Direct Formation of Wafer Scale Graphene Thin Layers Chemical Vapor Deposition

Nano Letters

11, 3612-3616

DOI: 10.1021/nl201362n

Citation Report

#	Article	IF	Citations
2	Direct Growth of Bilayer Graphene on SiO₂ Substrates by Carbon Diffusion through Nickel. ACS Nano, 2011, 5, 8241-8247.	7.3	260
3	Graphitic carbon growth on crystalline and amorphous oxide substrates using molecular beam epitaxy. Nanoscale Research Letters, 2011, 6, 565.	3.1	133
4	<i>In Situ</i> CCVD Grown Graphene Transistors with Ultra-High On/Off-Current Ratio in Silicon CMOS Compatible Processing. Advances in Science and Technology, 0, , .	0.2	3
5	Hysteresis of In Situ CCVD Grown Graphene Transistors. Electrochemical and Solid-State Letters, 2012, 15, K31.	2.2	14
6	Synthesis of transfer-free graphene on an insulating substrate using a solid phase reaction. Nanoscale, 2012, 4, 7791.	2.8	24
7	Progress of graphene growth on copper by chemical vapor deposition: Growth behavior and controlled synthesis. Science Bulletin, 2012, 57, 2995-2999.	1.7	15
8	On/off-current ratios of transfer-free bilayer graphene FETs as a function of temperature. , 2012, , .		1
9	Direct growth of high-quality mono-layer graphene on insulating substrate by advanced plasma CVD. , 2012, , .		0
10	Direct Growth and Patterning of Multilayer Graphene onto a Targeted Substrate without an External Carbon Source. ACS Applied Materials & Interfaces, 2012, 4, 3663-3666.	4.0	19
11	Graphene Growth from Spin-Coated Polymers without a Gas. Japanese Journal of Applied Physics, 2012, 51, 06FD01.	0.8	0
12	Graphene transfer: key for applications. Nanoscale, 2012, 4, 5527.	2.8	405
13	Graphene: An Emerging Electronic Material. Advanced Materials, 2012, 24, 5782-5825.	11.1	718
14	Mechanism of non-metal catalytic growth of graphene on silicon. Applied Physics Letters, 2012, 100, .	1.5	46
15	Sulphate-activated growth of bamboo-like carbon nanotubes over copper catalysts. Nanoscale, 2012, 4, 4757.	2.8	17
16	Transfer-free fabrication of suspended graphene grown by chemical vapor deposition. , 2012, , .		4
17	Uniform Wafer-Scale Chemical Vapor Deposition of Graphene on Evaporated Cu (111) Film with Quality Comparable to Exfoliated Monolayer. Journal of Physical Chemistry C, 2012, 116, 24068-24074.	1.5	69
18	Macroporous foam of reduced graphene oxides prepared by lyophilization. Materials Research Bulletin, 2012, 47, 4335-4339.	2.7	18
19	Graphene growth on metal surfaces. MRS Bulletin, 2012, 37, 1158-1165.	1.7	81

