

# Jie Sun

## List of Publications by Year in descending order

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95  
papers

2,100  
citations

218381

26  
h-index

264894

42  
g-index

95  
all docs

95  
docs citations

95  
times ranked

3061  
citing authors

#	ARTICLE	IF	CITATIONS
1	Graphene Conductance Uniformity Mapping. Nano Letters, 2012, 12, 5074-5081.	4.5	152
2	Synthesis Methods of Two-Dimensional MoS <sub>2</sub> : A Brief Review. Crystals, 2017, 7, 198.	1.0	138
3	Unveiling the charge transfer dynamics steered by built-in electric fields in BiOBr photocatalysts. Nature Communications, 2022, 13, 2230.	5.8	117
4	Frame assisted H <sub>2</sub> O electrolysis induced H <sub>2</sub> bubbling transfer of large area graphene grown by chemical vapor deposition on Cu. Applied Physics Letters, 2013, 102, .	1.5	109
5	Large-area uniform graphene-like thin films grown by chemical vapor deposition directly on silicon nitride. Applied Physics Letters, 2011, 98, .	1.5	81
6	Vertically Aligned Graphene Coating is Bactericidal and Prevents the Formation of Bacterial Biofilms. Advanced Materials Interfaces, 2018, 5, 1701331.	1.9	72
7	Catalyst-Free, Selective Growth of ZnO Nanowires on SiO <sub>2</sub> by Chemical Vapor Deposition for Transfer-Free Fabrication of UV Photodetectors. ACS Applied Materials & Interfaces, 2015, 7, 20264-20271.	4.0	69
8	Noncatalytic chemical vapor deposition of graphene on high-temperature substrates for transparent electrodes. Applied Physics Letters, 2012, 100, .	1.5	66
9	Controllable chemical vapor deposition of large area uniform nanocrystalline graphene directly on silicon dioxide. Journal of Applied Physics, 2012, 111, .	1.1	59
10	Low Partial Pressure Chemical Vapor Deposition of Graphene on Copper. IEEE Nanotechnology Magazine, 2012, 11, 255-260.	1.1	57
11	Electrical Properties of Self-Assembled Branched InAs Nanowire Junctions. Nano Letters, 2008, 8, 1100-1104.	4.5	56
12	Growth mechanism of graphene on platinum: Surface catalysis and carbon segregation. Applied Physics Letters, 2014, 104, .	1.5	56
13	Graphene GaN-Based Schottky Ultraviolet Detectors. IEEE Transactions on Electron Devices, 2015, 62, 2802-2808.	1.6	50
14	Influence of graphene synthesizing techniques on the photocatalytic performance of graphene@TiO <sub>2</sub> nanocomposites. Physical Chemistry Chemical Physics, 2013, 15, 15528-15537.	1.3	43
15	Quantum Hall effect in graphene decorated with disordered multilayer patches. Applied Physics Letters, 2013, 103, .	1.5	39
16	Ultrahigh Surface-Enhanced Raman Scattering of Graphene from Au/Graphene/Au Sandwiched Structures with Subnanometer Gap. Advanced Optical Materials, 2016, 4, 2021-2027.	3.6	38
17	New Strategy for Black Phosphorus Crystal Growth through Ternary Clathrate. Crystal Growth and Design, 2017, 17, 6579-6585.	1.4	38
18	Extremely low density InAs quantum dots realized in situ on (100) GaAs. Nanotechnology, 2004, 15, 1763-1766.	1.3	35

