Kar-Wei Ng

List of Publications by Year
in descending order

90 papers	2,508 citations	201575 27 h-index	214721 47 g-index
90 all docs	90 docs citations	90 times ranked	2929 citing authors

#	Article	IF	Citations
1	Nanolasers grown on silicon. Nature Photonics, 2011, 5, 170-175.	15.6	469
2	Growing antiphase-domain-free GaAs thin films out of highly ordered planar nanowire arrays on exact (001) silicon. Applied Physics Letters, 2015, 106, .	1.5	135
3	1-kV Sputtered p-NiO/n-Ga₂O₃ Heterojunction Diodes With an Ultra-Low Leakage Current Below $1~mu$ A/cm². IEEE Electron Device Letters, 2020, 41, 449-452.	2.2	129
4	GaAs-Based Nanoneedle Light Emitting Diode and Avalanche Photodiode Monolithically Integrated on a Silicon Substrate. Nano Letters, 2011, 11, 385-390.	4.5	97
5	Multiâ€Phase Heterostructure of CoNiP/Co_xP for Enhanced Hydrogen Evolution Under Alkaline and Seawater Conditions by Promoting H₂O Dissociation. Small, 2021, 17, e2007557.	5.2	83
6	Two-dimensional materials as novel co-catalysts for efficient solar-driven hydrogen production. Journal of Materials Chemistry A, 2020, 8, 23202-23230.	5.2	81
7	Two-Dimensional Layered Materials: High-Efficient Electrocatalysts for Hydrogen Evolution Reaction. ACS Applied Nano Materials, 2020, 3, 6270-6296.	2.4	70
8	High-performance III-nitride blue LEDs grown and fabricated on patterned Si substrates. Journal of Crystal Growth, 2007, 298, 725-730.	0.7	66
9	Nanophotonic integrated circuits from nanoresonators grown on silicon. Nature Communications, 2014, 5, 4325.	5.8	57
10	Unconventional Growth Mechanism for Monolithic Integration of IIIâ€“V on Silicon. ACS Nano, 2013, 7, 100-107.	7.3	53
11	Ultrasensitive ethanol sensor based on segregated ZnO-In2O3 porous nanosheets. Applied Surface Science, 2021, 535, 147697.	3.1	52
12	Sensitive and Low-Power Metal Oxide Gas Sensors with a Low-Cost Microelectromechanical Heater. ACS Omega, 2021, 6, 1216-1222.	1.6	49
13	An asymmetric supercapacitor with excellent cycling performance realized by hierarchical porous NiGa₂O₄ nanosheets. Journal of Materials Chemistry A, 2017, 5, 19046-19053.	5.2	48
14	Nanopillar quantum well lasers directly grown on silicon and emitting at silicon-transparent wavelengths. Optica, 2017, 4, 717.	4.8	45
15	Tailoring the Optical Characteristics of Microsized InP Nanoneedles Directly Grown on Silicon. Nano Letters, 2014, 14, 183-190.	4.5	44
16	Stable and Efficient Blueâ€Emitting CsPbBr₃ Nanoplatelets with Potassium Bromide Surface Passivation. Small, 2021, 17, e2101359.	5.2	41
17	Room-temperature InP/InGaAs nano-ridge lasers grown on Si and emitting at telecom bands. Optica, 2018, 5, 918.	4.8	40
18	Core-shell InGaAs/GaAs quantum well nanoneedles grown on silicon with silicon-transparent emission. Optics Express, 2009, 17, 7831.	1.7	38

