

Graphene-based integrated photonics for next-generation

Nature Reviews Materials

3, 392-414

DOI: [10.1038/s41578-018-0040-9](https://doi.org/10.1038/s41578-018-0040-9)

Citation Report

#	ARTICLE	IF	CITATIONS
1	Graphene photonic crystal fibre with strong and tunable light-matter interaction. Nature Photonics, 2019, 13, 754-759.	15.6	127
2	Design of carbon sources: starting point for chemical vapor deposition of graphene. 2D Materials, 2019, 6, 042003.	2.0	8
3	High-Mobility, Wet-Transferred Graphene Grown by Chemical Vapor Deposition. ACS Nano, 2019, 13, 8926-8935.	7.3	132
4	Graphene Hybrid Structures for Integrated and Flexible Optoelectronics. Advanced Materials, 2020, 32, e1902039.	11.1	127
5	Wafer-Scale Synthesis of Graphene on Sapphire: Toward Fab-Compatible Graphene. Small, 2019, 15, e1904906.	5.2	61
6	Hot Electrons Modulation of Third-Harmonic Generation in Graphene. ACS Photonics, 2019, 6, 2841-2849.	3.2	29
7	Nonvolatile integrated optical phase shifter with flash memory technology. Applied Physics Express, 2019, 12, 102005.	1.1	4
8	Cavity Enhanced Light-Matter Interaction in a Graphene Photodetector. , 2019, , .		1
9	Investigation on Metal-Oxide Graphene Field-Effect Transistors With Clamped Geometries. IEEE Journal of the Electron Devices Society, 2019, 7, 964-968.	1.2	1
10	Waveguide-Integrated, Plasmonic Enhanced Graphene Photodetectors. Nano Letters, 2019, 19, 7632-7644.	4.5	113
11	The lab-to-fab journey of 2D materials. Nature Nanotechnology, 2019, 14, 919-921.	15.6	13
12	Graphene and two-dimensional materials for silicon technology. Nature, 2019, 573, 507-518.	13.7	936
13	Matter manipulation with extreme terahertz light: Progress in the enabling THz technology. Physics Reports, 2019, 836-837, 1-74.	10.3	147
14	Analytical Approach of Director Tilting in Nematic Liquid Crystals for Electronically Tunable Devices. IEEE Access, 2019, 7, 14883-14893.	2.6	8
15	Two-dimensional spin-valley-coupled Dirac semimetals in functionalized SbAs monolayers. Materials Horizons, 2019, 6, 781-787.	6.4	38
16	Optical Pre-Emphasis by Cascaded Graphene Electro Absorption Modulators. IEEE Photonics Technology Letters, 2019, 31, 955-958.	1.3	5
17	Highly efficient, low cost, and stable self-powered UV photodetector based on Co ²⁺ :ZnO/Sn diluted magnetic semiconductor nanoparticles. Ceramics International, 2019, 45, 17729-17736.	2.3	21
18	Plasmonic Core-Shell Silicon Carbide-Graphene Nanoparticles. ACS Omega, 2019, 4, 10089-10093.	1.6	10

#	ARTICLE	IF	CITATIONS
19	Adsorption-assisted transport of water vapour in super-hydrophobic membranes filled with multilayer graphene platelets. <i>Nanoscale</i> , 2019, 11, 11521-11529.	2.8	38
20	Perspective of graphene-based electronic devices: Graphene synthesis and diverse applications. <i>APL Materials</i> , 2019, 7, .	2.2	46
21	Solid-Electrolyte-Gated Graphene-Covered Metal-Insulator-Silicon-Insulator-Metal Waveguide With a Remarkably Large Modulation Depth. <i>IEEE Access</i> , 2019, 7, 174312-174324.	2.6	3
22	Ultrafast Graphene-based Optical Modulators. , 2019, , .		0
23	2D-3D integration of high- ϵ_r dielectric with 2D heterostructures for opto-electronic applications. , 2019, , .		0
24	Path towards graphene commercialization from lab to market. <i>Nature Nanotechnology</i> , 2019, 14, 927-938.	15.6	235
25	Graphene is on track to deliver on its promises. <i>Nature Nanotechnology</i> , 2019, 14, 907-910.	15.6	61
26	Comparative Study of Silicon Photonic Modulators based on Transparent Conducting Oxide and Graphene. <i>Physical Review Applied</i> , 2019, 12, .	1.5	12
27	Optimization of Graphene-Based Slot Waveguides for Efficient Modulation. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2020, 26, 1-5.	1.9	4
28	Screen-printed and spray coated graphene-based RFID transponders. <i>2D Materials</i> , 2020, 7, 015019.	2.0	12
29	Functional Mid-Infrared Polaritronics in van der Waals Crystals. <i>Advanced Optical Materials</i> , 2020, 8, 1901194.	3.6	21
30	Tunable Optical Demultiplexer for Dense Wavelength Division Multiplexing Systems Using Graphene-Silicon Microring Resonators. <i>Journal of Electronic Materials</i> , 2020, 49, 7410-7419.	1.0	9
31	Application of graphene-based materials for removal of tetracyclines using adsorption and photocatalytic-degradation: A review. <i>Journal of Environmental Management</i> , 2020, 276, 111310.	3.8	130
32	Hybrid/Integrated Silicon Photonics Based on 2D Materials in Optical Communication Nanosystems. <i>Laser and Photonics Reviews</i> , 2020, 14, 2000239.	4.4	63
33	Insulating SiO ₂ under Centimeter-Scale, Single-Crystal Graphene Enables Electronic-Device Fabrication. <i>Nano Letters</i> , 2020, 20, 8584-8591.	4.5	19
34	Ultrafast, Zero-Bias, Graphene Photodetectors with Polymeric Gate Dielectric on Passive Photonic Waveguides. <i>ACS Nano</i> , 2020, 14, 11190-11204.	7.3	48
35	Dual-guiding-layer resonance structure with an embedded metasurface for quasi-critical coupling without a perfect mirror. <i>Scientific Reports</i> , 2020, 10, 16014.	1.6	4
36	Gate-Tunable Optical Nonlinearities and Extinction in Graphene/LaAlO ₃ /SrTiO ₃ Nanostructures. <i>Nano Letters</i> , 2020, 20, 6966-6973.	4.5	6

