Andras Kis

List of Publications by Year
in descending order

125 papers	60,404 citations	13068 68 h-index	16605 123 g-index
128 all docs	128 docs citations	128 times ranked	42646 citing authors

#	Article	IF	Citations
1	Electronics and optoelectronics of two-dimensional transition metal dichalcogenides. Nature Nanotechnology, 2012, 7, 699-712.	15.6	13,346
2	Single-layer MoS2 transistors. Nature Nanotechnology, 2011, 6, 147-150.	15.6	12,612
3	Ultrasensitive photodetectors based on monolayer MoS2. Nature Nanotechnology, 2013, 8, 497-501.	15.6	4,202
4	2D transition metal dichalcogenides. Nature Reviews Materials, 2017, 2, .	23.3	3,689
5	Science and technology roadmap for graphene, related two-dimensional crystals, and hybrid systems. Nanoscale, 2015, 7, 4598-4810.	2.8	2,452
6	Stretching and Breaking of Ultrathin MoS₂. ACS Nano, 2011, 5, 9703-9709.	7.3	2,096
7	Mobility engineering and a metalâ€“insulator transition in monolayer MoS2. Nature Materials, 2013, 12, 815-820.	13.3	1,500
8	Electrical contacts to two-dimensional semiconductors. Nature Materials, 2015, 14, 1195-1205.	13.3	1,318
9	Integrated Circuits and Logic Operations Based on Single-Layer MoS₂. ACS Nano, 2011, 5, 9934-9938.	7.3	1,196
10	Nonvolatile Memory Cells Based on MoS₂/Graphene Heterostructures. ACS Nano, 2013, 7, 3246-3252.	7.3	904
11	Single-layer MoS2 nanopores as nanopower generators. Nature, 2016, 536, 197-200.	13.7	830
12	Large-Area Epitaxial Monolayer MoS₂. ACS Nano, 2015, 9, 4611-4620.	7.3	712
13	Exciton Dynamics in Suspended Monolayer and Few-Layer MoS₂ 2D Crystals. ACS Nano, 2013, 7, 1072-1080.	7.3	686
14	Thermal Conductivity of Monolayer Molybdenum Disulfide Obtained from Temperature-Dependent Raman Spectroscopy. ACS Nano, 2014, 8, 986-993.	7.3	666
15	Valley Zeeman effect in elementary optical excitations of monolayer WSe2. Nature Physics, 2015, 11, 141-147.	6.5	648
16	Optically active quantum dots in monolayer WSe2. Nature Nanotechnology, 2015, 10, 491-496.	15.6	648
17	Electrical Transport Properties of Single-Layer WS₂. ACS Nano, 2014, 8, 8174-8181.	7.3	620
18	Reinforcement of single-walled carbon nanotube bundles by intertube bridging. Nature Materials, 2004, 3, 153-157.	13.3	534

