

Kuan Eng J Goh

List of Publications by Year in descending order

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82
papers

2,138
citations

236833

25
h-index

254106

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. <i>Applied Materials Today</i> , 2017, 9, 167-175.	2.3	240
2	Toward Atomic-Scale Device Fabrication in Silicon Using Scanning Probe Microscopy. <i>Nano Letters</i> , 2004, 4, 1969-1973.	4.5	150
3	Evidence of Spin Frustration in a Vanadium Diselenide Monolayer Magnet. <i>Advanced Materials</i> , 2019, 31, e1901185.	11.1	129
4	Realization of Atomically Controlled Dopant Devices in Silicon. <i>Small</i> , 2007, 3, 563-567.	5.2	108
5	Far out-of-equilibrium spin populations trigger giant spin injection into atomically thin MoS ₂ . <i>Nature Physics</i> , 2019, 15, 347-351.	6.5	105
6	Can Reconstructed Se-deficient Line Defects in Monolayer VSe ₂ Induce Magnetism?. <i>Advanced Materials</i> , 2020, 32, e2000693.	11.1	87
7	Modification of Vapor Phase Concentrations in MoS ₂ Growth Using a NiO Foam Barrier. <i>ACS Nano</i> , 2018, 12, 1339-1349.	7.3	70
8	Influence of doping density on electronic transport in degenerate Si:P-doped layers. <i>Physical Review B</i> , 2006, 73, .	1.1	62
9	Interlayer interactions in 2D WS ₂ /MoS ₂ heterostructures monolithically grown by <i>in situ</i> physical vapor deposition. <i>Nanoscale</i> , 2018, 10, 22927-22936.	2.8	62
10	Roadmap on finding chiral valleys: screening 2D materials for valleytronics. <i>Nano Futures</i> , 2018, 2, 032001.	1.0	58
11	Scanning probe microscopy for silicon device fabrication. <i>Molecular Simulation</i> , 2005, 31, 505-515.	0.9	50
12	Metallic 1T Phase, 3d ¹ Electronic Configuration and Charge Density Wave Order in Molecular Beam Epitaxy Grown Monolayer Vanadium Ditelluride. <i>ACS Nano</i> , 2019, 13, 12894-12900.	7.3	48
13	Effect of encapsulation temperature on Si:P-doped layers. <i>Applied Physics Letters</i> , 2004, 85, 4953-4955.	1.5	44
14	Electron-electron interactions in highly disordered two-dimensional systems. <i>Physical Review B</i> , 2008, 77, .	1.1	40
15	Electrical Doping Effect of Vacancies on Monolayer MoS ₂ . <i>Journal of Physical Chemistry C</i> , 2019, 123, 2933-2939.	1.5	40
16	Bilayer gate dielectric study by scanning tunneling microscopy. <i>Applied Physics Letters</i> , 2007, 91, 102905.	1.5	38
17	Single layer MoS ₂ nanoribbon field effect transistor. <i>Applied Physics Letters</i> , 2019, 114, .	1.5	35
18	Electrically-Excited Surface Plasmon Polaritons with Directionality Control. <i>ACS Photonics</i> , 2015, 2, 385-391.	3.2	34