#	ARTICLE	IF	CITATIONS
38	A Study of the Photoresponse in Graphene Produced by Chemical Vapor Deposition. <i>Semiconductors</i> , 2020, 54, 991-998.	0.2	0
40	A Review on Graphene-Based Light Emitting Functional Devices. <i>Molecules</i> , 2020, 25, 4217.	1.7	18
41	Bound-States-in-Continuum Hybrid Integration of 2D Platinum Diselenide on Silicon Nitride for High-Speed Photodetectors. <i>ACS Photonics</i> , 2020, 7, 2643-2649.	3.2	32
42	Compact Low-Loss Electroabsorption Modulator Using a Graphene-Inserted Metal-Slot-Added Waveguide. <i>IEEE Access</i> , 2020, 8, 203309-203316.	2.6	2
43	Optically Rewritable Memory in a Graphene- ϵ -Ferroelectric-Photovoltaic Heterostructure. <i>Physical Review Applied</i> , 2020, 13, .	1.5	21
44	Chemical Vapor Deposition of MoS ₂ for Energy Harvesting: Evolution of the Interfacial Oxide Layer. <i>ACS Applied Nano Materials</i> , 2020, 3, 6563-6573.	2.4	10
45	On-Chip Ultrafast Plasmonic Graphene Hot Electron Bolometric Photodetector. <i>ACS Omega</i> , 2020, 5, 14711-14719.	1.6	21
46	Poly(methyl methacrylate)-Assisted Exfoliation of Graphite and Its Use in Acrylonitrile-Butadiene-Styrene Composites. <i>Chemistry - A European Journal</i> , 2020, 26, 6715-6725.	1.7	2
47	Recent Progress in Waveguide-Integrated Graphene Photonic Devices for Sensing and Communication Applications. <i>Frontiers in Physics</i> , 2020, 8, .	1.0	14
48	Localized Electromagnetic Resonance Enabled THz Photothermoelectric Detection in Graphene. <i>Frontiers in Physics</i> , 2020, 8, .	1.0	6
49	Pillararene-functionalised graphene nanomaterials. <i>RSC Advances</i> , 2020, 10, 18502-18511.	1.7	18
50	Graphene-based all-optical modulators. <i>Frontiers of Optoelectronics</i> , 2020, 13, 114-128.	1.9	47
51	All-optical nanophotonic resonant element for switching and routing applications exploiting graphene saturable absorption. <i>Journal of Applied Physics</i> , 2020, 127, .	1.1	4
52	Graphene on an optical waveguide: comparison of simulation approaches. <i>Optical and Quantum Electronics</i> , 2020, 52, 1.	1.5	11
53	Graphene on Silicon Modulators. <i>Journal of Lightwave Technology</i> , 2020, 38, 2782-2789.	2.7	24
54	Low-loss composite photonic platform based on 2D semiconductor monolayers. <i>Nature Photonics</i> , 2020, 14, 256-262.	15.6	140
55	High-performance silicon-graphene hybrid plasmonic waveguide photodetectors beyond 1.55 μ m. <i>Light: Science and Applications</i> , 2020, 9, 29.	7.7	155
56	Production and processing of graphene and related materials. <i>2D Materials</i> , 2020, 7, 022001.	2.0	333