#	Article	IF	Citations
20	Direct Growth of Doping-Density-Controlled Hexagonal Graphene on SiO₂ Substrate by Rapid-Heating Plasma CVD. ACS Nano, 2012, 6, 8508-8515.	7.3	99
21	Transfer-free fabrication of graphene transistors. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2012, 30, 03D114.	0.6	26
22	Direct Growth of Graphene Nanoribbons for Large-Scale Device Fabrication. Nano Letters, 2012, 12, 6175-6179.	4.5	42
23	Laser-induced etching of few-layer graphene synthesized by Rapid-Chemical Vapour Deposition on Cu thin films. SpringerPlus, 2012, 1, 52.	1.2	9
24	Growth of atomically thin hexagonal boron nitride films by diffusion through a metal film and precipitation. Journal Physics D: Applied Physics, 2012, 45, 385304.	1.3	44
25	Chemical Vapor Deposition of Hexagonal Boron Nitride. E-Journal of Surface Science and Nanotechnology, 2012, 10, 133-138.	0.1	17
26	Graphene Photonics, Plasmonics, and Broadband Optoelectronic Devices. ACS Nano, 2012, 6, 3677-3694.	7.3	1,749
27	Synthesis of High Quality Monolayer Graphene at Reduced Temperature on Hydrogen-Enriched Evaporated Copper (111) Films. ACS Nano, 2012, 6, 2319-2325.	7.3	160
28	Synthesis of Largeâ€Area MoS₂ Atomic Layers with Chemical Vapor Deposition. Advanced Materials, 2012, 24, 2320-2325.	11.1	2,956
29	Efficient reduction of graphene oxide catalyzed by copper. Physical Chemistry Chemical Physics, 2012, 14, 3083.	1.3	12
30	Few-layer graphene synthesis on a dielectric substrate. Carbon, 2012, 50, 1503-1509.	5.4	37
31	Influence of Cu metal on the domain structure and carrier mobility in single-layer graphene. Carbon, 2012, 50, 2189-2196.	5.4	86
32	Autonomously Controlled Homogenous Growth of Waferâ€Sized Highâ€Quality Graphene via a Smart Janus Substrate. Advanced Functional Materials, 2012, 22, 1033-1039.	7.8	41
33	Fully Transparent Resistive Memory Employing Graphene Electrodes for Eliminating Undesired Surface Effects. Proceedings of the IEEE, 2013, 101, 1732-1739.	16.4	63
34	Chemical Vapor Deposition Synthesis and Raman Spectroscopic Characterization of Large-Area Graphene Sheets. Journal of Physical Chemistry A, 2013, 117, 9454-9461.	1.1	57
36	Direct imprinting of MoS2 flakes on a patterned gate for nanosheet transistors. Journal of Materials Chemistry C, 2013, 1, 7803.	2.7	50
37	The effect of fluid mechanics on graphene growths by chemical vapor deposition. , 2013, , .		0
38	CVD Growth of Large Area Smooth-edged Graphene Nanomesh by Nanosphere Lithography. Scientific Reports, 2013, 3, 1238.	1.6	111

#	Article	IF	Citations
39	Scalable and Direct Growth of Graphene Micro Ribbons on Dielectric Substrates. Scientific Reports, 2013, 3, 1348.	1.6	36
40	Synthesis of few-to-monolayer graphene on rutile titanium dioxide. Carbon, 2013, 55, 168-175.	5.4	18
41	Plasma electrolysis allows the facile and efficient production of graphite oxide from recycled graphite. RSC Advances, 2013, 3, 17402.	1.7	14
42	Transfer-free synthesis of multilayer graphene using a single-step process in an evaporator and formation confirmation by laser mode-locking. Nanotechnology, 2013, 24, 365603.	1.3	11
43	Transfer-free grown bilayer graphene transistors for digital applications. Solid-State Electronics, 2013, 81, 86-90.	0.8	10
44	Enhanced Performance and Fermi-Level Estimation of Coronene-Derived Graphene Transistors on Self-Assembled Monolayer Modified Substrates in Large Areas. Journal of Physical Chemistry C, 2013, 117, 4800-4807.	1.5	27
45	Graphitic carbon grown on fluorides by molecular beam epitaxy. Nanoscale Research Letters, 2013, 8, 11.	3.1	3
46	Flexible transparent electrodes made of electrochemically exfoliated graphene sheets from low-cost graphite pieces. Displays, 2013, 34, 315-319.	2.0	56
47	Labelâ€Free Electrical Detection of DNA Hybridization on Graphene using Hall Effect Measurements: Revisiting the Sensing Mechanism. Advanced Functional Materials, 2013, 23, 2301-2307.	7.8	114
48	Grapheneâ€Based Nanomaterials: Synthesis, Properties, and Optical and Optoelectronic Applications. Advanced Functional Materials, 2013, 23, 1984-1997.	7.8	257
49	Few-Layer MoS₂ with High Broadband Photogain and Fast Optical Switching for Use in Harsh Environments. ACS Nano, 2013, 7, 3905-3911.	7.3	584
50	Graphene Domains Synthesized on Electroplated Copper by Chemical Vapor Deposition. Chinese Physics Letters, 2013, 30, 028102.	1.3	3
51	Direct Synthesis of Graphene Meshes and Semipermanent Electrical Doping. Journal of Physical Chemistry Letters, 2013, 4, 2099-2104.	2.1	29
52	Self-regulating homogenous growth of high-quality graphene on Coâ€“Cu composite substrate for layer control. Nanoscale, 2013, 5, 5847.	2.8	25
53	Photo-thermal chemical vapor deposition of graphene on copper. Carbon, 2013, 62, 43-50.	5.4	32
54	Transfer-free grown bilayer graphene memory devices. , 2013, , .		1
55	Transfer-Free Selective Area Synthesis of Graphene Using Solid-State Self-Segregation of Carbon In Cu/Ni Bilayers. ECS Journal of Solid State Science and Technology, 2013, 2, M17-M21.	0.9	14
56	Pressure-dependent synthesis of high-quality few-layer graphene by plasma-enhanced arc discharge and their thermal stability. Journal of Nanoparticle Research, 2013, 15, 1.	0.8	55

