Abhay Pasupathy

List of Publications by Year
in descending order

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92	11,789	41323	43868
papers	citations	49 h-index	91 g-index

98	98	98	12944
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Coulomb blockade and the Kondo effect in single-atom transistors. Nature, 2002, 417, 722-725.	13.7	1,902
2	Visualizing Individual Nitrogen Dopants in Monolayer Graphene. Science, 2011, 333, 999-1003.	6.0	774
3	Maximized electron interactions at the magic angle in twisted bilayer graphene. Nature, 2019, 572, 95-100.	13.7	644
4	Correlated electronic phases in twisted bilayer transition metal dichalcogenides. Nature Materials, 2020, 19, 861-866.	13.3	544
5	The Kondo Effect in the Presence of Ferromagnetism. Science, 2004, 306, 86-89.	6.0	516
6	Connecting Dopant Bond Type with Electronic Structure in N-Doped Graphene. Nano Letters, 2012, 12, 4025-4031.	4.5	471
7	Visualizing pair formation on the atomic scale in the high-Tc superconductor Bi2Sr2CaCu2O8+Î´. Nature, 2007, 447, 569-572.	13.7	414
8	Mechanical Control of Spin States in Spin-1 Molecules and the Underscreened Kondo Effect. Science, 2010, 328, 1370-1373.	6.0	399
9	MoirÃ© heterostructures as a condensed-matter quantum simulator. Nature Physics, 2021, 17, 155-163.	6.5	317
10	Nature of the quantum metal in a two-dimensional crystalline superconductor. Nature Physics, 2016, 12, 208-212.	6.5	228
11	Structure and control of charge density waves in two-dimensional 1T-TaS ₂. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 15054-15059.	3.3	205
12	Local Atomic and Electronic Structure of Boron Chemical Doping in Monolayer Graphene. Nano Letters, 2013, 13, 4659-4665.	4.5	192
13	Visualization of moirÃ© superlattices. Nature Nanotechnology, 2020, 15, 580-584.	15.6	187
14	Electronic Origin of the Inhomogeneous Pairing Interaction in the High- T _c Superconductor Bi ₂ Sr ₂ CaCu ₂ O _{8+Î´}. Science, 2008, 320, 196-201.	6.0	186
15	Vibration-Assisted Electron Tunneling in C140Transistors. Nano Letters, 2005, 5, 203-207.	4.5	184
16	Visualizing the formation of the Kondo lattice and the hidden order in URu ₂ Si ₂. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 10383-10388.	3.3	176
17	Excitons in strain-induced one-dimensional moirÃ© potentials at transition metal dichalcogenide heterojunctions. Nature Materials, 2020, 19, 1068-1073.	13.3	169
18	Mechanically Adjustable and Electrically Gated Single-Molecule Transistors. Nano Letters, 2005, 5, 305-308.	4.5	168

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19	Quantum criticality in twisted transition metal dichalcogenides. Nature, 2021, 597, 345-349.	13.7	163
20	Approaching the Intrinsic Limit in Transition Metal Diselenides via Point Defect Control. Nano Letters, 2019, 19, 4371-4379.	4.5	161
21	Visualization of electron nematicity and unidirectional antiferroic fluctuations at high temperatures in NaFeAs. Nature Physics, 2014, 10, 225-232.	6.5	158
22	Band structure engineering of 2D materials using patterned dielectric superlattices. Nature Nanotechnology, 2018, 13, 566-571.	15.6	157
23	Klein tunnelling and electron trapping in nanometre-scale graphene quantum dots. Nature Physics, 2016, 12, 1069-1075.	6.5	150
24	Metal-nanoparticle single-electron transistors fabricated using electromigration. Applied Physics Letters, 2004, 84, 3154-3156.	1.5	142
25	Visualizing the charge density wave transition in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mn>2</mml:mn><mml:mi>H</mml:mi></mml:math>-<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mtext>NbSe</mml:mtext><mml:mn>2</mml:mn></mml:msu real space. Physical Review B, 2014, 89, .	3.7	136
26	Imaging strain-localized excitons in nanoscale bubbles of monolayer WSe2 at room temperature. Nature Nanotechnology, 2020, 15, 854-860.	15.6	134
27	Engineering the Structural and Electronic Phases of MoTe₂ through W Substitution. Nano Letters, 2017, 17, 1616-1622.	4.5	128
28	Deep moirÃ© potentials in twisted transition metal dichalcogenide bilayers. Nature Physics, 2021, 17, 720-725.	6.5	124
29	Large Physisorption Strain in Chemical Vapor Deposition of Graphene on Copper Substrates. Nano Letters, 2012, 12, 2408-2413.	4.5	122
30	Layered Antiferromagnetism Induces Large Negative Magnetoresistance in the van der Waals Semiconductor CrSBr. Advanced Materials, 2020, 32, e2003240.	11.1	116
31	Enabling room temperature ferromagnetism in monolayer MoS2 via in situ iron-doping. Nature Communications, 2020, 11, 2034.	5.8	112
32	Imaging chiral symmetry breaking from KekulÃ© bond order in graphene. Nature Physics, 2016, 12, 950-958.	6.5	111
33	Flicker Noise as a Probe of Electronic Interaction at Metalâ€“Single Molecule Interfaces. Nano Letters, 2015, 15, 4143-4149.	4.5	109
34	Extending Universal Nodal Excitations Optimizes Superconductivity in Bi ₂ Sr ₂ CaCu ₂ O _{8+Î´}. Science, 2009, 324, 1689-1693.	6.0	107
35	Signatures of the topological s +â^' superconducting order parameter in the type-II Weyl semimetal T d-MoTe2. Nature Communications, 2017, 8, 1082.	5.8	101
36	Magnetism in semiconducting molybdenum dichalcogenides. Science Advances, 2018, 4, eaat3672.	4.7	92