#	ARTICLE	IF	CITATIONS
57	Waveguide-integrated van der Waals heterostructure photodetector at telecom wavelengths with high speed and high responsivity. <i>Nature Nanotechnology</i> , 2020, 15, 118-124.	15.6	208
58	Broadband polarization-insensitive amplitude and phase modulators based on graphene-covered buried and ridge silicon waveguides. <i>Optics Communications</i> , 2020, 472, 125860.	1.0	3
59	HBN-Encapsulated, Graphene-based, Room-temperature Terahertz Receivers, with High Speed and Low Noise. <i>Nano Letters</i> , 2020, 20, 3169-3177.	4.5	67
60	Multi-Level Electro-Thermal Switching of Optical Phase-Change Materials Using Graphene. <i>Advanced Photonics Research</i> , 2021, 2, 2000034.	1.7	75
61	Piezoelectric-powered graphene strain sensor based on solid polymer electrolyte. <i>Nano Energy</i> , 2021, 81, 105610.	8.2	20
62	Turning On Solid-State Luminescence by Phototriggered Subtle Molecular Conformation Variations. <i>Advanced Materials</i> , 2021, 33, e2006844.	11.1	67
63	Emerging Light-Emitting Materials for Photonic Integration. <i>Advanced Materials</i> , 2021, 33, e2003733.	11.1	25
64	Hot carriers in graphene – fundamentals and applications. <i>Nanoscale</i> , 2021, 13, 8376-8411.	2.8	75
65	Heterocoagulation method for preparation of composite fluoropolymer particles with core-shell structure for optimized electromagnetic performance. <i>Journal of Materials Science: Materials in Electronics</i> , 2021, 32, 3116-3124.	1.1	2
66	Stacking of Two-Dimensional Materials to Large-Area Heterostructures by Wafer Bonding. , 2021, , .		1
67	Laser-assisted two dimensional material electronic and optoelectronic devices. <i>Journal of Materials Chemistry C</i> , 2021, 9, 2599-2619.	2.7	18
68	Large few-layer hexagonal boron nitride flakes for nonlinear optics. <i>Optics Letters</i> , 2021, 46, 564.	1.7	7
69	Wafer-scale single crystals: crystal growth mechanisms, fabrication methods, and functional applications. <i>Journal of Materials Chemistry C</i> , 2021, 9, 7829-7851.	2.7	11
70	Type-III organic/two-dimensional multi-layered phototransistors with promoted operation speed at the communication band. <i>Journal of Materials Chemistry C</i> , 2021, 9, 13963-13971.	2.7	6
71	Graphene Roadmap Briefs (No. 1): innovation interfaces of the Graphene Flagship. <i>2D Materials</i> , 2021, 8, 022004.	2.0	20
72	Large-area integration of two-dimensional materials and their heterostructures by wafer bonding. <i>Nature Communications</i> , 2021, 12, 917.	5.8	99
73	Wafer-Scale Integration of Graphene-Based Photonic Devices. <i>ACS Nano</i> , 2021, 15, 3171-3187.	7.3	75
74	2D-3D integration of hexagonal boron nitride and a high- ϵ dielectric for ultrafast graphene-based electro-absorption modulators. <i>Nature Communications</i> , 2021, 12, 1070.	5.8	40

#	ARTICLE	IF	CITATIONS
75	Logic gates based on optical transistors. Journal of Optical Communications, 2024, 44, s367-s377.	4.0	0
76	Photo thermal effect graphene detector featuring 105 Gbit s ⁻¹ NRZ and 120 Gbit s ⁻¹ PAM4 direct detection. Nature Communications, 2021, 12, 806.	5.8	51
77	Exciton-phonon coupling strength in single-layer MoSe ₂ at room temperature. Nature Communications, 2021, 12, 954.	5.8	35
78	Reflectionless plasmonic right-angled waveguide bend and divider using graphene and transformation optics. Optics Express, 2021, 29, 9589.	1.7	4
79	Emerging properties of non-crystalline phases of graphene and boron nitride based materials. Nano Materials Science, 2022, 4, 10-17.	3.9	12
80	Low-Loss Integrated Nanophotonic Circuits with Layered Semiconductor Materials. Nano Letters, 2021, 21, 2709-2718.	4.5	24
81	Tunable graphene plasmons in nanoribbon arrays: the role of interactions. Optical Materials Express, 2021, 11, 1390.	1.6	2
82	Taking silicon photonics modulators to a higher performance level: state-of-the-art and a review of new technologies. Advanced Photonics, 2021, 3, .	6.2	151
83	Phase Shift Induced by Gate-Controlled Quantum Capacitance in Graphene FET. IEEE Electron Device Letters, 2021, 42, 601-604.	2.2	4
84	Systematic THz study of the substrate effect in limiting the mobility of graphene. Scientific Reports, 2021, 11, 8729.	1.6	13
85	Graphene on the pilot line. Nature Materials, 2021, 20, 573-573.	13.3	3
86	Silica optical fiber integrated with two-dimensional materials: towards opto-electro-mechanical technology. Light: Science and Applications, 2021, 10, 78.	7.7	62
87	Recent progress of integrated circuits and optoelectronic chips. Science China Information Sciences, 2021, 64, 1.	2.7	56
88	Optoelectronic mixing with high-frequency graphene transistors. Nature Communications, 2021, 12, 2728.	5.8	18
89	From flexible electronics to flexible photonics: A brief overview. Optical Materials, 2021, 115, 111011.	1.7	34
90	Tunable broadband light emission from graphene. 2D Materials, 2021, 8, 035026.	2.0	5
91	Reshaping the emission of a THz quantum cascade laser frequency comb through an on-chip graphene modulator. , 2021, , .		0
92	Chameleon graphene surfaces. Nature Photonics, 0, , .	15.6	1