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19	Single-Layer MoS₂ Electronics. Accounts of Chemical Research, 2015, 48, 100-110.	7.6	417
20	Identification of single nucleotides in MoS2 nanopores. Nature Nanotechnology, 2015, 10, 1070-1076.	15.6	409
21	Atomically Thin Molybdenum Disulfide Nanopores with High Sensitivity for DNA Translocation. ACS Nano, 2014, 8, 2504-2511.	7.3	404
22	Light Generation and Harvesting in a van der Waals Heterostructure. ACS Nano, 2014, 8, 3042-3048.	7.3	389
23	Visibility of dichalcogenide nanolayers. Nanotechnology, 2011, 22, 125706.	1.3	382
24	A cell nanoinjector based on carbon nanotubes. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 8218-8222.	3.3	366
25	Room-temperature electrical control of exciton flux in a van der Waals heterostructure. Nature, 2018, 560, 340-344.	13.7	353
26	Breakdown of High-Performance Monolayer MoS₂ Transistors. ACS Nano, 2012, 6, 10070-10075.	7.3	349
27	Production and processing of graphene and related materials. 2D Materials, 2020, 7, 022001.	2.0	333
28	Detecting the translocation of DNA through a nanopore using graphene nanoribbons. Nature Nanotechnology, 2013, 8, 939-945.	15.6	332
29	Ripples and Layers in Ultrathin MoS₂ Membranes. Nano Letters, 2011, 11, 5148-5153.	4.5	315
30	Nanomechanics of Microtubules. Physical Review Letters, 2002, 89, 248101.	2.9	309
31	Piezoresistivity and Strain-induced Band Gap Tuning in Atomically Thin MoS₂. Nano Letters, 2015, 15, 5330-5335.	4.5	296
32	Electron and Hole Mobilities in Single-Layer WSe₂. ACS Nano, 2014, 8, 7180-7185.	7.3	295
33	High Responsivity, Large-Area Graphene/MoS₂ Flexible Photodetectors. ACS Nano, 2016, 10, 8252-8262.	7.3	275
34	Thickness-modulated metal-to-semiconductor transformation in a transition metal dichalcogenide. Nature Communications, 2018, 9, 919.	5.8	253
35	Logic-in-memory based on an atomically thin semiconductor. Nature, 2020, 587, 72-77.	13.7	243
36	Interlayer Forces and Ultralow Sliding Friction in Multiwalled Carbon Nanotubes. Physical Review Letters, 2006, 97, 025501.	2.9	231

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37	Polarization switching and electrical control of interlayer excitons in two-dimensional van der Waals heterostructures. Nature Photonics, 2019, 13, 131-136.	15.6	214
38	Atomic Scale Microstructure and Properties of Se-Deficient Two-Dimensional MoSe₂. ACS Nano, 2015, 9, 3274-3283.	7.3	213
39	Electrochemical Reaction in Single Layer MoS₂: Nanopores Opened Atom by Atom. Nano Letters, 2015, 15, 3431-3438.	4.5	209
40	Small-signal amplifier based on single-layer MoS₂. Applied Physics Letters, 2012, 101, 043103.	1.5	190
41	Suppressing Nucleation in Metalâ€"Organic Chemical Vapor Deposition of MoS₂ Monolayers by Alkali Metal Halides. Nano Letters, 2017, 17, 5056-5063.	4.5	185
42	Beta amyloid and hyperphosphorylated tau deposits in the pancreas in type 2 diabetes. Neurobiology of Aging, 2010, 31, 1503-1515.	1.5	179
43	MoS 2 and semiconductors in the flatland. Materials Today, 2015, 18, 20-30.	8.3	179
44	Observation of ionic Coulomb blockade inÂnanopores. Nature Materials, 2016, 15, 850-855.	13.3	175
45	Beta-amyloid deposition and Alzheimer's type changes induced by Borrelia spirochetes. Neurobiology of Aging, 2006, 27, 228-236.	1.5	172
46	Defect induced, layer-modulated magnetism in ultrathin metallic PtSe2. Nature Nanotechnology, 2019, 14, 674-678.	15.6	162
47	MoS₂ Transistors Operating at Gigahertz Frequencies. Nano Letters, 2014, 14, 5905-5911.	4.5	161
48	Shrinking a Carbon Nanotube. Nano Letters, 2006, 6, 2718-2722.	4.5	149
49	Light-Enhanced Blue Energy Generation Using MoS2 Nanopores. Joule, 2019, 3, 1549-1564.	11.7	127
50	Micro-reflectance and transmittance spectroscopy: a versatile and powerful tool to characterize 2D materials. Journal Physics D: Applied Physics, 2017, 50, 074002.	1.3	125
51	Shear and Young's Moduli of MoS2 Nanotube Ropes. Advanced Materials, 2003, 15, 733-736.	11.1	123
52	Probing the Interlayer Exciton Physics in a MoS₂/MoSe₂/MoS₂ van der Waals Heterostructure. Nano Letters, 2017, 17, 6360-6365.	4.5	118
53	Valley Polarization by Spin Injection in a Light-Emitting van der Waals Heterojunction. Nano Letters, 2016, 16, 5792-5797.	4.5	117
54	Valley-polarized exciton currents in a van der Waals heterostructure. Nature Nanotechnology, 2019, 14, 1104-1109.	15.6	116