#	Article	IF	Citations
57	Robust and stable intercalated graphene encapsulation of tin nanorods for enhanced cycle and capacity performance for lithium storage. RSC Advances, 2013, 3, 21588.	1.7	12
58	MULTILAYERED GRAPHENE IN MICROWAVES. , 2013, , .		0
59	Self-assembled two-dimensional graphene grating on a dielectric substrate. Applied Physics Letters, 2013, 102, 211603.	1.5	6
60	Direct growth of graphene nanomesh using a Au nano-network as a metal catalyst via chemical vapor deposition. Applied Physics Letters, 2013, 103, 023105.	1.5	26
61	Fabrication of a Schottky junction diode with direct growth graphene on silicon by a solid phase reaction. Journal Physics D: Applied Physics, 2013, 46, 455103.	1.3	28
62	Techniques for Production of Large Area Graphene for Electronic and Sensor Device Applications. Graphene and 2D Materials, 2014, 1, .	2.0	0
63	Gas detection using large-size graphene with defects. Journal of Applied Physics, 2014, 116, 193704.	1.1	2
64	Controlling the direct growth of graphene on an insulating substrate by the solid phase reaction of a polymer layer. RSC Advances, 2014, 4, 38450-38454.	1.7	10
65	The growth mechanisms of graphene directly on sapphire substrates by using the chemical vapor deposition. Journal of Applied Physics, 2014, 115, .	1.1	29
66	In situ control of dewetting of Cu thin films in graphene chemical vapor deposition. Thin Solid Films, 2014, 573, 122-127.	0.8	14
67	1-nm-thick graphene tri-layer as the ultimate copper diffusion barrier. Applied Physics Letters, 2014, 104, .	1.5	57
68	Few layer graphene paper from electrochemical process for heat conduction. Materials Research Innovations, 2014, 18, 208-213.	1.0	11
69	Self-assembled graphene on dielectric micro- and nanostructures. Carbon, 2014, 70, 273-278.	5.4	15
70	Mechanisms of graphene growth by chemical vapour deposition on transition metals. Carbon, 2014, 70, 1-21.	5.4	284
71	Controllable growth of 1â€“7 layers of graphene by chemical vapour deposition. Carbon, 2014, 73, 252-258.	5.4	125
72	Growth of epitaxial graphene: Theory and experiment. Physics Reports, 2014, 542, 195-295.	10.3	228
73	Two-step growth of graphene with separate controlling nucleation and edge growth directly on SiO2 substrates. Carbon, 2014, 72, 387-392.	5.4	45
74	Direct Growth of Graphene Films on Sapphire (0001) and (112ì…0) Surfaces by Self-Catalytic Chemical Vapor Deposition. Journal of Physical Chemistry C, 2014, 118, 5523-5529.	1.5	34