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37	Strain Engineering and Raman Spectroscopy of Monolayer Transition Metal Dichalcogenides. Chemistry of Materials, 2018, 30, 5148-5155.	3.2	92
38	Segregation of Sublattice Domains in Nitrogen-Doped Graphene. Journal of the American Chemical Society, 2014, 136, 1391-1397.	6.6	86
39	Atomic lattice disorder in charge-density-wave phases of exfoliated dichalcogenides (1T-TaS) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 113, 11420-11424.	3.3	86
40	Quasiparticle Interference, Quasiparticle Interactions, and the Origin of the Charge Density Wave in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mn>2</mml:mn><mml:mi>H</mml:mi><mml:mtext>â^'</mml:mtext><mml:msub><mml:mrow><m Physical Review Letters, 2015, 114, 037001.	2.9	67
41	Orderly disorder in magic-angle twisted trilayer graphene. Science, 2022, 376, 193-199.	6.0	63
42	MoirÃ© metrology of energy landscapes in van der Waals heterostructures. Nature Communications, 2021, 12, 242.	5.8	60
43	Coupling between magnetic order and charge transport in a two-dimensional magnetic semiconductor. Nature Materials, 2022, 21, 754-760.	13.3	60
44	Via Method for Lithography Free Contact and Preservation of 2D Materials. Nano Letters, 2018, 18, 1416-1420.	4.5	59
45	MoirÃ©less correlations in ABCA graphene. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	59
46	Magnetic Anisotropy Variations and Nonequilibrium Tunneling in a Cobalt Nanoparticle. Physical Review Letters, 2001, 87, 226801.	2.9	57
47	Sensitivity of the superconducting state in thin films. Science Advances, 2019, 5, eaau3826.	4.7	54
48	Emergent surface superconductivity in the topological insulator Sb2Te3. Nature Communications, 2015, 6, 8279.	5.8	53
49	Atomistic Interrogation of Bâ€“N Co-dopant Structures and Their Electronic Effects in Graphene. ACS Nano, 2016, 10, 6574-6584.	7.3	53
50	From Ballistic Transport to Tunneling in Electromigrated Ferromagnetic Breakjunctions. Nano Letters, 2006, 6, 123-127.	4.5	52
51	MoirÃ© nematic phase in twisted double bilayer graphene. Nature Physics, 2022, 18, 196-202.	6.5	51
52	Enhanced Superconductivity in Monolayer T_d-MoTe₂. Nano Letters, 2021, 21, 2505-2511.	4.5	49
53	Tunable strain soliton networks confine electrons in van der Waals materials. Nature Physics, 2020, 16, 1097-1102.	6.5	47
54	Substrate Level Control of the Local Doping in Graphene. Nano Letters, 2013, 13, 1386-1392.	4.5	42