#	ARTICLE	IF	CITATIONS
93	Silicon/2D-material photodetectors: from near-infrared to mid-infrared. <i>Light: Science and Applications</i> , 2021, 10, 123.	7.7	177
94	A Review on Terahertz Technologies Accelerated by Silicon Photonics. <i>Nanomaterials</i> , 2021, 11, 1646.	1.9	34
95	High-responsivity graphene photodetectors integrated on silicon microring resonators. <i>Nature Communications</i> , 2021, 12, 3733.	5.8	57
96	Hot-Carrier Cooling in High-Quality Graphene Is Intrinsically Limited by Optical Phonons. <i>ACS Nano</i> , 2021, 15, 11285-11295.	7.3	43
97	Hybrid Graphene-WS ₂ Mach-Zehnder modulator on passive silicon waveguide. , 2021, , .		0
98	Ferroelectric-tuned van der Waals heterojunction with band alignment evolution. <i>Nature Communications</i> , 2021, 12, 4030.	5.8	79
99	Achieving efficient inverse design of low-dimensional heterostructures based on a vigorous scalable multi-task learning network. <i>Optics Express</i> , 2021, 29, 19727.	1.7	7
100	Tunable and highly sensitive temperature sensor based on graphene photonic crystal fiber*. <i>Chinese Physics B</i> , 2021, 30, 118103.	0.7	2
101	A Review on the Applications of Graphene in Mechanical Transduction. <i>Advanced Materials</i> , 2022, 34, e2101326.	11.1	59
102	Wafer-scale integration of graphene for waveguide-integrated optoelectronics. <i>Applied Physics Letters</i> , 2021, 119, 050501.	1.5	7
103	Polarization-insensitive optical modulators based on single ENZ-graphene layers. , 2021, , .		0
104	Modeling of Ultrafast Waveguided Electro-Absorption Modulator at Telecommunication Wavelength ($\lambda = 1.55 \mu\text{m}$) Based on Intersubband Transition in an InGaAs/AlAs/AlAsSb Asymmetric Coupled Double Quantum Well Lattice-Matched to InP. <i>IEEE Journal of Quantum Electronics</i> , 2021, 57, 1-10.	1.0	0
105	Recovery of thermal transport in atomic-layer-deposition-healed defective graphene. <i>Carbon</i> , 2021, 180, 77-84.	5.4	2
106	Ultrahigh-speed graphene-based optical coherent receiver. <i>Nature Communications</i> , 2021, 12, 5076.	5.8	39
107	Designing New-Generation Piezoelectric Transducers by Embedding Superior Graphene-Based Thermal Regulators. <i>Advanced Materials</i> , 2021, 33, e2103141.	11.1	9
108	Graphene THz filter-switch dividers based on dipole-quadrupole and magneto-optical resonance effects. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 2021, 38, 1366.	0.8	5
109	Universal Transceivers: Opportunities and Future Directions for the Internet of Everything (IoE). <i>Frontiers in Communications and Networks</i> , 2021, 2, .	1.9	5
110	Silicon slotted photonic crystal cavities fabricated by deep-ultraviolet lithography. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2021, 38, 2898.	0.9	4