#	Article	IF	Citations
75	Graphene/MoS₂ Heterostructures for Ultrasensitive Detection of DNA Hybridisation. Advanced Materials, 2014, 26, 4838-4844.	11.1	290
76	25th Anniversary Article: Carbon Nanotubeâ€•and Grapheneâ€Based Transparent Conductive Films for Optoelectronic Devices. Advanced Materials, 2014, 26, 1958-1991.	11.1	350
77	Size Dependence of Compressive Strain in Graphene Flakes Directly Grown on SiO2/Si Substrate. Journal of Physical Chemistry C, 2014, 118, 12526-12531.	1.5	5
78	Lowâ€temperature rapid thermal CVD of nanocrystalline graphene on Cu thin films. Physica Status Solidi (B): Basic Research, 2014, 251, 2515-2520.	0.7	2
79	Preparation of Graphene with Large Area. , 2014, , 39-76.		3
80	High entropy alloy mediated growth of graphene. CrystEngComm, 2014, 16, 6187-6194.	1.3	7
81	Nanoelectronic circuits based on two-dimensional atomic layer crystals. Nanoscale, 2014, 6, 13283-13300.	2.8	49
82	Graphene film formation on insulating substrates using polymer films as carbon source. Journal Physics D: Applied Physics, 2014, 47, 094015.	1.3	17
83	Fabrication of a graphene nanomesh using a platinum nano-network as a pattern mask. Nanoscale, 2014, 6, 6482-6486.	2.8	19
84	Direct growth of patterned graphene on SiO₂ substrates without the use of catalysts or lithography. Nanoscale, 2014, 6, 10100-10105.	2.8	66
85	Crack-Release Transfer Method of Wafer-Scale Grown Graphene Onto Large-Area Substrates. ACS Applied Materials & Interfaces, 2014, 6, 12588-12593.	4.0	25
86	Asymmetric Growth of Bilayer Graphene on Copper Enclosures Using Low-Pressure Chemical Vapor Deposition. ACS Nano, 2014, 8, 6491-6499.	7.3	113
87	Synthesis of transfer-free graphene by solid phase reaction process in presence of a carbon diffusion barrier. Materials Letters, 2014, 129, 76-79.	1.3	8
88	Improvement of Electrical Device Performances for Graphene Directly Grown on a SiO₂Substrate by Plasma Chemical Vapor Deposition. Plasma and Fusion Research, 2014, 9, 1206079-1206079.	0.3	0
89	Homogeneous Optical and Electronic Properties of Graphene Due to the Suppression of Multilayer Patches During CVD on Copper Foils. Advanced Functional Materials, 2014, 24, 964-970.	7.8	71
90	Graphene/Conjugated Polymer Nanocomposites for Optoelectronic and Biological Applications. , 2015, , 229-279.		1
91	Controllable Synthesis of Grapheneâ€Encapsulated Lowâ€Dimensional Nanocomposites. Advanced Materials Interfaces, 2015, 2, 1500112.	1.9	3
92	A green, simple and cost-effective approach to synthesize high quality graphene by electrochemical exfoliation via process optimization. RSC Advances, 2015, 5, 54762-54768.	1.7	36