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55	Patterning metal contacts on monolayer MoS2 with vanishing Schottky barriers using thermal nanolithography. Nature Electronics, 2019, 2, 17-25.	13.1	113
56	Disorder engineering and conductivity dome in ReS2 with electrolyte gating. Nature Communications, 2016, 7, 12391.	5.8	109
57	Wafer-scale MOCVD growth of monolayer MoS2 on sapphire and SiO2. Nano Research, 2019, 12, 2646-2652.	5.8	104
58	Reply to 'Measurement of mobility in dual-gated MoS2 transistors'. Nature Nanotechnology, 2013, 8, 147-148.	15.6	103
59	Nanomechanics of carbon nanotubes. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2008, 366, 1591-1611.	1.6	100
60	MoS2 photodetectors integrated with photonic circuits. Npj 2D Materials and Applications, 2019, 3, .	3.9	94
61	Excitonic devices with van der Waals heterostructures: valleytronics meets twistronics. Nature Reviews Materials, 2022, 7, 449-464.	23.3	94
62	Geometrical Effect in 2D Nanopores. Nano Letters, 2017, 17, 4223-4230.	4.5	87
63	ssDNA Binding Reveals the Atomic Structure of Graphene. Langmuir, 2010, 26, 18078-18082.	1.6	81
64	Large-area MoS ₂ grown using H ₂ S as the sulphur source. 2D Materials, 2015, 2, 044005.	2.0	78
65	Mechanical Properties of Microtubules Explored Using the Finite Elements Method. ChemPhysChem, 2004, 5, 252-257.	1.0	77
66	Electronic properties of transition-metal dichalcogenides. MRS Bulletin, 2015, 40, 577-584.	1.7	77
67	Optospintronics in Graphene <i>via</i> Proximity Coupling. ACS Nano, 2017, 11, 11678-11686.	7.3	73
68	Dark excitons and the elusive valley polarization in transition metal dichalcogenides. 2D Materials, 2017, 4, 025016.	2.0	71
69	Thickness-dependent mobility in two-dimensional MoS₂transistors. Nanoscale, 2015, 7, 6255-6260.	2.8	68
70	Magnetoexcitons in large area CVD-grown monolayer<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>MoS</mml:mi><mml:mn>2</mml:mn></mml:msub></mm xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>MoSe</mml:mi><mml:mn>2</mml:mn></mml:msub></m sapphire. Physical Review B, 2016, 93, .	1.1	66
71	Catalytically Grown Carbon Nanotubes of Small Diameter Have a High Young's Modulus. Nano Letters, 2005, 5, 2074-2077.	4.5	65
72	Self-sensing, tunable monolayer MoS2 nanoelectromechanical resonators. Nature Communications, 2019, 10, 4831.	5.8	65