#	ARTICLE	IF	CITATIONS
111	Graphene-based mid-infrared photodetectors using metamaterials and related concepts. Applied Physics Reviews, 2021, 8, .	5.5	20
112	Recent progress in terahertz modulation using photonic structures based on two-dimensional materials. Informa Mater, 2021, 3, 1110-1133.	8.5	28
113	Theory of the effective Seebeck coefficient for photoexcited two-dimensional materials: Graphene. Physical Review B, 2021, 104, .	1.1	5
114	Time-Resolved Raman Scattering in Exfoliated and CVD Graphene Crystals. Journal of Physical Chemistry C, 2021, 125, 21003-21010.	1.5	6
115	Properties of BC ₆ N monolayer derived by first-principle computation: Influences of interactions between dopant atoms on thermoelectric and optical properties. Materials Science in Semiconductor Processing, 2021, 135, 106073.	1.9	29
116	Engineering the electronic and magnetic properties of nitrogen monolayer and bilayer by doping: A first-principles study. Applied Surface Science, 2021, 566, 150711.	3.1	10
117	Challenges in silicon photonics modulators for data center interconnect applications. Optics and Laser Technology, 2021, 144, 107376.	2.2	5
118	Graphene-based PAM-4 modulator compatible with CMOS platform operating over DWDM C-Band. Results in Optics, 2021, 5, 100110.	0.9	3
119	Graphene-based materials for metronidazole degradation: A comprehensive review. Chemosphere, 2022, 286, 131727.	4.2	44
120	Selective sensing and mechanism of patterned graphene-based sensors: Experiments and DFT calculations. Chemical Engineering Science, 2022, 247, 117017.	1.9	18
121	Compact Dual-Band Multi-Focal Diffractive Lenses. Laser and Photonics Reviews, 2021, 15, 2000207.	4.4	10
122	Deterministic synthesis of Cu ₉ S ₅ flakes assisted by single-layer graphene arrays. Nanoscale Advances, 2021, 3, 1352-1361.	2.2	1
123	Tunable, Grating-Gated, Graphene-On-Polyimide Terahertz Modulators. Advanced Functional Materials, 2021, 31, 2008039.	7.8	31
124	Graphene-dispersed polymer waveguide for efficient formation of mode-locked lasers at extremely low graphene concentration. Carbon, 2020, 166, 123-130.	5.4	10
125	Simulation of tuning graphene plasmonic behaviors by ferroelectric domains for self-driven infrared photodetector applications. Nanoscale, 2019, 11, 20868-20875.	2.8	15
126	Phase change material-based nano-cavity as an efficient optical modulator. Nanotechnology, 2021, 32, 095207.	1.3	21
127	Silicon waveguides with graphene: coupling of waveguide mode to surface plasmons. Journal of Optics (United Kingdom), 2020, 22, 095801.	1.0	5
128	Design of electro-optic modulators and switches based on graphene and phase change materials. , 2019, , .		2

#	ARTICLE	IF	CITATIONS
129	Review—A Review of Advanced Electronic Applications Based on Carbon Nanomaterials. ECS Journal of Solid State Science and Technology, 2020, 9, 071002.	0.9	7
130	5—25 Gbit/s WDM transmitters based on passivated graphene—silicon electro-absorption modulators, Applied Optics, 2020, 59, 1156.	0.9	9
131	Waveguide Integrated CVD Graphene Photo-Thermo-Electric Detector With >40GHz Bandwidth. , 2019, , .		3
132	High-speed double layer graphene electro-absorption modulator on SOI waveguide. Optics Express, 2019, 27, 20145.	1.7	57
133	Tuning silicon-rich nitride microring resonances with graphene capacitors for high-performance computing applications. Optics Express, 2019, 27, 35129.	1.7	8
134	Controllable coupling between an ultra-high-Q microtoroid cavity and a graphene monolayer for optical filtering and switching applications. Optics Express, 2020, 28, 7906.	1.7	12
135	Graphene Photonics for Optical Communications. , 2019, , .		2
136	High-efficiency couplers for graphene surface plasmon polaritons in the mid-infrared region. Optics Letters, 2020, 45, 264.	1.7	12
137	High-speed van der Waals heterostructure tunneling photodiodes integrated on silicon nitride waveguides. Optica, 2019, 6, 514.	4.8	26
138	High-performance fiber-integrated multifunctional graphene-optoelectronic device with photoelectric detection and optic-phase modulation. Photonics Research, 2020, 8, 1949.	3.4	13
139	On-chip nanophotonics and future challenges. Nanophotonics, 2020, 9, 3733-3753.	2.9	85
140	Silicon—germanium receivers for short-wave-infrared optoelectronics and communications. Nanophotonics, 2021, 10, 1059-1079.	2.9	51
141	Recent improvement of silicon absorption in opto-electric devices. Opto-Electronic Advances, 2019, 2, 19002301-19002308.	6.4	12
142	A survey on key roles of optical switching and labeling technologies on big data traffic of Data Centers and HPC environments. AIMS Electronics and Electrical Engineering, 2019, 3, 233-256.	0.8	5
143	Electrically tunable optical filter based on tapered fiber coated with porous graphene film. Optics Communications, 2022, 505, 127518.	1.0	4
144	50Gb/s CVD Graphene-Insulator-Graphene Electro-Absorption Modulator on Si waveguide. , 2019, , .		0
145	5G optical transport networking: from photonic devices to processors. , 2019, , .		0
146	Graphene photonics for optical communications. , 2019, , .		1