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19	One-dimensional conduction properties of highly phosphorus-doped planar nanowires patterned by scanning probe microscopy. <i>Physical Review B</i> , 2007, 76, .	1.1	33
20	Electronic properties of atomically abrupt tunnel junctions in silicon. <i>Physical Review B</i> , 2007, 75, .	1.1	31
21	Emergence of photoluminescence on bulk MoS ₂ by laser thinning and gold particle decoration. <i>Nano Research</i> , 2018, 11, 4574-4586.	5.8	30
22	Atomic-scale silicon device fabrication. <i>International Journal of Nanotechnology</i> , 2008, 5, 352.	0.1	28
23	Impact of S-Vacancies on the Charge Injection Barrier at the Electrical Contact with the MoS ₂ Monolayer. <i>ACS Nano</i> , 2021, 15, 2686-2697.	7.3	27
24	The use of etched registration markers to make four-terminal electrical contacts to STM-patterned nanostructures. <i>Nanotechnology</i> , 2005, 16, 2446-2449.	1.3	26
25	Quantum Transport in Two-Dimensional WS ₂ with High-Efficiency Carrier Injection through Indium Alloy Contacts. <i>ACS Nano</i> , 2020, 14, 13700-13708.	7.3	26
26	Narrow, highly P-doped, planar wires in silicon created by scanning probe microscopy. <i>Nanotechnology</i> , 2007, 18, 044023.	1.3	24
27	Electronic properties of atomically thin MoS ₂ layers grown by physical vapour deposition: band structure and energy level alignment at layer/substrate interfaces. <i>RSC Advances</i> , 2018, 8, 7744-7752.	1.7	22
28	Gaussian Thermionic Emission Model for Analysis of Au/MoS_2 Schottky-Barrier Devices. <i>Physical Review Applied</i> , 2020, 14, .	1.5	21
29	Tuning the Conductivity Type in Monolayer WS ₂ and MoS ₂ by Sulfur Vacancies. <i>Physica Status Solidi - Rapid Research Letters</i> , 2020, 14, 2000248.	1.2	20
30	Toward Valley-Coupled Spin Qubits. <i>Advanced Quantum Technologies</i> , 2020, 3, 1900123.	1.8	18
31	Gate-Defined Quantum Confinement in CVD 2D WS ₂ . <i>Advanced Materials</i> , 2022, 34, e2103907.	11.1	18
32	Electronically Transparent Graphene Barriers against Unwanted Doping of Silicon. <i>ACS Applied Materials & Interfaces</i> , 2014, 6, 20464-20472.	4.0	17
33	Imaging buried organic islands by spatially resolved ballistic electron emission spectroscopy. <i>Nanotechnology</i> , 2008, 19, 445718.	1.3	16
34	Low temperature nanoscale electronic transport on the MoS ₂ surface. <i>Applied Physics Letters</i> , 2013, 103, .	1.5	16
35	Effect of Phonons on Valley Depolarization in Monolayer WSe ₂ . <i>Electronic Materials Letters</i> , 2018, 14, 766-773.	1.0	15
36	Enhancing electron transport in Si:P delta-doped devices by rapid thermal anneal. <i>Applied Physics Letters</i> , 2008, 93, 142105.	1.5	13

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37	Ohmic conduction of sub-10nm P-doped silicon nanowires at cryogenic temperatures. Applied Physics Letters, 2008, 92, 052101.	1.5	12
38	Effective removal of hydrogen resists used to pattern devices in silicon using scanning tunneling microscopy. Applied Physics Letters, 2005, 86, 143116.	1.5	11
39	Impact of Si growth rate on coherent electron transport in Si:P delta-doped devices. Applied Physics Letters, 2009, 95, 142104.	1.5	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.	1.3	11
41	Protected hole valley states in single-layer MoS_2 . Physical Review B, 2019, 99, .	1.1	11
42	Relevance of phosphorus incorporation and hydrogen removal for Si:P $\hat{\Gamma}$ -doped layers fabricated using phosphine. Physica Status Solidi (A) Applications and Materials Science, 2005, 202, 1002-1005.	0.8	10
43	Morphology and electrical conduction of Si:P $\hat{\Gamma}$ -doped layers on vicinal Si(001). Journal of Applied Physics, 2008, 104, 066104.	1.1	10
44	Coulomb Blockade in Etched Single- and Few-Layer MoS_2 Nanoribbons. ACS Applied Electronic Materials, 2019, 1, 2202-2207.	2.0	10
45	Carrier control in 2D transition metal dichalcogenides with Al_2O_3 dielectric. Scientific Reports, 2019, 9, 8769.	1.6	10
46	Using patterned H-resist for controlled three-dimensional growth of nanostructures. Applied Physics Letters, 2011, 98, .	1.5	9
47	Polymer-based conductive composites for 3D and 4D printing of electrical circuits. , 2020, , 45-83.		9
48	Comparison of GaP and PH ₃ as dopant sources for STM-based device fabrication. Nanotechnology, 2007, 18, 065301.	1.3	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, .	1.1	8
50	A Lab-scale Spin and Angular Resolved Photoemission Spectroscopy Capability for 2D Valleytronics. MRS Advances, 2017, 2, 1527-1532.	0.5	8
51	Tri-Level Resistive Switching in Metal-Nanocrystal-Based $\text{Al}_2\text{O}_3/\text{SiO}_2$ Gate Stack. IEEE Transactions on Electron Devices, 2010, 57, 3001-3005.	1.6	7
52	Subthreshold characteristics of ballistic electron emission spectra. Journal of Applied Physics, 2012, 111, .	1.1	7
53	Enriched Fluorescence Emission from WS_2 Monoflake Empowered by Au Nanoexplorers. Advanced Optical Materials, 2017, 5, 1700156.	3.6	7
54	Detecting MoS_2 and MoSe_2 with optical contrast simulation. Progress in Natural Science: Materials International, 2019, 29, 667-671.	1.8	7

