Andras Kis

List of Publications by Year in Descending Order

120 papers	47,768 citations	61 h-index	128 g-index
128 ext. papers	54,450 ext. citations	14.8 avg, IF	7.99 L-index

#	Paper	IF	Citations
120	Zero Bias Power Detector Circuits based on MoS Field Effect Transistors on Wafer-Scale Flexible Substrates.. *Advanced Materials*, **2022**, e2108469	24	1
119	Excitonic transport driven by repulsive dipolar interaction in a van der Waals heterostructure.. *Nature Photonics*, **2022**, 16, 79-85	33.9	5
118	How we made the 2D transistor. *Nature Electronics*, **2021**, 4, 853-853	28.4	2
117	Super-resolved Optical Mapping of Reactive Sulfur-Vacancies in Two-Dimensional Transition Metal Dichalcogenides. *ACS Nano*, **2021**, 15, 7168-7178	16.7	2
116	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, 053210	2.9	0
115	Logic-in-memory based on an atomically thin semiconductor. *Nature*, **2020**, 587, 72-77	50.4	94
114	Wafer-Scale Fabrication of Nanopore Devices for Single-Molecule DNA Biosensing using MoS2. *Small Methods*, **2020**, 4, 2000072	12.8	21
113	Strongly Coupled Coherent Phonons in Single-Layer MoS. *ACS Nano*, **2020**, 14, 5700-5710	16.7	15
112	Production and processing of graphene and related materials. *2D Materials*, **2020**, 7, 022001	5.9	179
111	Quantitative Nanoscale Absorption Mapping: A Novel Technique To Probe Optical Absorption of Two-Dimensional Materials. *Nano Letters*, **2020**, 20, 567-576	11.5	10
110	Quantitative Mapping of the Charge Density in a Monolayer of MoS at Atomic Resolution by Off-Axis Electron Holography. *ACS Nano*, **2020**, 14, 524-530	16.7	6
109	Probing magnetism in atomically thin semiconducting PtSe. *Nature Communications*, **2020**, 11, 4806	17.4	28
108	Wafer-scale MOCVD growth of monolayer MoS2 on sapphire and SiO2. *Nano Research*, **2019**, 12, 2646-2652	9.9	52
107	Defect induced, layer-modulated magnetism in ultrathin metallic PtSe. *Nature Nanotechnology*, **2019**, 14, 674-678	28.7	106
106	MoS2 photodetectors integrated with photonic circuits. *Npj 2D Materials and Applications*, **2019**, 3,	8.8	53
105	Light-Enhanced Blue Energy Generation Using MoS2 Nanopores. *Joule*, **2019**, 3, 1549-1564	27.8	68
104	Self-sensing, tunable monolayer MoS nanoelectromechanical resonators. *Nature Communications*, **2019**, 10, 4831	17.4	24

103	Valley-polarized exciton currents in a van der Waals heterostructure. *Nature Nanotechnology*, **2019**, 14, 1104-1109	28.7	63
102	Polarization switching and electrical control of interlayer excitons in two-dimensional van der Waals heterostructures. *Nature Photonics*, **2019**, 13, 131-136	33.9	134
101	Air and Water-Stable n-Type Doping and Encapsulation of Flexible MoS2 Devices with SU8. *Advanced Electronic Materials*, **2019**, 5, 1800492	6.4	11
100	Patterning metal contacts on monolayer MoS2 with vanishing Schottky barriers using thermal nanolithography. *Nature Electronics*, **2019**, 2, 17-25	28.4	73
99	Thickness-modulated metal-to-semiconductor transformation in a transition metal dichalcogenide. *Nature Communications*, **2018**, 9, 919	17.4	187
98	Reconfigurable Diodes Based on Vertical WSe Transistors with van der Waals Bonded Contacts. *Advanced Materials*, **2018**, 30, e1707200	24	21
97	Large-grain MBE-grown GaSe on GaAs with a Mexican hat-like valence band dispersion. *Npj 2D Materials and Applications*, **2018**, 2,	8.8	34
96	Room-temperature electrical control of exciton flux in a van der Waals heterostructure. *Nature*, **2018**, 560, 340-344	50.4	217
95	Impact of photodoping on inter- and intralayer exciton emission in a MoS2/MoSe2/MoS2 heterostructure. *Applied Physics Letters*, **2018**, 113, 062107	3.4	7
94	Electronic Properties of Transferable Atomically Thin MoSe/h-BN Heterostructures Grown on Rh(111). *ACS Nano*, **2018**, 12, 11161-11168	16.7	14
93	Intervalley Scattering of Interlayer Excitons in a MoS/MoSe/MoS Heterostructure in High Magnetic Field. *Nano Letters*, **2018**, 18, 3994-4000	11.5	19
92	Dark excitons and the elusive valley polarization in transition metal dichalcogenides. *2D Materials*, **2017**, 4, 025016	5.9	53
91	Unconventional electroabsorption in monolayer MoS 2. *2D Materials*, **2017**, 4, 021005	5.9	14
90	Micro-reflectance and transmittance spectroscopy: a versatile and powerful tool to characterize 2D materials. *Journal Physics D: Applied Physics*, **2017**, 50, 074002	3	80
89	Geometrical Effect in 2D Nanopores. *Nano Letters*, **2017**, 17, 4223-4230	11.5	58
88	Highly Oriented Atomically Thin Ambipolar MoSe Grown by Molecular Beam Epitaxy. *ACS Nano*, **2017**, 11, 6355-6361	16.7	48
87	Defect Healing and Charge Transfer-Mediated Valley Polarization in MoS/MoSe/MoS Trilayer van der Waals Heterostructures. *Nano Letters*, **2017**, 17, 4130-4136	11.5	44
86	2D transition metal dichalcogenides. *Nature Reviews Materials*, **2017**, 2,	73.3	2213