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19	Nanolasers grown on silicon-based MOSFETs. Optics Express, 2012, 20, 12171.	1.7	36
20	Spray-deposited PbS colloidal quantum dot solid for near-infrared photodetectors. Nano Energy, 2020, 78, 105254.	8.2	35
21	High-quality InP nanoneedles grown on silicon. Applied Physics Letters, 2013, 102, .	1.5	34
22	GaAs nanoneedles grown on sapphire. Applied Physics Letters, 2011, 98, 123101.	1.5	33
23	Proton Conducting Polyoxometalate/Polypyrrole Films and Their Humidity Sensing Performance. ACS Applied Nano Materials, 2018, 1, 564-571.	2.4	32
24	Design of novel pentagonal 2D transitional-metal sulphide monolayers for hydrogen evolution reaction. International Journal of Hydrogen Energy, 2020, 45, 16201-16209.	3.8	32
25	Close-loop recycling of perovskite solar cells through dissolution-recrystallization of perovskite by butylamine. Cell Reports Physical Science, 2021, 2, 100341.	2.8	32
26	Laser optomechanics. Scientific Reports, 2015, 5, 13700.	1.6	31
27	InGaAs/InP quantum wires grown on silicon with adjustable emission wavelength at telecom bands. Nanotechnology, 2018, 29, 225601.	1.3	27
28	Elastic energy relaxation and critical thickness for plastic deformation in the core-shell InGaAs/GaAs nanopillars. Journal of Applied Physics, 2013, 113, .	1.1	26
29	Nanopillar Lasers Directly Grown on Silicon with Heterostructure Surface Passivation. ACS Nano, 2014, 8, 6833-6839.	7.3	26
30	Ultracompact Position-Controlled InP Nanopillar LEDs on Silicon with Bright Electroluminescence at Telecommunication Wavelengths. ACS Photonics, 2017, 4, 695-702.	3.2	26
31	Tailoring the Photoluminescence Excitation Dependence of the Carbon Dots via an Alkali Treatment. Journal of Physical Chemistry Letters, 2019, 10, 4596-4602.	2.1	26
32	Defect reduction in epitaxial InP on nanostructured Si (001) substrates with position-controlled seed arrays. Journal of Crystal Growth, 2014, 405, 81-86.	0.7	24
33	Illumination Angle Insensitive Single Indium Phosphide Tapered Nanopillar Solar Cell. Nano Letters, 2015, 15, 4961-4967.	4.5	24
34	Continuous-wave lasing from InP/InGaAs nanoridges at telecommunication wavelengths. Applied Physics Letters, 2017, 111, 212101.	1.5	23
35	Ultrahigh Responsivity-Bandwidth Product in a Compact InP Nanopillar Phototransistor Directly Grown on Silicon. Scientific Reports, 2016, 6, 33368.	1.6	22
36	High-Performance AlGaN/GaN/Si Power MOSHEMTs With ZrO₂ Gate Dielectric. IEEE Transactions on Electron Devices, 2018, 65, 5337-5342.	1.6	22