#	ARTICLE	IF	CITATIONS
19	A Mechanism for Highly Efficient Electrochemical Bubbling Delamination of CVD-Grown Graphene from Metal Substrates. <i>Advanced Materials Interfaces</i> , 2016, 3, 1500492.	1.9	33
20	Frequency mixing and phase detection functionalities of three-terminal ballistic junctions. <i>Nanotechnology</i> , 2007, 18, 195205.	1.3	30
21	Memristive and Memcapacitive Characteristics of a Au/TiO <sub>2</sub> /InP/InGaAs Diode. <i>IEEE Electron Device Letters</i> , 2011, 32, 131-133.	2.2	30
22	Asymmetric Quantum-Dot Pixelation for Color-Converted White Balance. <i>ACS Photonics</i> , 2021, 8, 2158-2165.	3.2	30
23	Perovskite Quantum Dots for Emerging Displays: Recent Progress and Perspectives. <i>Nanomaterials</i> , 2022, 12, 2243.	1.9	30
24	A Novel SR Latch Device Realized by Integration of Three-Terminal Ballistic Junctions in InGaAs/InP. <i>IEEE Electron Device Letters</i> , 2008, 29, 540-542.	2.2	29
25	Pore-free bubbling delamination of chemical vapor deposited graphene from copper foils. <i>Journal of Materials Chemistry C</i> , 2015, 3, 8634-8641.	2.7	29
26	Two-In-One Method for Graphene Transfer: Simplified Fabrication Process for Organic Light-Emitting Diodes. <i>ACS Applied Materials &amp; Interfaces</i> , 2018, 10, 7289-7295.	4.0	29
27	Direct Chemical Vapor Deposition of Large-Area Carbon Thin Films on Gallium Nitride for Transparent Electrodes: A First Attempt. <i>IEEE Transactions on Semiconductor Manufacturing</i> , 2012, 25, 494-501.	1.4	23
28	Graphene bolometer with thermoelectric readout and capacitive coupling to an antenna. <i>Applied Physics Letters</i> , 2018, 112, .	1.5	23
29	High-responsivity photodetectors made of graphene nanowalls grown on Si. <i>Applied Physics Letters</i> , 2019, 115, .	1.5	23
30	Chiral charge pumping in graphene deposited on a magnetic insulator. <i>Physical Review B</i> , 2017, 95, .	1.1	22
31	Transfer-free, lithography-free and fast growth of patterned CVD graphene directly on insulators by using sacrificial metal catalyst. <i>Nanotechnology</i> , 2018, 29, 365301.	1.3	22
32	Insights into the Mechanism for Vertical Graphene Growth by Plasma-Enhanced Chemical Vapor Deposition. <i>ACS Applied Materials &amp; Interfaces</i> , 2022, 14, 7152-7160.	4.0	20
33	Gate-defined quantum-dot devices realized in InGaAs/InP by incorporating a HfO <sub>2</sub> layer as gate dielectric. <i>Applied Physics Letters</i> , 2009, 94, 042114.	1.5	18
34	Electrochemical Bubbling Transfer of Graphene Using a Polymer Support with Encapsulated Air Gap as Permeation Stopping Layer. <i>Journal of Nanomaterials</i> , 2016, 2016, 1-7.	1.5	18
35	Rapid chemical vapor deposition of graphene on liquid copper. <i>Synthetic Metals</i> , 2016, 216, 93-97.	2.1	18
36	Encapsulation of graphene in Parylene. <i>Applied Physics Letters</i> , 2017, 110, .	1.5	18

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37	Process Optimization of Passive Matrix GaN-Based Micro-LED Arrays for Display Applications. <i>Journal of Electronic Materials</i> , 2019, 48, 5195-5201.	1.0	18
38	Monolithic Integrated Device of GaN Micro-LED with Graphene Transparent Electrode and Graphene Active-Matrix Driving Transistor. <i>Materials</i> , 2019, 12, 428.	1.3	17
39	In Situ Growth of CVD Graphene Directly on Dielectric Surface toward Application. <i>ACS Applied Electronic Materials</i> , 2020, 2, 238-246.	2.0	17
40	Nonlinear electrical properties of Si three-terminal junction devices. <i>Applied Physics Letters</i> , 2010, 97, .	1.5	16
41	Graphene p-n junctions controlled by local gates made of naturally oxidized thin aluminium films. <i>Carbon</i> , 2012, 50, 1987-1992.	5.4	16
42	Quantum-dot array with a random rough interface encapsulated by atomic layer deposition. <i>Optics Letters</i> , 2022, 47, 166.	1.7	16
43	GaN nanorod light emitting diodes with suspended graphene transparent electrodes grown by rapid chemical vapor deposition. <i>Applied Physics Letters</i> , 2013, 103, 222105.	1.5	14
44	Transfer-free, lithography-free, and micrometer-precision patterning of CVD graphene on SiO <sub>2</sub> toward all-carbon electronics. <i>APL Materials</i> , 2018, 6, 026802.	2.2	14
45	Unusual thermopower of inhomogeneous graphene grown by chemical vapor deposition. <i>Applied Physics Letters</i> , 2014, 104, 021902.	1.5	13
46	Direct growth of high quality graphene nanowalls on dielectric surfaces by plasma-enhanced chemical vapor deposition for photo detection. <i>Optical Materials Express</i> , 2020, 10, 2909.	1.6	13
47	Chemical liquid phase deposition of thin aluminum oxide films. <i>Chinese Journal of Chemistry</i> , 2004, 22, 661-667.	2.6	12
48	Large-Scale Proton-Implant-Defined VCSEL Arrays With Narrow Beamwidth. <i>IEEE Electron Device Letters</i> , 2018, 39, 390-393.	2.2	11
49	Dependence of Beam Quality on Optical Intensity Asymmetry in In-Phase Coherently Coupled VCSEL Array. <i>IEEE Journal of Quantum Electronics</i> , 2018, 54, 1-6.	1.0	10
50	Tripling Light Conversion Efficiency of 1/4LED Displays by Light Recycling Black Matrix. <i>IEEE Photonics Journal</i> , 2022, 14, 1-7.	1.0	10
51	Gate-defined double quantum dot with integrated charge sensors realized in InGaAs/InP by incorporating a high- $\epsilon_r$ dielectric. <i>Applied Physics Letters</i> , 2010, 96, .	1.5	9
52	ZnO nanorods/graphene/Ni/Au hybrid structures as transparent conductive layer in GaN LED for low work voltage and high light extraction. <i>Solid-State Electronics</i> , 2016, 126, 5-9.	0.8	9
53	The Growth of Graphene on Ni-Cu Alloy Thin Films at a Low Temperature and Its Carbon Diffusion Mechanism. <i>Nanomaterials</i> , 2019, 9, 1633.	1.9	9
54	Ultra-compact electrically controlled beam steering chip based on coherently coupled VCSEL array directly integrated with optical phased array. <i>Optics Express</i> , 2019, 27, 13910.	1.7	9