85	Optospintronics in Graphene via Proximity Coupling. *ACS Nano*, **2017**, 11, 11678-11686	16.7	55
84	On current transients in MoS Field Effect Transistors. *Scientific Reports*, **2017**, 7, 11575	4.9	3
83	Probing the Interlayer Exciton Physics in a MoS/MoSe/MoS van der Waals Heterostructure. *Nano Letters*, **2017**, 17, 6360-6365	11.5	74
82	Resolving the spin splitting in the conduction band of monolayer MoS. *Nature Communications*, **2017**, 8, 1938	17.4	26
81	Suppressing Nucleation in Metal-Organic Chemical Vapor Deposition of MoS Monolayers by Alkali Metal Halides. *Nano Letters*, **2017**, 17, 5056-5063	11.5	131
80	Field-induced charge separation dynamics in monolayer MoS 2. *2D Materials*, **2017**, 4, 035017	5.9	4
79	High Throughput Characterization of Epitaxially Grown Single-Layer MoS2. *Electronics (Switzerland)*, **2017**, 6, 28	2.6	12
78	Valley Polarization by Spin Injection in a Light-Emitting van der Waals Heterojunction. *Nano Letters*, **2016**, 16, 5792-7	11.5	79
77	Free-standing electronic character of monolayer MoS2 in van der Waals epitaxy. *Physical Review B*, **2016**, 94,	3.3	8
76	High Responsivity, Large-Area Graphene/MoS2 Flexible Photodetectors. *ACS Nano*, **2016**, 10, 8252-62	16.7	206
75	Magnetoexcitons in large area CVD-grown monolayer MoS2 and MoSe2 on sapphire. *Physical Review B*, **2016**, 93,	3.3	57
74	Single-layer MoS2 nanopores as nanopower generators. *Nature*, **2016**, 536, 197-200	50.4	560
73	High-quality synthetic 2D transition metal dichalcogenide semiconductors **2016**,		1
72	Disorder engineering and conductivity dome in ReS2 with electrolyte gating. *Nature Communications*, **2016**, 7, 12391	17.4	89
71	THz time-domain spectroscopy and IR spectroscopy on MoS2. *Physica Status Solidi (B): Basic Research*, **2016**, 253, 2499-2504	1.3	6
70	A robust molecular probe for Ångstrom-scale analytics in liquids. *Nature Communications*, **2016**, 7, 12403	17.4	3
69	Vacuum ultraviolet excitation luminescence spectroscopy of few-layered MoS2. *Journal of Physics Condensed Matter*, **2016**, 28, 015301	1.8	9
68	Observation of ionic Coulomb blockade in nanopores. *Nature Materials*, **2016**, 15, 850-5	27	120

