Kuan Eng J Goh

List of Publications by Year
in descending order

82 papers	2,138 citations	236925 25 h-index	254184 43 g-index
86 all docs	86 docs citations	86 times ranked	2989 citing authors

#	Article	IF	Citations
1	Electrically conductive filament for 3D-printed circuits and sensors. Applied Materials Today, 2017, 9, 167-175.	4.3	240
2	Toward Atomic-Scale Device Fabrication in Silicon Using Scanning Probe Microscopy. Nano Letters, 2004, 4, 1969-1973.	9.1	150
3	Evidence of Spin Frustration in a Vanadium Diselenide Monolayer Magnet. Advanced Materials, 2019, 31, e1901185.	21.0	129
4	Realization of Atomically Controlled Dopant Devices in Silicon. Small, 2007, 3, 563-567.	10.0	108
5	Far out-of-equilibrium spin populations trigger giant spin injection into atomically thin MoS2. Nature Physics, 2019, 15, 347-351.	16.7	105
6	Can Reconstructed Seâ€Ðeficient Line Defects in Monolayer VSe₂ Induce Magnetism?. Advanced Materials, 2020, 32, e2000693.	21.0	87
7	Modification of Vapor Phase Concentrations in MoS₂ Growth Using a NiO Foam Barrier. ACS Nano, 2018, 12, 1339-1349.	14.6	70
8	Influence of doping density on electronic transport in degenerate Si:PÎ´-doped layers. Physical Review B, 2006, 73, .	3.2	62
9	Interlayer interactions in 2D WS₂/MoS₂ heterostructures monolithically grown by in situ physical vapor deposition. Nanoscale, 2018, 10, 22927-22936.	5.6	62
10	Roadmap on finding chiral valleys: screening 2D materials for valleytronics. Nano Futures, 2018, 2, 032001.	2.2	58
11	Scanning probe microscopy for silicon device fabrication. Molecular Simulation, 2005, 31, 505-515.	2.0	50
12	Metallic 1T Phase, 3d¹ Electronic Configuration and Charge Density Wave Order in Molecular Beam Epitaxy Grown Monolayer Vanadium Ditelluride. ACS Nano, 2019, 13, 12894-12900.	14.6	48
13	Effect of encapsulation temperature on Si:P Î´-doped layers. Applied Physics Letters, 2004, 85, 4953-4955.	3.3	44
14	Electron-electron interactions in highly disordered two-dimensional systems. Physical Review B, 2008, 77, .	3.2	40
15	Electrical Doping Effect of Vacancies on Monolayer MoS₂. Journal of Physical Chemistry C, 2019, 123, 2933-2939.	3.1	40
16	Bilayer gate dielectric study by scanning tunneling microscopy. Applied Physics Letters, 2007, 91, 102905.	3.3	38
17	Single layer MoS2 nanoribbon field effect transistor. Applied Physics Letters, 2019, 114, .	3.3	35
18	Electrically-Excited Surface Plasmon Polaritons with Directionality Control. ACS Photonics, 2015, 2, 385-391.	6.6	34