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73	Highly Oriented Atomically Thin Ambipolar MoSe₂ Grown by Molecular Beam Epitaxy. ACS Nano, 2017, 11, 6355-6361.	7.3	64
74	Probing magnetism in atomically thin semiconducting PtSe2. Nature Communications, 2020, 11, 4806.	5.8	63
75	Oscillation modes of microtubules. Biology of the Cell, 2004, 96, 697-700.	0.7	59
76	Defect Healing and Charge Transfer-Mediated Valley Polarization in MoS₂/MoSe₂/MoS₂ Trilayer van der Waals Heterostructures. Nano Letters, 2017, 17, 4130-4136.	4.5	56
77	Long-term retention in organic ferroelectric-graphene memories. Applied Physics Letters, 2012, 100, 023507.	1.5	54
78	Direct fabrication of thin layer MoS2 field-effect nanoscale transistors by oxidation scanning probe lithography. Applied Physics Letters, 2015, 106, .	1.5	53
79	Buckling and kinking force measurements on individual multiwalled carbon nanotubes. Physical Review B, 2007, 76, .	1.1	52
80	Large-grain MBE-grown GaSe on GaAs with a Mexican hat-like valence band dispersion. Npj 2D Materials and Applications, 2018, 2, .	3.9	51
81	Imaging the life story of nanotube devices. Applied Physics Letters, 2005, 87, 083103.	1.5	50
82	Excitonic transport driven by repulsive dipolar interaction in a van der Waals heterostructure. Nature Photonics, 2022, 16, 79-85.	15.6	48
83	Electromechanical oscillations in bilayer graphene. Nature Communications, 2015, 6, 8582.	5.8	44
84	Strongly Coupled Coherent Phonons in Single-Layer MoS₂. ACS Nano, 2020, 14, 5700-5710.	7.3	44
85	Elastic modulus of multi-walled carbon nanotubes produced by catalytic chemical vapour deposition. Applied Physics A: Materials Science and Processing, 2005, 80, 695-700.	1.1	42
86	Resolving the spin splitting in the conduction band of monolayer MoS2. Nature Communications, 2017, 8, 1938.	5.8	41
87	Controlled placement of highly aligned carbon nanotubes for the manufacture of arrays of nanoscale torsional actuators. Nanotechnology, 2006, 17, 434-438.	1.3	38
88	Can 2D-Nanocrystals Extend the Lifetime of Floating-Gate Transistor Based Nonvolatile Memory?. IEEE Transactions on Electron Devices, 2014, 61, 3456-3464.	1.6	38
89	Your new travel guide to the flatlands. Npj 2D Materials and Applications, 2017, 1, .	3.9	32
90	Waferâ€Scale Fabrication of Nanopore Devices for Singleâ€Molecule DNA Biosensing using MoS₂. Small Methods, 2020, 4, 2000072.	4.6	32

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91	Reconfigurable Diodes Based on Vertical WSe₂ Transistors with van der Waals Bonded Contacts. Advanced Materials, 2018, 30, e1707200.	11.1	31
92	Engineering Optically Active Defects in Hexagonal Boron Nitride Using Focused Ion Beam and Water. ACS Nano, 2022, 16, 3695-3703.	7.3	28
93	Intervalley Scattering of Interlayer Excitons in a MoS₂/MoSe₂/MoS₂ Heterostructure in High Magnetic Field. Nano Letters, 2018, 18, 3994-4000.	4.5	27
94	Mechanical and electronic properties of vanadium oxide nanotubes. Journal of Applied Physics, 2009, 105, .	1.1	26
95	Nanomechanical Investigation of Mo₆S_{9âˆ’<i>x</i>}I_{<i>x</i>} Nanowire Bundles. Small, 2007, 3, 1544-1548.	5.2	25
96	Quantitative Nanoscale Absorption Mapping: A Novel Technique To Probe Optical Absorption of Two-Dimensional Materials. Nano Letters, 2020, 20, 567-576.	4.5	22
97	Superconducting 2D NbS₂ Grown Epitaxially by Chemical Vapor Deposition. ACS Nano, 2021, 15, 18403-18410.	7.3	21
98	Temperature-Dependent Elasticity of Microtubules. Langmuir, 2008, 24, 6176-6181.	1.6	20
99	Super-resolved Optical Mapping of Reactive Sulfur-Vacancies in Two-Dimensional Transition Metal Dichalcogenides. ACS Nano, 2021, 15, 7168-7178.	7.3	20
100	Low-Power Artificial Neural Network Perceptron Based on Monolayer MoS₂. ACS Nano, 2022, 16, 3684-3694.	7.3	20
101	Unconventional electroabsorption in monolayer MoS ₂. 2D Materials, 2017, 4, 021005.	2.0	19
102	Air and Waterâ€Stable nâ€Type Doping and Encapsulation of Flexible MoS₂ Devices with SU8. Advanced Electronic Materials, 2019, 5, 1800492.	2.6	18
103	Electronic Properties of Transferable Atomically Thin MoSe₂/h-BN Heterostructures Grown on Rh(111). ACS Nano, 2018, 12, 11161-11168.	7.3	17
104	High-frequency, scaled MoS2 transistors. , 2015, , .		16
105	High Throughput Characterization of Epitaxially Grown Single-Layer MoS2. Electronics (Switzerland), 2017, 6, 28.	1.8	16
106	Zeroâ€Bias Powerâ€Detector Circuits based on MoS₂ Fieldâ€Effect Transistors on Waferâ€Scale Flexible Substrates. Advanced Materials, 2022, 34, e2108469.	11.1	14
107	Vacuum ultraviolet excitation luminescence spectroscopy of few-layered MoS₂. Journal of Physics Condensed Matter, 2016, 28, 015301.	0.7	13
108	Numerical correction of anti-symmetric aberrations in single HRTEM images of weakly scattering 2D-objects. Ultramicroscopy, 2015, 151, 130-135.	0.8	12