67	Single-layer MoS2 electronics. *Accounts of Chemical Research*, **2015**, 48, 100-10	24.3	329
66	MoS 2 and semiconductors in the flatland. *Materials Today*, **2015**, 18, 20-30	21.8	126
65	Atomic scale microstructure and properties of Se-deficient two-dimensional MoSe2. *ACS Nano*, **2015**, 9, 3274-83	16.7	176
64	Piezoresistivity and Strain-induced Band Gap Tuning in Atomically Thin MoS2. *Nano Letters*, **2015**, 15, 5330-5	11.5	220
63	Direct fabrication of thin layer MoS2 field-effect nanoscale transistors by oxidation scanning probe lithography. *Applied Physics Letters*, **2015**, 106, 103503	3.4	45
62	Electrochemical Reaction in Single Layer MoS2: Nanopores Opened Atom by Atom. *Nano Letters*, **2015**, 15, 3431-8	11.5	162
61	Optically active quantum dots in monolayer WSe2. *Nature Nanotechnology*, **2015**, 10, 491-6	28.7	500
60	Large-Area Epitaxial Monolayer MoS2. *ACS Nano*, **2015**, 9, 4611-20	16.7	583
59	Identification of single nucleotides in MoS2 nanopores. *Nature Nanotechnology*, **2015**, 10, 1070-6	28.7	319
58	Electromechanical oscillations in bilayer graphene. *Nature Communications*, **2015**, 6, 8582	17.4	34
57	Electrical contacts to two-dimensional semiconductors. *Nature Materials*, **2015**, 14, 1195-205	27	980
56	Numerical correction of anti-symmetric aberrations in single HRTEM images of weakly scattering 2D-objects. *Ultramicroscopy*, **2015**, 151, 130-135	3.1	12
55	Science and technology roadmap for graphene, related two-dimensional crystals, and hybrid systems. *Nanoscale*, **2015**, 7, 4598-810	7.7	2015
54	Electronic properties of transition-metal dichalcogenides. *MRS Bulletin*, **2015**, 40, 577-584	3.2	55
53	High-frequency, scaled MoS2 transistors **2015**,		14
52	Thickness-dependent mobility in two-dimensional MoS transistors. *Nanoscale*, **2015**, 7, 6255-60	7.7	54
51	Large-area MoS 2 grown using H 2 S as the sulphur source. *2D Materials*, **2015**, 2, 044005	5.9	60
50	Valley Zeeman effect in elementary optical excitations of monolayer WSe2. *Nature Physics*, **2015**, 11, 141-147	16.2	477

49	Light generation and harvesting in a van der Waals heterostructure. *ACS Nano*, **2014**, 8, 3042-8	16.7	337
48	Thermal conductivity of monolayer molybdenum disulfide obtained from temperature-dependent Raman spectroscopy. *ACS Nano*, **2014**, 8, 986-93	16.7	526
47	MoS2 transistors operating at gigahertz frequencies. *Nano Letters*, **2014**, 14, 5905-11	11.5	137
46	Can 2D-Nanocrystals Extend the Lifetime of Floating-Gate Transistor Based Nonvolatile Memory?. *IEEE Transactions on Electron Devices*, **2014**, 61, 3456-3464	2.9	32
45	Electrical transport properties of single-layer WS2. *ACS Nano*, **2014**, 8, 8174-81	16.7	488
44	Atomically thin molybdenum disulfide nanopores with high sensitivity for DNA translocation. *ACS Nano*, **2014**, 8, 2504-11	16.7	333
43	Electron and hole mobilities in single-layer WSe2. *ACS Nano*, **2014**, 8, 7180-5	16.7	230
42	Mobility engineering and a metal-insulator transition in monolayer MoS□*Nature Materials*, **2013**, 12, 815-20	27	1265
41	Detecting the translocation of DNA through a nanopore using graphene nanoribbons. *Nature Nanotechnology*, **2013**, 8, 939-45	28.7	285
40	Exciton dynamics in suspended monolayer and few-layer MoS□2D crystals. *ACS Nano*, **2013**, 7, 1072-80	16.7	581
39	Nonvolatile memory cells based on MoS2/graphene heterostructures. *ACS Nano*, **2013**, 7, 3246-52	16.7	762
38	Addendum: Small-signal amplifier based on single-layer MoS2 [Appl. Phys. Lett. 101, 043103 (2012)]. *Applied Physics Letters*, **2013**, 102, 059901	3.4	3
37	Ultrasensitive photodetectors based on monolayer MoS2. *Nature Nanotechnology*, **2013**, 8, 497-501	28.7	3412
36	Reply to UMeasurement of mobility in dual-gated MoS□transistorsU*Nature Nanotechnology*, **2013**, 8, 147-8	28.7	93
35	Electronics and optoelectronics of two-dimensional transition metal dichalcogenides. *Nature Nanotechnology*, **2012**, 7, 699-712	28.7	10871
34	Breakdown of high-performance monolayer MoS2 transistors. *ACS Nano*, **2012**, 6, 10070-5	16.7	314
33	Small-signal amplifier based on single-layer MoS2. *Applied Physics Letters*, **2012**, 101, 043103	3.4	180
32	Micro-fabrication process for small transport devices of layered manganite. *Journal of Applied Physics*, **2012**, 111, 07E129	2.5	1