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19	One-dimensional conduction properties of highly phosphorus-doped planar nanowires patterned by scanning probe microscopy. Physical Review B, 2007, 76, .	3.2	33
20	Electronic properties of atomically abrupt tunnel junctions in silicon. Physical Review B, 2007, 75, .	3.2	31
21	Emergence of photoluminescence on bulk MoS2 by laser thinning and gold particle decoration. Nano Research, 2018, 11, 4574-4586.	10.4	30
22	Atomic-scale silicon device fabrication. International Journal of Nanotechnology, 2008, 5, 352.	0.2	28
23	Impact of S-Vacancies on the Charge Injection Barrier at the Electrical Contact with the MoS₂ Monolayer. ACS Nano, 2021, 15, 2686-2697.	14.6	27
24	The use of etched registration markers to make four-terminal electrical contacts to STM-patterned nanostructures. Nanotechnology, 2005, 16, 2446-2449.	2.6	26
25	Quantum Transport in Two-Dimensional WS₂ with High-Efficiency Carrier Injection through Indium Alloy Contacts. ACS Nano, 2020, 14, 13700-13708.	14.6	26
26	Narrow, highly P-doped, planar wires in silicon created by scanning probe microscopy. Nanotechnology, 2007, 18, 044023.	2.6	24
27	Electronic properties of atomically thin MoS₂ layers grown by physical vapour deposition: band structure and energy level alignment at layer/substrate interfaces. RSC Advances, 2018, 8, 7744-7752.	3.6	22
28	Gaussian Thermionic Emission Model for Analysis of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" overflow="scroll"><mml:mi>Au</mml:mi><mml:mo>/</mml:mo><mml:msub><mml:mrow><mml:mi>Mo</mml:mi><mml:mi mathvariant="normal">S</mml:mi></mml:mrow><mml:mn>2</mml:mn></mml:msub></mml:math> Schottky-Barrier Devices. Physical Review Applied, 2020, 14, .	3.8	21
29	Tuning the Conductivity Type in Monolayer WS₂ and MoS₂ by Sulfur Vacancies. Physica Status Solidi - Rapid Research Letters, 2020, 14, 2000248.	2.4	20
30	Toward Valleyâ€Coupled Spin Qubits. Advanced Quantum Technologies, 2020, 3, 1900123.	3.9	18
31	Gateâ€Defined Quantum Confinement in CVD 2D WS₂. Advanced Materials, 2022, 34, e2103907.	21.0	18
32	Electronically Transparent Graphene Barriers against Unwanted Doping of Silicon. ACS Applied Materials & Interfaces, 2014, 6, 20464-20472.	8.0	17
33	Imaging buried organic islands by spatially resolved ballistic electron emission spectroscopy. Nanotechnology, 2008, 19, 445718.	2.6	16
34	Low temperature nanoscale electronic transport on the MoS2 surface. Applied Physics Letters, 2013, 103, .	3.3	16
35	Effect of Phonons on Valley Depolarization in Monolayer WSe2. Electronic Materials Letters, 2018, 14, 766-773.	2.2	15
36	Enhancing electron transport in Si:P delta-doped devices by rapid thermal anneal. Applied Physics Letters, 2008, 93, 142105.	3.3	13

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37	Ohmic conduction of sub-10nm P-doped silicon nanowires at cryogenic temperatures. Applied Physics Letters, 2008, 92, 052101.	3.3	12
38	Effective removal of hydrogen resists used to pattern devices in silicon using scanning tunneling microscopy. Applied Physics Letters, 2005, 86, 143116.	3.3	11
39	Impact of Si growth rate on coherent electron transport in Si:P delta-doped devices. Applied Physics Letters, 2009, 95, 142104.	3.3	11
40	Patterning of sub-1 nm dangling-bond lines with atomic precision alignment on H:Si(100) surface at room temperature. Nanotechnology, 2012, 23, 275301.	2.6	11
41	Protected hole valley states in single-layer <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>Mo</mml:mi><mml:msub><mml:mi mathvariant="normal">S</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml:math>. Physical Review B, 2019, 99, .	3.2	11
42	Relevance of phosphorus incorporation and hydrogen removal for Si:P Î´-doped layers fabricated using phosphine. Physica Status Solidi (A) Applications and Materials Science, 2005, 202, 1002-1005.	1.8	10
43	Morphology and electrical conduction of Si:P Î´-doped layers on vicinal Si(001). Journal of Applied Physics, 2008, 104, 066104.	2.5	10
44	Coulomb Blockade in Etched Single- and Few-Layer MoS₂ Nanoribbons. ACS Applied Electronic Materials, 2019, 1, 2202-2207.	4.3	10
45	Carrier control in 2D transition metal dichalcogenides with Al2O3 dielectric. Scientific Reports, 2019, 9, 8769.	3.3	10
46	Using patterned H-resist for controlled three-dimensional growth of nanostructures. Applied Physics Letters, 2011, 98, .	3.3	9
47	Polymer-based conductive composites for 3D and 4D printing of electrical circuits. , 2020, , 45-83.		9
48	Comparison of GaP and PH3 as dopant sources for STM-based device fabrication. Nanotechnology, 2007, 18, 065301.	2.6	8
49	Use of a scanning electron microscope to pattern large areas of a hydrogen resist for electrical contacts. Journal of Applied Physics, 2007, 102, .	2.5	8
50	A Lab-scale Spin and Angular Resolved Photoemission Spectroscopy Capability for 2D Valleytronics. MRS Advances, 2017, 2, 1527-1532.	0.9	8
51	Tri-Level Resistive Switching in Metal-Nanocrystal-Based $hbox{Al}_{2}hbox{O}_{3}/hbox{SiO}_{2}$ Gate Stack. IEEE Transactions on Electron Devices, 2010, 57, 3001-3005.	3.0	7
52	Subthreshold characteristics of ballistic electron emission spectra. Journal of Applied Physics, 2012, 111, .	2.5	7
53	Enriched Fluorescence Emission from WS₂ Monoflake Empowered by Au Nanoexplorers. Advanced Optical Materials, 2017, 5, 1700156.	7.3	7
54	Detecting MoS2 and MoSe2 with optical contrast simulation. Progress in Natural Science: Materials International, 2019, 29, 667-671.	4.4	7