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109	THz timeâ€domain spectroscopy and IR spectroscopy on MoS₂. Physica Status Solidi (B): Basic Research, 2016, 253, 2499-2504.	0.7	12
110	Impact of photodoping on inter- and intralayer exciton emission in a MoS2/MoSe2/MoS2 heterostructure. Applied Physics Letters, 2018, 113, 062107.	1.5	12
111	Specific heats of the charge density wave compounds o-TaS and (TaSe) I. European Physical Journal B, 2002, 29, 71-77.	0.6	11
112	Quantitative Mapping of the Charge Density in a Monolayer of MoS₂ at Atomic Resolution by Off-Axis Electron Holography. ACS Nano, 2020, 14, 524-530.	7.3	10
113	Stable Al₂O₃ Encapsulation of MoS₂â€FETs Enabled by CVD Grown hâ€BN. Advanced Electronic Materials, 2022, 8, .	2.6	10
114	Free-standing electronic character of monolayer<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>MoS</mml:mi><mml:mn>2</mml:mn></mml:msub></mn van der Waals epitaxy. Physical Review B, 2016, 94, .	1.1	9
115	Mechanical Properties of Carbon Nanotubes. Nanoscience and Technology, 2007, , 583-600.	1.5	9
116	Field-induced charge separation dynamics in monolayer MoS 2. 2D Materials, 2017, 4, 035017.	2.0	6
117	Correlating chemical and electronic states from quantitative photoemission electron microscopy of transition-metal dichalcogenide heterostructures. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2021, 39, .	0.9	5
118	A robust molecular probe for Ã…ngstrom-scale analytics in liquids. Nature Communications, 2016, 7, 12403.	5.8	4
119	On current transients in MoS2 Field Effect Transistors. Scientific Reports, 2017, 7, 11575.	1.6	4
120	How we made the 2D transistor. Nature Electronics, 2021, 4, 853-853.	13.1	4
121	Micro-fabrication process for small transport devices of layered manganite. Journal of Applied Physics, 2012, 111, 07E129.	1.1	1
122	High-quality synthetic 2D transition metal dichalcogenide semiconductors. , 2016, , .		1
123	Excitonic Effects in Single Layer MoS2 Probed by Broadband Two-dimensional Electronic Spectroscopy. , 2019, , .		1
124	Electrical Transport in MoS2: A Prototypical Semiconducting TMDC. , 0, , 295-309.		0
125	Excitonic Effects in Single Layer MoS2 Probed by Broadband Two-Dimensional Electronic Spectroscopy. , 2019, , .		0