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55	Distinct surface and bulk charge density waves in ultrathin <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mn>1</mml:mn><mml:mi>T</mml:mi><mml:mtext>â^’</mml:mtext><mml:mi mathvariant="normal">S</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml:math>. Physical Review B, 2016, 94, .	1.1	41
56	Superatomic Two-Dimensional Semiconductor. Nano Letters, 2018, 18, 1483-1488.	4.5	41
57	High carrier mobility in graphene doped using a monolayer of tungsten oxyselenide. Nature Electronics, 2021, 4, 731-739.	13.1	41
58	Absence of a Band Gap at the Interface of a Metal and Highly Doped Monolayer MoS₂. Nano Letters, 2017, 17, 5962-5968.	4.5	37
59	Temperature-driven topological transition in 1T'-MoTe2. Npj Quantum Materials, 2018, 3, .	1.8	36
60	Molecular beam growth of graphene nanocrystals on dielectric substrates. Carbon, 2012, 50, 4822-4829.	5.4	34
61	Nanoscale lattice dynamics in hexagonal boron nitride moirÃ© superlattices. Nature Communications, 2021, 12, 5741.	5.8	34
62	Atomic-Scale Spectroscopy of Gated Monolayer MoS₂. Nano Letters, 2016, 16, 3148-3154.	4.5	30
63	Nanoscale Proximity Effect in the High-Temperature Superconductor <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>Bi</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:msub><mml:mi>Sr</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:msub><mml:mi>Ca</mml:mi><mml:mn>1</mml:mn></mml:msub><mml:msub><mml:mi>Cu</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:msub><mml:mi mathvariant="bold">O</mml:mi><mml:mrow><mml:mn>8</mml:mn><mml:mo>+</mml:mo><mml:mi>Î´</mml:mi></mml:mrow></mml:msub></mml:math> a Scanning Tunneling Microscope. Physical Review Letters, 2010, 104, 117001.	2.9	29
64	Fragility of the dissipationless state in clean two-dimensional superconductors. Nature Physics, 2019, 15, 947-953.	6.5	29
65	Intrinsic donor-bound excitons in ultraclean monolayer semiconductors. Nature Communications, 2021, 12, 871.	5.8	29
66	On the Global Geometry of Sphere-Constrained Sparse Blind Deconvolution. , 2017, , .		26
67	Experimental Evidence for a Bragg Glass Density Wave Phase in a Transition-Metal Dichalcogenide. Physical Review Letters, 2015, 114, 026802.	2.9	25
68	Nanometer-Scale Lateral pâ€“n Junctions in Graphene/Î±-RuCl₃ Heterostructures. Nano Letters, 2022, 22, 1946-1953.	4.5	25
69	Impact of substrate induced band tail states on the electronic and optical properties of MoS2. Applied Physics Letters, 2019, 115, .	1.5	24
70	Electric-field-tunable electronic nematic order in twisted double-bilayer graphene. 2D Materials, 2021, 8, 034005.	2.0	23
71	Nano-spectroscopy of excitons in atomically thin transition metal dichalcogenides. Nature Communications, 2022, 13, 542.	5.8	23
72	Visualizing Atomically Layered Magnetism in CrSBr. Advanced Materials, 2022, 34, e2201000.	11.1	22

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73	Unconventional scaling of the superfluid density with the critical temperature in transition metal dichalcogenides. Science Advances, 2019, 5, eaav8465.	4.7	20
74	Dopant Segregation in Polycrystalline Monolayer Graphene. Nano Letters, 2015, 15, 1428-1436.	4.5	19
75	Nano-imaging of strain-tuned stripe textures in a Mott crystal. Npj Quantum Materials, 2021, 6, .	1.8	12
76	Atomic-Scale Characterization of Graphene pâ€“n Junctions for Electron-Optical Applications. ACS Nano, 2019, 13, 2558-2566.	7.3	10
77	Dictionary learning in Fourier-transform scanning tunneling spectroscopy. Nature Communications, 2020, 11, 1081.	5.8	10
78	Deep Learning Analysis of Polaritonic Wave Images. ACS Nano, 2021, 15, 18182-18191.	7.3	10
79	Extracting the Strain Matrix and Twist Angle from the MoirÃ© Superlattice in van der Waals Heterostructures. ACS Nano, 2022, 16, 1471-1476.	7.3	10
80	Infrared nanoimaging of the metal-insulator transition in the charge-density-wave van der Waals material 1Tâ^'TaS2. Physical Review B, 2018, 97, .	1.1	9
81	Passivating 1Tâ€²-MoTe₂ multilayers at elevated temperatures by encapsulation. Nanoscale, 2017, 9, 13910-13914.	2.8	7
82	Topological electronic structure of YbMg2Bi2 and CaMg2Bi2. Npj Quantum Materials, 2022, 7, .	1.8	7
83	Complete Strain Mapping of Nanosheets of Tantalum Disulfide. ACS Applied Materials & Interfaces, 2020, 12, 43173-43179.	4.0	6
84	Mapping of the formation of the pairing gap in. Journal of Physics and Chemistry of Solids, 2008, 69, 3034-3038.	1.9	5
85	Topography, complex refractive index, and conductivity of graphene layers measured by correlation of optical interference contrast, atomic force, and back scattered electron microscopy. Journal of Applied Physics, 2013, 114, 183107.	1.1	5
86	Nanoscale Femtosecond Dynamics of Mott Insulator (Ca_{0.99}Sr_{0.01})₂RuO₄. Nano Letters, 2022, 22, 5689-5697.	4.5	5
87	A tell-tale wiggle. Nature Physics, 2021, 17, 1082-1083.	6.5	3
88	Andreev Reflections in NbN/Graphene Junctions under Large Magnetic Fields. Nano Letters, 2021, 21, 8229-8235.	4.5	3
89	Nonmonotonic Temperature-Dependent Dissipation at Nonequilibrium in Atomically Thin Clean-Limit Superconductors. Nano Letters, 2021, 21, 583-589.	4.5	3
90	Visualizing the unusual spectral weight transfer in DyBa2Cu3O7â€“Î´ thin film. Scientific Reports, 2022, 12, 830.	1.6	1

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91	Mapping Periodic Lattice Distortions in Exfoliated Dichalchogenides with Atomic Resolution cryo-STEM. Microscopy and Microanalysis, 2016, 22, 1550-1551.	0.2	0
92	Thickness and Stacking Sequence Determination of Exfoliated Dichalchogenides Using Scanning Transmission Electron Microscopy. Microscopy and Microanalysis, 2016, 22, 1456-1457.	0.2	0