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55	Band Nesting Bypass in WS₂ Monolayers via FÃ¶rster Resonance Energy Transfer. ACS Nano, 2020, 14, 5946-5955.	14.6	7
56	A first-principles study on strain engineering of monolayer stanene for enhanced catalysis of CO2 reduction. Chemosphere, 2021, 268, 129317.	8.2	7
57	Use of low-temperature Hall effect to measure dopant activation: Role of electron-electron interactions. Physical Review B, 2007, 76, .	3.2	6
58	Electrostatic effects of nanoscale dielectric patches in the modification of Schottky contacts. Physical Review B, 2009, 79, .	3.2	6
59	Deep learning-enabled prediction of 2D material breakdown. Nanotechnology, 2021, 32, 265203.	2.6	6
60	Dual parameter ballistic electron emission spectroscopy analysis of inhomogeneous interfaces. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2010, 28, C5F1-C5F4.	1.2	5
61	Isoemissive Photoluminescence from a Quaternary System of Valley-Polarized, Defect-Bound Excitons and Trions in Two-Dimensional Transition Metal Dichalcogenides. Journal of Physical Chemistry C, 2021, 125, 12721-12729.	3.1	4
62	Quantum Technologies for Engineering: the materials challenge. Materials for Quantum Technology, 2022, 2, 013002.	3.1	4
63	Electronic properties of ultrathin high-Î¤ dielectrics studied by ballistic electron emission microscopy. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2011, 29, .	1.2	3
64	Effect of surface contamination on electron tunneling in the high bias range. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2012, 30, 041402.	2.1	3
65	Dynamic Tuning of MoirÃ© Superlattice Morphology by Laser Modification. ACS Nano, 2022, 16, 8172-8180.	14.6	3
66	Barrier height determination of Au/Oxidized GaAs/n-GaAs using ballistic electron emission spectroscopy. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2012, 30, .	1.2	2
67	The electronic barrier height of silicon native oxides at different oxidation stages. Journal of Applied Physics, 2012, 111, .	2.5	2
68	Atomically precise silicon device fabrication. , 2007, , .		1
69	Temperature-dependent relaxation current on single and dual layer Pt metal nanocrystal-based Al2O3/SiO2gate stack. Journal of Applied Physics, 2012, 112, 104503.	2.5	1
70	Back Cover: Toward Valleyâ€Coupled Spin Qubits (Adv. Quantum Technol. 6/2020). Advanced Quantum Technologies, 2020, 3, 2070063.	3.9	1
71	Minimisation of P surface segregation during epitaxial silicon growth for the fabrication of a silicon-based quantum computer. , 0, , .		0
72	The fabrication of devices in silicon using scanning probe microscopy. , 2005, , .		0

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73	Electrical properties of atomically controlled Si:P nanowires created by scanning probe microscopy. AIP Conference Proceedings, 2007, , .	0.4	0
74	Study of the charge leakage of dual layer Pt metal nanocrystal-based high-κ/SiO<inf>2</inf> flash memory cell - a relaxation current point of view. , 2011, , .		0
75	Study of automatic recovery on the metal nanocrystal-based Al2O3/SiO2 gate stack. Applied Physics Letters, 2011, 98, .	3.3	0
76	Nanoscale characterization of oxidized ultrathin Co-films by ballistic electron emission microscopy. Materials Research Express, 2016, 3, 015001.	1.6	0
77	2D Materials: Enriched Fluorescence Emission from WS₂ Monoflake Empowered by Au Nanoexplorers (Advanced Optical Materials 14/2017). Advanced Optical Materials, 2017, 5, .	7.3	0
78	Achieving Low Resistance Ohmic Contacts to Transition Metal Dichalcogenides (TMDCs). , 2021, , 185-196.		0
79	Ballistic Electron Emission Microscopy on Hybrid Metal/Organic/Semiconductor Interfaces. , 2010, , 57-73.		0
80	Dangling-Bond Wire Circuits on a Si(001)-(2x1):H Surface with Their Contacting Nanopads. Advances in Atom and Single Molecule Machines, 2013, , 163-174.	0.0	0
81	Band Engineering of the Si(001):H Surface by Doping with P and B Atoms. Advances in Atom and Single Molecule Machines, 2017, , 95-104.	0.0	0
82	Making 2D Nanolayers Visible by Optical Imaging. , 2019, , 349-361.		0