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55	Metal-Catalyst-Free Growth of Patterned Graphene on SiO <sub>2</sub> Substrates by Annealing Plasma-Induced Cross-Linked Parylene for Optoelectronic Device Applications. ACS Applied Materials & Interfaces, 2019, 11, 14427-14436.	4.0	8
56	Quantum Dot Color Conversion Efficiency Enhancement in Micro-Light-Emitting Diodes by Non-Radiative Energy Transfer. IEEE Electron Device Letters, 2021, 42, 1184-1187.	2.2	8
57	Role of surface microstructure and shape on light extraction efficiency enhancement of GaN micro-LEDs: A numerical simulation study. Displays, 2022, 73, 102172.	2.0	8
58	Silica and Alumina Thin Films Grown by Liquid Phase Deposition. Materials Science Forum, 2005, 475-479, 1725-1728.	0.3	7
59	Mechanism of Electrochemical Delamination of Two-Dimensional Materials from Their Native Substrates by Bubbling. Sensors, 2015, 15, 31811-31820.	2.1	7
60	Transfer-Free Graphene-Like Thin Films on GaN LED Epiwafers Grown by PECVD Using an Ultrathin Pt Catalyst for Transparent Electrode Applications. Materials, 2019, 12, 3533.	1.3	7
61	Reliability of High-Voltage GaN-Based Light-Emitting Diodes. IEEE Transactions on Device and Materials Reliability, 2019, 19, 402-408.	1.5	7
62	Chemical vapor deposition of graphene on refractory metals: The attempt of growth at much higher temperature. Synthetic Metals, 2019, 247, 233-239.	2.1	7
63	Analysis of optical coupling behavior in two-dimensional implant-defined coherently coupled vertical-cavity surface-emitting laser arrays. Photonics Research, 2018, 6, 1048.	3.4	7
64	Facile growth of aluminum oxide thin film by chemical liquid deposition and its application in devices. Nanotechnology Reviews, 2020, 9, 876-885.	2.6	7
65	Hybrid Device of Blue GaN Light-Emitting Diodes and Organic Light-Emitting Diodes with Color Tunability for Smart Lighting Sources. ACS Omega, 2022, 7, 5502-5509.	1.6	7
66	Changing planar thin film growth into self-assembled island formation by adjusting experimental conditions. Thin Solid Films, 2005, 476, 68-72.	0.8	6
67	A sequential logic device realized by integration of in-plane gate transistors in InGaAs <sup>+</sup> InP. Applied Physics Letters, 2008, 92, 012116.	1.5	6
68	Transport properties of three-terminal ballistic junctions realized by focused ion beam enhanced etching in InGaAs/InP. Applied Physics Letters, 2008, 93, 133110.	1.5	5
69	Multiple growth of graphene from a pre-dissolved carbon source. Nanotechnology, 2020, 31, 345601.	1.3	5
70	Research on the reliability of Micro LED high-density solder joints under thermal cycling conditions. Journal of Physics: Conference Series, 2022, 2221, 012010.	0.3	5
71	Electron Resonant Tunneling Through InAs <sup>+</sup> GaAs Quantum Dots Embedded in a Schottky Diode with an AlAs Insertion Layer. Journal of the Electrochemical Society, 2006, 153, G703.	1.3	4
72	Room-Temperature Observation of Electron Resonant Tunneling Through InAs <sup>+</sup> AlAs Quantum Dots. Electrochemical and Solid-State Letters, 2006, 9, G167.	2.2	4