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37	Single Crystalline InGaAs Nanopillar Grown on Polysilicon with Dimensions beyond the Substrate Grain Size Limit. Nano Letters, 2013, 13, 5931-5937.	4.5	19
38	High Brightness InP Micropillars Grown on Silicon with Fermi Level Splitting Larger than 1 eV. Nano Letters, 2014, 14, 3235-3240.	4.5	19
39	Stable UV-Pumped White Light-Emitting Diodes Based on Anthracene-Coated CsCu₂I₃. Journal of Physical Chemistry C, 2021, 125, 13076-13083.	1.5	19
40	Fabrication of Robust, Anti-reflective, Transparent Superhydrophobic Coatings with a Micropatterned Multilayer Structure. Langmuir, 2022, 38, 7129-7136.	1.6	19
41	Wurtzite-Phased InP Micropillars Grown on Silicon with Low Surface Recombination Velocity. Nano Letters, 2015, 15, 7189-7198.	4.5	18
42	Cobalt/titanium nitride@N-doped carbon hybrids for enhanced electrocatalytic hydrogen evolution and supercapacitance. New Journal of Chemistry, 2019, 43, 14518-14526.	1.4	17
43	Low-cost preparation of durable, transparent, superhydrophobic coatings with excellent environmental stability and self-cleaning function. Surface and Coatings Technology, 2022, 438, 128367.	2.2	17
44	Metastable Growth of Pure Wurtzite InGaAs Microstructures. Nano Letters, 2014, 14, 4757-4762.	4.5	16
45	Aluminum-Based Surface Polymerization on Carbon Dots with Aggregation-Enhanced Luminescence. Journal of Physical Chemistry Letters, 2021, 12, 4530-4536.	2.1	16
46	Robust Ultralong Lead Halide Perovskite Microwire Lasers. ACS Applied Materials & Interfaces, 2021, 13, 38458-38466.	4.0	14
47	Physical, chemical, and cell toxicity properties of mature/aged particulate matter (PM) trapped in a diesel particulate filter (DPF) along with the results from freshly produced PM of a diesel engine. Journal of Hazardous Materials, 2022, 434, 128855.	6.5	14
48	InAlGaAs/InAlAs MQWs on Si Substrate. IEEE Photonics Technology Letters, 2015, 27, 748-751.	1.3	13
49	Homogeneous Core/Shell NiMoO4@NiMoO4 and Activated Carbon for High Performance Asymmetric Supercapacitor. Nanomaterials, 2019, 9, 1033.	1.9	12
50	Magnetic and electronic properties of 2D TiX3 (X = F, Cl, Br and I). Physical Chemistry Chemical Physics, 2020, 22, 17632-17638.	1.3	12
51	Micropatterned Amorphous Zr-Based Alloys Coated with Silica Nanoparticles as Superhydrophobic Surfaces against Abrasion. ACS Applied Nano Materials, 2021, 4, 12300-12307.	2.4	12
52	Investigation on the role of amines in the liquefaction and recrystallization process of MAPbI₃ perovskite. Journal of Materials Chemistry A, 2020, 8, 13585-13593.	5.2	11
53	Physicochemical and cell toxicity properties of particulate matter (PM) from a diesel vehicle fueled with diesel, spent coffee ground biodiesel, and ethanol. Science of the Total Environment, 2022, 824, 153873.	3.9	11
54	Valence Band Splitting in Wurtzite InGaAs Nanoneedles Studied by Photoluminescence Excitation Spectroscopy. ACS Nano, 2014, 8, 11440-11446.	7.3	10

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55	Solvent Effects on the Interface and Film Integrity of Solution-Processed ZnO Electron Transfer Layers for Quantum Dot Light-Emitting Diodes. ACS Applied Electronic Materials, 2020, 2, 1074-1080.	2.0	10
56	Design of 2D materials â€“ MSi₂C_xN_{4â^'x} (M = Cr, Mo, and W;) Tj ETQq0 0 0 rgBT /Overlock 10 T	2.8	10
57	Ultra-thin curved visible microdisk lasers with three-dimensional whispering gallery modes. Nanophotonics, 2020, 9, 2997-3002.	2.9	10
58	Three-dimensional whispering gallery modes in InGaAs nanoneedle lasers on silicon. Applied Physics Letters, 2014, 105, .	1.5	9
59	Composition Homogeneity in InGaAs/GaAs Coreâ€“Shell Nanopillars Monolithically Grown on Silicon. ACS Applied Materials & Interfaces, 2014, 6, 16706-16711.	4.0	9
60	Unveiling the Origin of Catalytic Sites of Pt Nanoparticles Decorated on Oxygen-Deficient Vanadium-Doped Cobalt Hydroxide Nanosheet for Hybrid Sodiumâ€“Air Batteries. ACS Applied Energy Materials, 2020, 3, 7464-7473.	2.5	9
61	Ab initio design of a new family of 2D materials: transition metal carbon nitrogen compounds (MCNs). Journal of Materials Chemistry C, 2021, 9, 4748-4756.	2.7	8
62	Improved GaN grown on Si(111) substrate using ammonia flow modulation on SiN x mask layer by MOCVD. Science in China Series D: Earth Sciences, 2009, 52, 2758-2761.	0.9	7
63	Freestanding CH₃NH₃PbBr₃ single-crystal microwires for optoelectronic applications synthesized with a predefined lattice framework. Journal of Materials Chemistry C, 2021, 9, 4771-4781.	2.7	7
64	Growth kinetics of GaAs nanoneedles on silicon and sapphire substrates. Applied Physics Letters, 2011, 98, 153113.	1.5	6
65	IIIâ€“V micro- and nano-lasers deposited on amorphous SiO2. Applied Physics Letters, 2020, 116, .	1.5	5
66	Observation and Suppression of Stacking Interface States in Sandwich-Structured Quantum Dot Light-Emitting Diodes. ACS Applied Materials & Interfaces, 2021, 13, 56630-56637.	4.0	5
67	Design of functionalized double-metal MXenes (M2Mâ€™C2T2: M = Cr, Mo, Mâ€™ = Ti, V) for magnetic and catalytic applications. International Journal of Hydrogen Energy, 2022, , .	3.8	5
68	Growth and Characterizations of GaN-Based LEDs Grown on Wet-Etched Stripe-Patterned Sapphire Substrates. Journal of Electronic Materials, 2008, 37, 1560-1564.	1.0	4
69	Effects of AlGaN/AlN Stacked Interlayers on GaN Growth on Si (111). Chinese Physics Letters, 2010, 27, 038103.	1.3	4
70	High-speed avalanche photodiodes using III–V nanopillars monolithically grown on silicon. , 2012, , .		4
71	Metal-to-ligand charge transfer chirality-based sensing of mercury ions. Photonics Research, 2021, 9, 213.	3.4	3
72	All-semiconductor nanolasers on silicon. , 2010, , .		2