#	Article	IF	Citations
93	High-speed roll-to-roll manufacturing of graphene using a concentric tube CVD reactor. Scientific Reports, 2015, 5, 10257.	1.6	150
94	Performance of a CVD grown graphene-based planar device for a hydrogen gas sensor. Measurement Science and Technology, 2015, 26, 115104.	1.4	19
95	Chemical vapor deposition of transfer-free graphene on SiO2/Si using a sacrificial copper film. , 2015, , .		2
96	Transfer-Free Synthesis of Doped and Patterned Graphene Films. ACS Nano, 2015, 9, 594-601.	7.3	82
97	Low Temperature Growth of Graphene on Glass by Carbon-Enclosed Chemical Vapor Deposition Process and Its Application as Transparent Electrode. Chemistry of Materials, 2015, 27, 1646-1655.	3.2	41
98	Fabrication of high-quality graphene by hot-filament thermal chemical vapor deposition. Carbon, 2015, 86, 1-11.	5.4	21
99	Direct growth of self-crystallized graphene and graphite nanoballs with Ni vapor-assisted growth: From controllable growth to material characterization. Scientific Reports, 2014, 4, 4739.	1.6	42
100	Frontiers of Graphene and Carbon Nanotubes. , 2015, , .		34
101	Effects of molecular adsorption on carrier transport properties of large-size graphene. Journal of Applied Physics, 2015, 117, 025103.	1.1	5
102	Low-Temperature Synthesis of Graphene and Fabrication of Top-Gated Field-Effect Transistors Using Transfer-Free Processes for Future LSIs. , 2015, , 79-89.		0
103	Transferring-free and large-area graphitic carbon film growth by using molecular beam epitaxy at low growth temperature. Journal of Crystal Growth, 2015, 425, 177-180.	0.7	1
104	Towards the continuous production of high crystallinity graphene via electrochemical exfoliation with molecular in situ encapsulation. Nanoscale, 2015, 7, 15362-15373.	2.8	112
105	Hexaazatriphenylene (HAT) derivatives: from synthesis to molecular design, self-organization and device applications. Chemical Society Reviews, 2015, 44, 6850-6885.	18.7	130
107	Rapid growth of single-layer graphene on the insulating substrates by thermal CVD. Applied Surface Science, 2015, 346, 41-45.	3.1	40
108	Ultrafast Graphene Growth on Insulators via Metal-Catalyzed Crystallization by a Laser Irradiation Process: From Laser Selection, Thickness Control to Direct Patterned Graphene Utilizing Controlled Layer Segregation Process. Small, 2015, 11, 3017-3027.	5.2	11
109	Atomically Thin Epitaxial Template for Organic Crystal Growth Using Graphene with Controlled Surface Wettability. Nano Letters, 2015, 15, 2474-2484.	4.5	55
110	Magneto-electronic properties of multilayer graphenes. Physical Chemistry Chemical Physics, 2015, 17, 26008-26035.	1.3	43
111	Non-vacuum growth of graphene films using solid carbon source. Applied Physics Letters, 2015, 106, 221604.	1.5	8

#	Article	IF	Citations
112	A novel semiconductor compatible path for nano-graphene synthesis using CBr4 precursor and Ga catalyst. Scientific Reports, 2015, 4, 4653.	1.6	8
113	Direct synthesis of few- and multi-layer graphene films on dielectric substrates by â€œetching-precipitationâ€•method. Carbon, 2015, 82, 254-263.	5.4	31
114	Ultrahigh-Gain Photodetectors Based on Atomically Thin Graphene-MoS2 Heterostructures. Scientific Reports, 2014, 4, 3826.	1.6	771
115	Spontaneous pattern transfer and selective growth of graphene on a Cu foil. Carbon, 2015, 82, 238-244.	5.4	4
116	Large-scale and patternable graphene: direct transformation of amorphous carbon film into graphene/graphite on insulators via Cu mediation engineering and its application to all-carbon based devices. Nanoscale, 2015, 7, 1678-1687.	2.8	25
117	CVD growth of graphene under exfoliated hexagonal boron nitride for vertical hybrid structures. Materials Research Bulletin, 2015, 61, 226-230.	2.7	12
119	Low temperature direct growth of graphene patterns on flexible glass substrates catalysed by a sacrificial ultrathin Ni film. Optical Materials Express, 2016, 6, 2487.	1.6	30
120	Largeâ€Size Growth of Ultrathin SnS₂ Nanosheets and High Performance for Phototransistors. Advanced Functional Materials, 2016, 26, 4405-4413.	7.8	279
121	Direct CVD Graphene Growth on Semiconductors and Dielectrics for Transferâ€Free Device Fabrication. Advanced Materials, 2016, 28, 4956-4975.	11.1	113
122	VQS (vapor-quasiliquid-solid, vapor-quasisolid-solid) mechanism lays down general platform for the syntheses of graphene by chemical vapor deposition. Journal of Applied Physics, 2016, 120, 214305.	1.1	3
123	Chemical and biological sensors based on defect-engineered graphene mesh field-effect transistors. Nano Convergence, 2016, 3, 14.	6.3	14
124	One-Minute Room-Temperature Transfer-Free Production of Mono- and Few-Layer Polycrystalline Graphene on Various Substrates. Scientific Reports, 2016, 6, 19313.	1.6	18
125	Surface engineering of nanomaterials for improved energy storage â€“ A review. Chemical Engineering Science, 2016, 154, 3-19.	1.9	49
126	Optical characterization of directly deposited graphene on a dielectric substrate. Optics Express, 2016, 24, 2965.	1.7	5
127	Simultaneous growth of monolayer graphene on Niâ€“Cu bimetallic catalyst by atmospheric pressure CVD process. RSC Advances, 2016, 6, 41447-41452.	1.7	2
128	GRAPHENE: FROM SYNTHESIS TO APPLICATIONS IN FLEXIBLE ELECTRONICS. , 2016, , 87-115.		0
129	Transfer-Free Fabrication of Graphene Scaffolds on High-k Dielectrics from Metalâ€“Organic Oligomers. ACS Applied Materials & Interfaces, 2016, 8, 25469-25475.	4.0	1
131	Booming Development of Group IVâ€“VI Semiconductors: Fresh Blood of 2D Family. Advanced Science, 2016, 3, 1600177.	5.6	181