31	Long-term retention in organic ferroelectric-graphene memories. *Applied Physics Letters*, **2012**, 100, 023507	3.4	51
30	Visibility of dichalcogenide nanolayers. *Nanotechnology*, **2011**, 22, 125706	3.4	335
29	Single-layer MoS2 transistors. *Nature Nanotechnology*, **2011**, 6, 147-50	28.7	10521
28	Ripples and layers in ultrathin MoS2 membranes. *Nano Letters*, **2011**, 11, 5148-53	11.5	286
27	Stretching and breaking of ultrathin MoS2. *ACS Nano*, **2011**, 5, 9703-9	16.7	1672
26	Integrated circuits and logic operations based on single-layer MoS2. *ACS Nano*, **2011**, 5, 9934-8	16.7	1027
25	ssDNA binding reveals the atomic structure of graphene. *Langmuir*, **2010**, 26, 18078-82	4	75
24	Beta amyloid and hyperphosphorylated tau deposits in the pancreas in type 2 diabetes. *Neurobiology of Aging*, **2010**, 31, 1503-15	5.6	138
23	Mechanical and electronic properties of vanadium oxide nanotubes. *Journal of Applied Physics*, **2009**, 105, 074317	2.5	24
22	Temperature-dependent elasticity of microtubules. *Langmuir*, **2008**, 24, 6176-81	4	19
21	Nanomechanics of carbon nanotubes. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2008**, 366, 1591-611	3	87
20	Buckling and kinking force measurements on individual multiwalled carbon nanotubes. *Physical Review B*, **2007**, 76,	3.3	40
19	Nanomechanical investigation of Mo6S9-x Ix nanowire bundles. *Small*, **2007**, 3, 1544-8	11	25
18	A cell nanoinjector based on carbon nanotubes. *Proceedings of the National Academy of Sciences of the United States of America*, **2007**, 104, 8218-22	11.5	325
17	Mechanical Properties of Carbon Nanotubes. *Nanoscience and Technology*, **2007**, 583-600	0.6	5
16	Interlayer forces and ultralow sliding friction in multiwalled carbon nanotubes. *Physical Review Letters*, **2006**, 97, 025501	7.4	212
15	Controlled placement of highly aligned carbon nanotubes for the manufacture of arrays of nanoscale torsional actuators. *Nanotechnology*, **2006**, 17, 434-438	3.4	34
14	Shrinking a carbon nanotube. *Nano Letters*, **2006**, 6, 2718-22	11.5	137

13	Beta-amyloid deposition and Alzheimer's type changes induced by Borrelia spirochetes. *Neurobiology of Aging*, **2006**, 27, 228-36	5.6	134
12	Catalytically grown carbon nanotubes of small diameter have a high Young's modulus. *Nano Letters*, **2005**, 5, 2074-7	11.5	61
11	Elastic modulus of multi-walled carbon nanotubes produced by catalytic chemical vapour deposition. *Applied Physics A: Materials Science and Processing*, **2005**, 80, 695-700	2.6	37
10	Imaging the life story of nanotube devices. *Applied Physics Letters*, **2005**, 87, 083103	3.4	41
9	Reinforcement of single-walled carbon nanotube bundles by intertube bridging. *Nature Materials*, **2004**, 3, 153-7	27	487
8	Oscillation modes of microtubules. *Biology of the Cell*, **2004**, 96, 697-700	3.5	56
7	Mechanical properties of microtubules explored using the finite elements method. *ChemPhysChem*, **2004**, 5, 252-7	3.2	69
6	Shear and Young's Moduli of MoS2 Nanotube Ropes. *Advanced Materials*, **2003**, 15, 733-736	24	108
5	Specific heats of the charge density wave compounds o-TaS and (TaSe) I. *European Physical Journal B*, **2002**, 29, 71-77	1.2	10
4	Nanomechanics of microtubules. *Physical Review Letters*, **2002**, 89, 248101	7.4	276
3	Electrical Transport in MoS2: A Prototypical Semiconducting TMDC295-309		
2	Excitonic devices with van der Waals heterostructures: valleytronics meets twistronics. *Nature Reviews Materials*,	73.3	15
1	Stable Al 2 O 3 Encapsulation of MoS 2 -FETs Enabled by CVD Grown h-BN. *Advanced Electronic Materials*,2200123	6.4	1