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	Gateâ€Defined Quantum Confinement in CVD 2D WS₂. Advanced Materials, 2022, 34, e2103907.	11.1	18
2	Quantum Technologies for Engineering: the materials challenge. Materials for Quantum Technology, 2022, 2, 013002.	1.2	4
3	Dynamic Tuning of MoirÃ© Superlattice Morphology by Laser Modification. ACS Nano, 2022, 16, 8172-8180.	7.3	3
4	A first-principles study on strain engineering of monolayer stanene for enhanced catalysis of CO2 reduction. Chemosphere, 2021, 268, 129317.	4.2	7
5	Achieving Low Resistance Ohmic Contacts to Transition Metal Dichalcogenides (TMDCs). , 2021, , 185-196.		0
6	Deep learning-enabled prediction of 2D material breakdown. Nanotechnology, 2021, 32, 265203.	1.3	6
7	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
8	Impact of S-Vacancies on the Charge Injection Barrier at the Electrical Contact with the MoS₂ Monolayer. ACS Nano, 2021, 15, 2686-2697.	7.3	27
9	Polymer-based conductive composites for 3D and 4D printing of electrical circuits. , 2020, , 45-83.		9
10	Quantum Transport in Two-Dimensional WS₂ with High-Efficiency Carrier Injection through Indium Alloy Contacts. ACS Nano, 2020, 14, 13700-13708.	7.3	26
11	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:mrow><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, .	4.5	21
12	Band Nesting Bypass in WS₂ Monolayers via FÃ¶rster Resonance Energy Transfer. ACS Nano, 2020, 14, 5946-5955.	7.3	7
13	Can Reconstructed Seâ€Deficient Line Defects in Monolayer VSe₂ Induce Magnetism?. Advanced Materials, 2020, 32, e2000693.	11.1	87
14	Toward Valleyâ€Coupled Spin Qubits. Advanced Quantum Technologies, 2020, 3, 1900123.	1.8	18
15	Back Cover: Toward Valleyâ€Coupled Spin Qubits (Adv. Quantum Technol. 6/2020). Advanced Quantum Technologies, 2020, 3, 2070063.	1.8	1
16	Tuning the Conductivity Type in Monolayer WS₂ and MoS₂ by Sulfur Vacancies. Physica Status Solidi - Rapid Research Letters, 2020, 14, 2000248.	1.2	20
17	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.	7.3	48
18	Coulomb Blockade in Etched Single- and Few-Layer MoS₂ Nanoribbons. ACS Applied Electronic Materials, 2019, 1, 2202-2207.	2.0	10

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19	Far out-of-equilibrium spin populations trigger giant spin injection into atomically thin MoS2. Nature Physics, 2019, 15, 347-351.	6.5	105
20	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, .	1.1	11
21	Carrier control in 2D transition metal dichalcogenides with Al2O3 dielectric. Scientific Reports, 2019, 9, 8769.	1.6	10
22	Evidence of Spin Frustration in a Vanadium Diselenide Monolayer Magnet. Advanced Materials, 2019, 31, e1901185.	11.1	129
23	Detecting MoS2 and MoSe2 with optical contrast simulation. Progress in Natural Science: Materials International, 2019, 29, 667-671.	1.8	7
24	Electrical Doping Effect of Vacancies on Monolayer MoS₂. Journal of Physical Chemistry C, 2019, 123, 2933-2939.	1.5	40
25	Single layer MoS2 nanoribbon field effect transistor. Applied Physics Letters, 2019, 114, .	1.5	35
26	Making 2D Nanolayers Visible by Optical Imaging. , 2019, , 349-361.		0
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.	1.7	22
28	Modification of Vapor Phase Concentrations in MoS₂ Growth Using a NiO Foam Barrier. ACS Nano, 2018, 12, 1339-1349.	7.3	70
29	Emergence of photoluminescence on bulk MoS2 by laser thinning and gold particle decoration. Nano Research, 2018, 11, 4574-4586.	5.8	30
30	Interlayer interactions in 2D WS₂/MoS₂ heterostructures monolithically grown by in situ physical vapor deposition. Nanoscale, 2018, 10, 22927-22936.	2.8	62
31	Roadmap on finding chiral valleys: screening 2D materials for valleytronics. Nano Futures, 2018, 2, 032001.	1.0	58
32	Effect of Phonons on Valley Depolarization in Monolayer WSe2. Electronic Materials Letters, 2018, 14, 766-773.	1.0	15
33	A Lab-scale Spin and Angular Resolved Photoemission Spectroscopy Capability for 2D Valleytronics. MRS Advances, 2017, 2, 1527-1532.	0.5	8
34	Enriched Fluorescence Emission from WS₂ Monoflake Empowered by Au Nanoexplorers. Advanced Optical Materials, 2017, 5, 1700156.	3.6	7
35	2D Materials: Enriched Fluorescence Emission from WS₂ Monoflake Empowered by Au Nanoexplorers (Advanced Optical Materials 14/2017). Advanced Optical Materials, 2017, 5, .	3.6	0
36	Electrically conductive filament for 3D-printed circuits and sensors. Applied Materials Today, 2017, 9, 167-175.	2.3	240