#	ARTICLE	IF	CITATIONS
147	Reconfigurable photonic integrated circuits (RPICs) based on functional materials for integrated optical communication applications. , 2020, , .		0
148	Chip-Scalable, Room-Temperature, Zero-Bias, Graphene-Based Terahertz Detectors with Nanosecond Response Time. ACS Nano, 2021, 15, 17966-17976.	7.3	21
149	Flexible high-performance graphene hybrid photodetectors functionalized with gold nanostars and perovskites. NPG Asia Materials, 2020, 12, .	3.8	21
151	Graphene-silicon nitride photodetector with bound state in the continuum. , 2020, , .		0
152	On-chip ultrafast plasmonic graphene photodetectors. , 2020, , .		1
153	Tailored nano-electronics and photonics with two-dimensional materials at terahertz frequencies. Journal of Applied Physics, 2021, 130, .	1.1	11
154	Molten Ga-Pd alloy catalyzed interfacial growth of graphene on dielectric substrates. Applied Surface Science, 2022, 576, 151806.	3.1	2
155	All-carbon approach to inducing electrical and optical anisotropy in graphene. AIP Advances, 2021, 11, .	0.6	2
156	Recent Progress in the Transfer of Graphene Films and Nanostructures. Small Methods, 2021, 5, e2100771.	4.6	17
157	Bottom-up Growth of Graphene Nanoribbons for Application to Electronic Devices. Vacuum and Surface Science, 2020, 63, 492-497.	0.0	0
158	Efficient helicity control of four-wave mixing in gated graphene. Optics Letters, 2022, 47, 234-237.	1.7	1
159	Polarization-Insensitive Optical Modulator Based on Single-Layer Graphene Sheets. IEEE Nanotechnology Magazine, 2021, 20, 883-888.	1.1	1
160	Nanofabrication route to achieve sustainable production of next generation defect-free graphene: analysis and characterisation. Nanofabrication, 2021, 6, 36-43.	1.1	4
161	Pillararene-based molecular-scale porous materials. Chemical Communications, 2021, 57, 13429-13447.	2.2	47
162	Dispersion Analysis of Periodic Structures in Anisotropic Media: Application to Liquid Crystals. IEEE Transactions on Antennas and Propagation, 2022, 70, 2811-2821.	3.1	6
163	Electrically Tunable Graphene-on-Polyimide Terahertz Modulators. , 2020, , .		0
164	Optically enabled graphene-based transmitter for Gbit/s links at 93 GHz carrier frequency. , 2021, , .		0
165	Room temperature plasmonic graphene hot electron bolometric photodetectors: A comparative analysis. Journal of Applied Physics, 2022, 131, .	1.1	3

#	ARTICLE	IF	CITATIONS
166	Photonic crystal integrated logic gates and circuits. <i>Optics Express</i> , 2022, 30, 1976.	1.7	22
167	Silicon-Based Graphene Electro-Optical Modulators. <i>Photonics</i> , 2022, 9, 82.	0.9	11
168	Carbon materials: The burgeoning promise in electronics. <i>International Journal of Minerals, Metallurgy and Materials</i> , 2022, 29, 404-423.	2.4	12
169	Ultra-clean high-mobility graphene on technologically relevant substrates. <i>Nanoscale</i> , 2022, 14, 2167-2176.	2.8	22
170	Photonic Spiking Neural Networks and Graphene-on-Silicon Spiking Neurons. <i>Journal of Lightwave Technology</i> , 2022, 40, 2901-2914.	2.7	28
171	Mid-infrared Ge-based thermo-optic phase shifters with an improved figure of merit. <i>Optical Materials Express</i> , 0, , .	1.6	1
172	A generic model for the study of supercontinuum generation in graphene-covered nanowires. <i>JPhys Photonics</i> , 2022, 4, 015001.	2.2	2
173	Electrically Tunable Nonequilibrium Optical Response of Graphene. <i>ACS Nano</i> , 2022, 16, 3613-3624.	7.3	13
174	Nonvolatile van der Waals Heterostructure Phototransistor for Encrypted Optoelectronic Logic Circuit. <i>ACS Nano</i> , 2022, 16, 4528-4535.	7.3	34
175	Numerical analysis of optical phase modulator operating at 2 μ m wavelength using graphene/III-V hybrid metal-oxide-semiconductor capacitor. <i>Japanese Journal of Applied Physics</i> , 2022, 61, SC1031.	0.8	1
176	Wafer-scale integration of layered 2D materials by adhesive wafer bonding. , 2022, , .		0
177	Environmental effects on layer-dependent dynamics of Dirac fermions in quasicrystalline bilayer graphene. <i>Physical Review B</i> , 2022, 105, .	1.1	3
178	Thermionic graphene/silicon Schottky infrared photodetectors. <i>Physical Review B</i> , 2022, 105, .	1.1	9
179	Two-Dimensional Platinum Diselenide Waveguide-Integrated Infrared Photodetectors. <i>ACS Photonics</i> , 2022, 9, 859-867.	3.2	14
180	Mapping the complex refractive index of single layer graphene on semiconductor or polymeric substrates at terahertz frequencies. <i>2D Materials</i> , 2022, 9, 025018.	2.0	6
181	Memristive effects due to charge transfer in graphene gated through ferroelectric $\text{CuInP}_{2}\text{S}_{6}$. <i>2D Materials</i> , 2022, 9, 035003.	2.0	10
182	2D materials for future heterogeneous electronics. <i>Nature Communications</i> , 2022, 13, 1392.	5.8	174
183	Performance enhancement of an ultrafast graphene photodetector via simultaneous two-mode absorption in a hybrid plasmonic waveguide. <i>Applied Optics</i> , 2022, 61, 3165.	0.9	3

