Growth: Role of Diffusion. *Journal of Physical Chemistry C*, **2017**, 121, 18490-18495	3.8	26
49	Quantum spin Hall state in monolayer 1T′WTe2. *Nature Physics*, **2017**, 13, 683-687	16.2	399
48	Tuning charge and correlation effects for a single molecule on a graphene device. *Nature Communications*, **2016**, 7, 13553	17.4	66

47	Imaging electrostatically confined Dirac fermions in graphene quantum dots. *Nature Physics*, **2016**, 12, 1032-1036	16.2	131
46	Soliton-dependent plasmon reflection at bilayer graphene domain ́walls. *Nature Materials*, **2016**, 15, 840–47	27	92
45	Bottom-Up Synthesis of N = 13 Sulfur-Doped Graphene Nanoribbons. *Journal of Physical Chemistry C*, **2016**, 120, 2684-2687	3.8	95
44	Electronic Structure, Surface Doping, and Optical Response in Epitaxial WSe2 Thin Films. *Nano Letters*, **2016**, 16, 2485-91	11.5	111
43	Nanoscale Control of Rewriteable Doping Patterns in Pristine Graphene/Boron Nitride Heterostructures. *Nano Letters*, **2016**, 16, 1620-5	11.5	42
42	Characterization of collective ground states in single-layer NbSe2. *Nature Physics*, **2016**, 12, 92-97	16.2	376
41	Sequence-defined oligo(-arylene) foldamers derived from the benzannulation of (arylene ethynylene)s. *Chemical Science*, **2016**, 7, 6357-6364	9.4	31
40	Imaging electric field dynamics with graphene optoelectronics. *Nature Communications*, **2016**, 7, 13704	17.4	11
39	Charge density wave order in 1D mirror twin boundaries of single-layer MoSe2. *Nature Physics*, **2016**, 12, 751-756	16.2	156
38	Imaging single-molecule reaction intermediates stabilized by surface dissipation and entropy. *Nature Chemistry*, **2016**, 8, 678-83	17.6	102
37	Selenium capped monolayer NbSe2 for two-dimensional superconductivity studies. *Physica Status Solidi (B): Basic Research*, **2016**, 253, 2396-2399	1.3	11
36	Noncovalent Dimerization after Enediyne Cyclization on Au(111). *Journal of the American Chemical Society*, **2016**, 138, 10963-7	16.4	14
35	Molecular bandgap engineering of bottom-up synthesized graphene nanoribbon heterojunctions. *Nature Nanotechnology*, **2015**, 10, 156-60	28.7	340
34	Site-Specific Substitutional Boron Doping of Semiconducting Armchair Graphene Nanoribbons. *Journal of the American Chemical Society*, **2015**, 137, 8872-5	16.4	177
33	Probing the role of interlayer coupling and coulomb interactions on electronic structure in few-layer MoSe□anostructures. *Nano Letters*, **2015**, 15, 2594-9	11.5	110
32	Molecular Self-Assembly in a Poorly Screened Environment: F4TCNQ on Graphene/BN. *ACS Nano*, **2015**, 9, 12168-73	16.7	42
31	Characterization and manipulation of individual defects in insulating hexagonal boron nitride using scanning tunnelling microscopy. *Nature Nanotechnology*, **2015**, 10, 949-53	28.7	148
30	Direct Growth of Single- and Few-Layer MoS2 on h-BN with Preferred Relative Rotation Angles. *Nano Letters*, **2015**, 15, 6324-31	11.5	152