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73	High quality InGaP micropillars directly grown on silicon. , 2013, , .		2
74	CNSi/MXene/CNSi: Unique Structure with Specific Electronic Properties for Nanodevices. Small, 2021, 17, 2101482.	5.2	2
75	InGaAs QW Nanopillar Light Emitting Diodes Monolithically Grown on a Si Substrate. , 2010, , .		1
76	Single Crystalline GaAs Nanoneedles Grown on 46% Lattice-Mismatched Sapphire with Bright Luminescence. , 2010, , .		1
77	Nanolasers grown on polycrystalline silicon. , 2010, , .		1
78	Characteristics of InP nanoneedles grown on silicon by low-temperature MOCVD. , 2012, , .		1
79	InP nanowire avalanche photodiode and bipolar junction phototransistor integrated on silicon substrate. , 2014, , .		1
80	GaAs Nanoneedle Photodetector Monolithically Grown on a (111) Si Substrate by MOCVD. , 2009, , .		1
81	Room-Temperature InGaAs/InP Quantum-Well-in-Nanopillar Laser Directly Grown on Silicon. , 2016, , .		1
82	Efficiency Improvement of Quantum Dot Light-Emitting Diodes via Thermal Damage Suppression with HATCN. ACS Applied Materials & Interfaces, 2021, 13, 49058-49065.	4.0	1
83	One-step synthesized single component white emitting carbon microspheres for lighting. Journal of Luminescence, 2022, 242, 118606.	1.5	1
84	Fabrication and oxidation of amorphous Zr-based alloy for imprint lithography. Microelectronic Engineering, 2022, 256, 111722.	1.1	1
85	Nanopillar lasers on silicon. , 2011, , .		0
86	Helically Propagating Modes in InGaAs Nanoneedle Lasers Grown on Poly-Silicon and Silicon Substrates. , 2011, , .		0
87	High brightness InP micropillars grown on silicon with Fermi-level splits larger than 1 eV. , 2013, , .		0
88	Nanolasers on Si-MOSFET: A Monolithic Integration. , 2011, , .		0
89	Broadband Self-Swept High Contrast Grating VCSEL. , 2015, , .		0
90	EFFECT OF VEHICLE LIGHT ON THE NANOSTRUCTURE OF PARTICULATE MATTERS EMITTED FROM DIESEL AND GASOLINE VEHICLES. WIT Transactions on Ecology and the Environment, 2021, , .	0.0	0