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55	Band Nesting Bypass in WS ₂ Monolayers via First Resonance Energy Transfer. ACS Nano, 2020, 14, 5946-5955.	7.3	7
56	A first-principles study on strain engineering of monolayer stanene for enhanced catalysis of CO ₂ reduction. Chemosphere, 2021, 268, 129317.	4.2	7
57	Use of low-temperature Hall effect to measure dopant activation: Role of electron-electron interactions. Physical Review B, 2007, 76, .	1.1	6
58	Electrostatic effects of nanoscale dielectric patches in the modification of Schottky contacts. Physical Review B, 2009, 79, .	1.1	6
59	Deep learning-enabled prediction of 2D material breakdown. Nanotechnology, 2021, 32, 265203.	1.3	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.	0.6	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.	1.5	4
62	Quantum Technologies for Engineering: the materials challenge. Materials for Quantum Technology, 2022, 2, 013002.	1.2	4
63	Electronic properties of ultrathin high- κ dielectrics studied by ballistic electron emission microscopy. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2011, 29, .	0.6	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.	0.9	3
65	Dynamic Tuning of Moiré Superlattice Morphology by Laser Modification. ACS Nano, 2022, 16, 8172-8180.	7.3	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, .	0.6	2
67	The electronic barrier height of silicon native oxides at different oxidation stages. Journal of Applied Physics, 2012, 111, .	1.1	2
68	Atomically precise silicon device fabrication. , 2007, , .		1
69	Temperature-dependent relaxation current on single and dual layer Pt metal nanocrystal-based Al ₂ O ₃ /SiO ₂ gate stack. Journal of Applied Physics, 2012, 112, 104503.	1.1	1
70	Back Cover: Toward Valley-Coupled Spin Qubits (Adv. Quantum Technol. 6/2020). Advanced Quantum Technologies, 2020, 3, 2070063.	1.8	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, , .	0.3	0
74	Study of the charge leakage of dual layer Pt metal nanocrystal-based high- κ /SiO ₂ flash memory cell - a relaxation current point of view. , 2011, , .		0
75	Study of automatic recovery on the metal nanocrystal-based Al ₂ O ₃ /SiO ₂ gate stack. Applied Physics Letters, 2011, 98, .	1.5	0
76	Nanoscale characterization of oxidized ultrathin Co-films by ballistic electron emission microscopy. Materials Research Express, 2016, 3, 015001.	0.8	0
77	2D Materials: Enriched Fluorescence Emission from WS ₂ Monoflake Empowered by Au Nanoexplorers (Advanced Optical Materials 14/2017). Advanced Optical Materials, 2017, 5, .	3.6	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