29	Local spectroscopy of moiré-induced electronic structure in gate-tunable twisted bilayer graphene. *Physical Review B*, **2015**, 92,	3.3	86
28	Fabrication of Gate-tunable Graphene Devices for Scanning Tunneling Microscopy Studies with Coulomb Impurities. *Journal of Visualized Experiments*, **2015**, e52711	1.6	6
27	Closing the Nanographene Gap: Surface-Assisted Synthesis of Peripentacene from 6,6?-Bipentacene Precursors. *Angewandte Chemie*, **2015**, 127, 15358-15361	3.6	27
26	Closing the Nanographene Gap: Surface-Assisted Synthesis of Peripentacene from 6,6′-Bipentacene Precursors. *Angewandte Chemie - International Edition*, **2015**, 54, 15143-6	16.4	96
25	Giant bandgap renormalization and excitonic effects in a monolayer transition metal dichalcogenide semiconductor. *Nature Materials*, **2014**, 13, 1091-5	27	1150
24	Imaging and tuning molecular levels at the surface of a gated graphene device. *ACS Nano*, **2014**, 8, 5395-401	13.7	31
23	Statistical Characterization of High Angle Graphene Grain Boundaries at Atomic Resolution. *Microscopy and Microanalysis*, **2014**, 20, 1056-1057	0.5	
22	Bottom-up graphene nanoribbon field-effect transistors. *Applied Physics Letters*, **2013**, 103, 253114	3.4	178
21	Observing atomic collapse resonances in artificial nuclei on graphene. *Science*, **2013**, 340, 734-7	33.3	175
20	Tuning the band gap of graphene nanoribbons synthesized from molecular precursors. *ACS Nano*, **2013**, 7, 6123-8	16.7	425
19	Intermolecular interactions and substrate effects for an adamantane monolayer on a Au(111) surface. *Physical Review B*, **2013**, 88,	3.3	4
18	Polymer-free, low tension graphene mechanical resonators. *Physica Status Solidi - Rapid Research Letters*, **2013**, 7, 1064-1066	2.5	5
17	Mapping Dirac quasiparticles near a single Coulomb impurity on graphene. *Nature Physics*, **2012**, 8, 653-657	16.2	99
16	High-resolution EM of colloidal nanocrystal growth using graphene liquid cells. *Science*, **2012**, 336, 61-4	33.3	829
15	Local electronic properties of graphene on a BN substrate via scanning tunneling microscopy. *Nano Letters*, **2011**, 11, 2291-5	11.5	475
14	Drude conductivity of Dirac fermions in graphene. *Physical Review B*, **2011**, 83,	3.3	376
13	Gate-controlled ionization and screening of cobalt adatoms on a graphene surface. *Nature Physics*, **2011**, 7, 43-47	16.2	198
12	Spatially resolving edge states of chiral graphene nanoribbons. *Nature Physics*, **2011**, 7, 616-620	16.2	557

11	A direct transfer of layer-area graphene. *Applied Physics Letters*, **2010**, 96, 113102	3.4	300
10	Observation of carrier-density-dependent many-body effects in graphene via tunneling spectroscopy. *Physical Review Letters*, **2010**, 104, 036805	7.4	96
9	Optical spectroscopy of bilayer graphene. *Physica Status Solidi (B): Basic Research*, **2010**, 247, 2931-2934	1.3	3
8	Direct observation of a widely tunable bandgap in bilayer graphene. *Nature*, **2009**, 459, 820-3	50.4	2751
7	Origin of spatial charge inhomogeneity in graphene. *Nature Physics*, **2009**, 5, 722-726	16.2	574
6	Giant phonon-induced conductance in scanning tunnelling spectroscopy of gate-tunable graphene. *Nature Physics*, **2008**, 4, 627-630	16.2	353
5	Measuring reversible photomechanical switching rates for a molecule at a surface. *Applied Physics Letters*, **2008**, 92, 123107	3.4	52
4	Scanning tunneling spectroscopy of inhomogeneous electronic structure in monolayer and bilayer graphene on SiC. *Applied Physics Letters*, **2007**, 91, 122102	3.4	218
3	Physics. Manipulating magnetism in a single molecule. *Science*, **2005**, 309, 1501-2	33.3	21
2	Evidence for quantum spin liquid behaviour in single-layer 1T-TaSe2 from scanning tunnelling microscopy. *Nature Physics*,	16.2	13
1	Imaging local discharge cascades for correlated electrons in WS2/WSe2 moir superlattices. *Nature Physics*,	16.2	7