#	ARTICLE	IF	CITATIONS
184	Broadband high-efficiency near-infrared graphene phase modulators enabled by metal-nanoribbon integrated hybrid plasmonic waveguides. <i>Nanophotonics</i> , 2022, 11, 613-623.	2.9	9
185	2D materials-enabled optical modulators: From visible to terahertz spectral range. <i>Applied Physics Reviews</i> , 2022, 9, .	5.5	32
186	The Rise of Graphene Photonic Crystal Fibers. <i>Advanced Functional Materials</i> , 2022, 32, .	7.8	6
187	Nanopatterning Technologies of 2D Materials for Integrated Electronic and Optoelectronic Devices. <i>Advanced Materials</i> , 2022, 34, e2200734.	11.1	25
188	Unbiased Plasmonic-Assisted Integrated Graphene Photodetectors. <i>ACS Photonics</i> , 2022, 9, 1992-2007.	3.2	4
189	Unravelling the Complete Raman Response of Graphene Nanoribbons Discerning the Signature of Edge Passivation. <i>Small Methods</i> , 2022, 6, .	4.6	2
190	A review on elastic graphene aerogels: Design, preparation, and applications. <i>Journal of Polymer Science</i> , 2022, 60, 2239-2261.	2.0	14
191	Impact of GST thickness on GST-loaded silicon waveguides for optimal optical switching. <i>Scientific Reports</i> , 2022, 12, .	1.6	7
192	Electrical modulation of high-Q guided-mode resonances using graphene. <i>Carbon Trends</i> , 2022, 8, 100185.	1.4	1
193	Ultra-low-energy programmable non-volatile silicon photonics based on phase-change materials with graphene heaters. <i>Nature Nanotechnology</i> , 2022, 17, 842-848.	15.6	94
194	Advanced Waveguide Based LOC Biosensors: A Minireview. <i>Sensors</i> , 2022, 22, 5443.	2.1	0
195	Terahertz photodetection in scalable single-layer-graphene and hexagonal boron nitride heterostructures. <i>Applied Physics Letters</i> , 2022, 121, .	1.5	6
196	Applications of a novel electron energy filter combined with a hybrid-pixel direct electron detector for the analysis of functional oxides by STEM/EELS and energy-filtered imaging. <i>Micron</i> , 2022, 160, 103331.	1.1	5
197	Linear and nonlinear optical propagation in 2D materials. <i>URSI Radio Science Bulletin</i> , 2021, 2021, 19-37.	0.2	3
198	Ultrafast intrinsic optical-to-electrical conversion dynamics in a graphene photodetector. <i>Nature Photonics</i> , 2022, 16, 718-723.	15.6	32
199	Nonlinear absorption and integrated photonics applications of MoSSe. <i>Optics Express</i> , 2022, 30, 32924.	1.7	2
200	Ultrafast light emission at telecom wavelengths from a wafer-scale monolayer graphene enabled by Fabry-Perot interferences. <i>Optics Letters</i> , 2022, 47, 4668.	1.7	3
201	High-performance broadband WO ₃ /Bi ₂ O ₂ Se photodetectors based on plasmon-induced hot-electron injection. <i>Applied Physics Letters</i> , 2022, 121, .	1.5	4