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37	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
38	Nanoscale characterization of oxidized ultrathin Co-films by ballistic electron emission microscopy. Materials Research Express, 2016, 3, 015001.	0.8	0
39	Electrically-Excited Surface Plasmon Polaritons with Directionality Control. ACS Photonics, 2015, 2, 385-391.	3.2	34
40	Electronically Transparent Graphene Barriers against Unwanted Doping of Silicon. ACS Applied Materials & Interfaces, 2014, 6, 20464-20472.	4.0	17
41	Low temperature nanoscale electronic transport on the MoS2 surface. Applied Physics Letters, 2013, 103, .	1.5	16
42	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
43	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
44	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
45	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
46	Temperature-dependent relaxation current on single and dual layer Pt metal nanocrystal-based Al2O3/SiO2gate stack. Journal of Applied Physics, 2012, 112, 104503.	1.1	1
47	Subthreshold characteristics of ballistic electron emission spectra. Journal of Applied Physics, 2012, 111, .	1.1	7
48	The electronic barrier height of silicon native oxides at different oxidation stages. Journal of Applied Physics, 2012, 111, .	1.1	2
49	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
50	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, .	0.6	3
51	Study of automatic recovery on the metal nanocrystal-based Al2O3/SiO2 gate stack. Applied Physics Letters, 2011, 98, .	1.5	0
52	Using patterned H-resist for controlled three-dimensional growth of nanostructures. Applied Physics Letters, 2011, 98, .	1.5	9
53	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.	1.6	7
54	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

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55	Ballistic Electron Emission Microscopy on Hybrid Metal/Organic/Semiconductor Interfaces. , 2010, , 57-73.		0
56	Impact of Si growth rate on coherent electron transport in Si:P delta-doped devices. Applied Physics Letters, 2009, 95, 142104.	1.5	11
57	Electrostatic effects of nanoscale dielectric patches in the modification of Schottky contacts. Physical Review B, 2009, 79, .	1.1	6
58	Atomic-scale silicon device fabrication. International Journal of Nanotechnology, 2008, 5, 352.	0.1	28
59	Imaging buried organic islands by spatially resolved ballistic electron emission spectroscopy. Nanotechnology, 2008, 19, 445718.	1.3	16
60	Enhancing electron transport in Si:P delta-doped devices by rapid thermal anneal. Applied Physics Letters, 2008, 93, 142105.	1.5	13
61	Electron-electron interactions in highly disordered two-dimensional systems. Physical Review B, 2008, 77, .	1.1	40
62	Ohmic conduction of sub-10nm P-doped silicon nanowires at cryogenic temperatures. Applied Physics Letters, 2008, 92, 052101.	1.5	12
63	Morphology and electrical conduction of Si:P Î´-doped layers on vicinal Si(001). Journal of Applied Physics, 2008, 104, 066104.	1.1	10
64	Comparison of GaP and PH3 as dopant sources for STM-based device fabrication. Nanotechnology, 2007, 18, 065301.	1.3	8
65	Atomically precise silicon device fabrication. , 2007, , .		1
66	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
67	Use of low-temperature Hall effect to measure dopant activation: Role of electron-electron interactions. Physical Review B, 2007, 76, .	1.1	6
68	Electronic properties of atomically abrupt tunnel junctions in silicon. Physical Review B, 2007, 75, .	1.1	31
69	One-dimensional conduction properties of highly phosphorus-doped planar nanowires patterned by scanning probe microscopy. Physical Review B, 2007, 76, .	1.1	33
70	Narrow, highly P-doped, planar wires in silicon created by scanning probe microscopy. Nanotechnology, 2007, 18, 044023.	1.3	24
71	Bilayer gate dielectric study by scanning tunneling microscopy. Applied Physics Letters, 2007, 91, 102905.	1.5	38
72	Electrical properties of atomically controlled Si:P nanowires created by scanning probe microscopy. AIP Conference Proceedings, 2007, , .	0.3	0

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73	Realization of Atomically Controlled Dopant Devices in Silicon. Small, 2007, 3, 563-567.	5.2	108
74	Influence of doping density on electronic transport in degenerate Si:PÎ´-doped layers. Physical Review B, 2006, 73, .	1.1	62
75	The fabrication of devices in silicon using scanning probe microscopy. , 2005, , .		0
76	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.	0.8	10
77	The use of etched registration markers to make four-terminal electrical contacts to STM-patterned nanostructures. Nanotechnology, 2005, 16, 2446-2449.	1.3	26
78	Effective removal of hydrogen resists used to pattern devices in silicon using scanning tunneling microscopy. Applied Physics Letters, 2005, 86, 143116.	1.5	11
79	Scanning probe microscopy for silicon device fabrication. Molecular Simulation, 2005, 31, 505-515.	0.9	50
80	Effect of encapsulation temperature on Si:P Î´-doped layers. Applied Physics Letters, 2004, 85, 4953-4955.	1.5	44
81	Toward Atomic-Scale Device Fabrication in Silicon Using Scanning Probe Microscopy. Nano Letters, 2004, 4, 1969-1973.	4.5	150
82	Minimisation of P surface segregation during epitaxial silicon growth for the fabrication of a silicon-based quantum computer. , 0, , .		0