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73	Thermoelectric effects in graphene at high bias current and under microwave irradiation. Scientific Reports, 2017, 7, 15542.	1.6	4
74	Self-organized LPE growth of $\text{Al}_{0.3}\text{Ga}_{0.7}\text{As}$ microtips for integrated SNOM sensors. , 2002, , .		3
75	High responsivity sensing of unfocused laser and white light using graphene photodetectors grown by chemical vapor deposition. Optical Materials Express, 2016, 6, 2158.	1.6	3
76	Aspiration-assisted fabrication of patterned quantum dot films for photo-emissive color conversion. Journal of Materials Science, 2021, 56, 1504-1514.	1.7	3
77	GaN LEDs with <i>in situ</i> synthesized transparent graphene heat-spreading electrodes fabricated by PECVD and penetration etching. Journal of Materials Chemistry C, 2022, 10, 6794-6804.	2.7	3
78	Metal-Free Graphene as Transparent Electrode for GaN-Based Light-Emitters. Japanese Journal of Applied Physics, 2013, 52, 08JG05.	0.8	2
79	High Light Extraction Efficiency AlGaInP LEDs With Proton Implanted Current Blocking Layer. IEEE Electron Device Letters, 2016, 37, 1303-1306.	2.2	2
80	Morphology regulation of TiO <sub>2</sub> thin film by ALD growth temperature and its applications to encapsulation and light extraction. Journal of Materials Science: Materials in Electronics, 2020, 31, 21316-21324.	1.1	2
81	Graphene-assisted preparation of large-scale single-crystal Ag(111) nanoparticle arrays for surface-enhanced Raman scattering. Nanotechnology, 2021, 32, 025301.	1.3	2
82	SCANNING ELECTRON MICROSCOPY OBSERVATION OF IN-DEVICE InAs/AlAs QUANTUM DOTS BY SELECTIVE ETCHING OF CAPPING LAYERS. Modern Physics Letters B, 2007, 21, 859-866.	1.0	1
83	Comment on "Mechanism of non-metal catalytic growth of graphene on silicon" [Appl. Phys. Lett. 100, 231604 (2012)]. Applied Physics Letters, 2012, 101, 096101.	1.5	1
84	Chemical vapor deposition of nanocrystalline graphene directly on arbitrary high-temperature insulating substrates. , 2012, , .		1
85	A Hybrid-Type CVD System for Graphene Growth. Chemical Vapor Deposition, 2015, 21, 176-180.	1.4	1
86	Graphene Transfer: A Mechanism for Highly Efficient Electrochemical Bubbling Delamination of CVD-Grown Graphene from Metal Substrates (Adv. Mater. Interfaces 8/2016). Advanced Materials Interfaces, 2016, 3, .	1.9	1
87	High Quality Graphene Thin Films Synthesized by Glow Discharge Method in A Chemical Vapor Deposition System Using Solid Carbon Source. Materials, 2020, 13, 2026.	1.3	1
88	Dynamic phase manipulation of vertical-cavity surface-emitting lasers via on-chip integration of microfluidic channels. Optics Express, 2021, 29, 1481.	1.7	1
89	Graphene coated magnetic nanoparticles facilitate the release of biofuels and oleochemicals from yeast cell factories. Scientific Reports, 2021, 11, 20612.	1.6	1
90	Micro-fabricated $\text{Al}_{0.3}\text{Ga}_{0.7}\text{As}$ pyramids for potential SPM applications. , 2004, , .		0

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91	Gate-defined quantum devices realized on an InGaAs/InP heterostructure by incorporating a high- $\kappa$ dielectric material. , 2009, , .		0
92	Metallization Reliability of GaN-Based High-Voltage Light-Emitting Diodes. IEEE Transactions on Device and Materials Reliability, 2021, 21, 472-478.	1.5	0
93	Direct Growth of Transparent Graphene Electrodes on GaN LEDs Using Metal Proximity Catalytic Effect. , 2021, , .		0
94	Direct Growth of Large-area Graphene by Cross-linked Parylene Graphitization toward Photodetection. , 2019, , .		0
95	Direct Patterned Growth of PECVD Graphene Transparent Electrodes on GaN LED Epiwafers Using Co as a Sacrificial Catalyst Layer. , 2020, , .		0