#	ARTICLE	IF	CITATIONS
202	Electrical detection of graphene plasmons for mid-infrared photodetection and chemical sensing: A computational study. <i>Applied Physics Letters</i> , 2022, 121, .	1.5	2
203	Enhanced photosensitivity of heterostructure SiO ₂ /Bi ₂ WO ₆ /GO composite nanoparticles. <i>Physica B: Condensed Matter</i> , 2022, 645, 414241.	1.3	4
204	Adaptive PAM-4/PAM-8 graphene-based electro-optical modulator integrated into a polymer waveguide platform for data-center communication. <i>Optics and Laser Technology</i> , 2023, 157, 108622.	2.2	0
205	Tracking Ultrafast Photocurrent Generation and Transport in hBN-Encapsulated Graphene Using On-Chip THz Spectroscopy. , 2022, , .		1
206	Chip-Scalable, Graphene-Based Terahertz Thermoelectric Photodetectors. , 2022, , .		1
207	pH Sensitivity of Edge-Gated Graphene Field-Effect Devices with Covalent Edge Functionalization. <i>ACS Applied Electronic Materials</i> , 2022, 4, 4668-4676.	2.0	3
208	A Wide Range and High Repeatability MEMS Pressure Sensor Based on Graphene. <i>IEEE Sensors Journal</i> , 2022, 22, 17737-17745.	2.4	4
209	All in Oneâ€Chip, Electrolyteâ€Gated Graphene Amplitude Modulator, Saturable Absorber Mirror and Metrological Frequencyâ€Tuner in the 2â€5 THz Range. <i>Advanced Optical Materials</i> , 2022, 10, .	3.6	6
210	On-surface synthesis of hydroxy-functionalized graphene nanoribbons through deprotection of methylenedioxy groups. <i>Nanoscale Advances</i> , 0, , .	2.2	0
211	Towards integrated mode-division demultiplexing spectrometer by deep learning. , 2022, 1, 220012-220012.		8
212	Neuromorphic Vision Based on van der Waals Heterostructure Materials. , 2022, , 67-79.		0
213	Two-dimensional devices and integration towards the silicon lines. <i>Nature Materials</i> , 2022, 21, 1225-1239.	13.3	79
214	Feasibility of chipscale integration of single-photon switched digital loop buffer. , 2022, 1, 100028.		1
215	Spin Hall Effect of Light: From Fundamentals To Recent Advancements. <i>Laser and Photonics Reviews</i> , 2023, 17, .	4.4	19
216	Adaptive PAM-4 /PAM-8 Graphene-based Electro-Optical Modulator. , 2022, , .		0
217	Graphene nanoribbon/graphene hybrid broadband infrared photodetectors. <i>Optical Engineering</i> , 2022, 61, .	0.5	1
218	Graphene-Coated Substrate-Mediated Photoresponse from MoS ₂ /UCNP Nanohybrid-Based Photodetectors. <i>ACS Applied Electronic Materials</i> , 2022, 4, 5475-5486.	2.0	5
219	Saturable absorption of a double layer graphene modulator on a slot waveguide. , 2022, , .		0

#	ARTICLE	IF	CITATIONS
220	Enhancement of nonlinear interaction for efficient graphene-based mode-locked lasers. , 2022, , .		0
221	Two-dimensional optoelectronic devices for silicon photonic integration. Journal of Materiomics, 2023, 9, 551-567.	2.8	3
222	CO ₂ -promoted transfer-free growth of conformal graphene. Nano Research, 2023, 16, 6334-6342.	5.8	2
223	Structure modulation of two-dimensional transition metal chalcogenides: recent advances in methodology, mechanism and applications. Chemical Society Reviews, 2023, 52, 1215-1272.	18.7	26
224	Assessment of Wafer-Level Transfer Techniques of Graphene with Respect to Semiconductor Industry Requirements. Advanced Materials Technologies, 2023, 8, .	3.0	4
225	Wafer-Scale Integration of Single Layer Graphene Electro-Absorption Modulators in a 300 mm CMOS Pilot Line. Laser and Photonics Reviews, 2023, 17, .	4.4	5
226	Theory of Edge Effects and Conductance for Applications in Graphene-Based Nanoantennas. Applied Sciences (Switzerland), 2023, 13, 2221.	1.3	2
227	High-Speed Graphene-Silicon Graphene Waveguide PDs with High Photo-Dark Current Ratio and Large Linear Dynamic Range. Laser and Photonics Reviews, 2023, 17, .	4.4	6
228	Selective Enhancement of Photoresponse with Ferroelectric-Controlled BP/In ₂ Se ₃ vdW Heterojunction. Advanced Science, 2023, 10, .	5.6	18
229	Silicon Photonic Integrated Reservoir Computing Processor with Ultra-high Tunability for High-speed IM/DD Equalization. , 2022, , .		0
230	Advances in chip-integrated silicon-germanium photodetectors. , 2023, , 233-266.		0
231	Real-Time Measure of the Lattice Temperature of a Semiconductor Heterostructure Laser via an On-Chip Integrated Graphene Thermometer. ACS Nano, 2023, 17, 6103-6112.	7.3	1
232	Growth and applications of two-dimensional single crystals. 2D Materials, 2023, 10, 032001.	2.0	4
233	Silicon Waveguide-Integrated Carbon Nanotube Photodetector with Low Dark Current and 48 GHz Bandwidth. ACS Nano, 2023, 17, 7466-7474.	7.3	3
234	Beyond 5G Fronthaul Based on FSO Using Spread Spectrum Codes and Graphene Modulators. Sensors, 2023, 23, 3791.	2.1	5
235	Rapid and Scalable Transfer of Large-Area Graphene Wafers. Advanced Materials, 2023, 35, .	11.1	8
245	Integration of epitaxial monolayer MX ₂ channels on 300mm wafers via Collective-Die-To-Wafer (CoD2W) transfer. , 2023, , .		1
246	Optical modulators. , 2023, , 69-121.		4

#	ARTICLE	IF	CITATIONS
259	A novel benchtop multimodal optical setup for synergistic crystallization dynamics of poly-3-hexylthiophene. , 2023, , .		1
261	Graphene Photonics Nested Mach-Zehnder Modulator for Advanced Modulation Formats. , 2023, , .		0
272	Graphene-Based Photonic-Electronic Multiply-Accumulate Neurons. , 2023, , .		0