#	Article	IF	Citations
132	Selective growth of graphene in layer-by-layer via chemical vapor deposition. Nanoscale, 2016, 8, 14633-14642.	2.8	10
133	Fabrication Methods of Graphene Nanoribbons. , 2016, , 151-166.		0
134	Functionalized Graphene: Synthesis and Its Applications in Electrochemistry. , 2016, , 167-188.		0
135	Chapter 6 Graphene: A New Star Nanomaterial in Energy and Environment Applications. , 2016, , 273-306.		0
136	Graphene-based Chemical Sensors. , 2016, , 221-243.		0
137	Multigraphene growth on lead-pencil drawn sliver halide print paper irradiated by scanning femtosecond laser. Japanese Journal of Applied Physics, 2016, 55, 01AE24.	0.8	1
138	Black Phosphorus Nanosheets: Synthesis, Characterization and Applications. Small, 2016, 12, 3480-3502.	5.2	337
139	High Capacity Retention Anode Material for Lithium Ion Battery. Electrochimica Acta, 2016, 211, 156-163.	2.6	44
140	Temperature- and Hydrogen-Gas-Dependent Reversible Inversion of n-/p-Type Conductivity in CVD-Grown Multilayer Graphene (MLG) Film. Journal of Electronic Materials, 2016, 45, 2861-2869.	1.0	8
141	Grain Boundaries in Chemical Vapor Deposition-Grown Graphene. , 2016, , 123-142.		0
142	Application of Graphene and Graphene Oxide in Dye-Sensitized Solar Cells. , 2016, , 399-414.		0
143	Structural, Vibrational, and Thermal Properties of Nanocrystalline Graphene in Atomistic Simulations. Journal of Physical Chemistry C, 2016, 120, 3026-3035.	1.5	15
144	A general two-step chemical vapor deposition procedure to synthesize highly crystalline transition metal dichalcogenides: A case study of MoS2. Materials Research Bulletin, 2016, 76, 473-478.	2.7	8
145	Rapid flame synthesis of multilayer graphene on SiO2/Si substrate. Journal of Materials Science: Materials in Electronics, 2016, 27, 2795-2799.	1.1	12
146	Wide-range work-function tuning of active graphene transparent electrodes via hole doping. RSC Advances, 2016, 6, 32746-32756.	1.7	29
147	A study of the growth-time effect on graphene layer number based on a Cuâ€“Ni bilayer catalyst system. RSC Advances, 2016, 6, 23956-23960.	1.7	14
148	Direct preparation of high quality graphene on dielectric substrates. Chemical Society Reviews, 2016, 45, 2057-2074.	18.7	88
149	Atomic-concentration diffusion governing integrated-territory graphene syntheses at catalystâ€“insulator interfaces. Carbon, 2016, 102, 403-408.	5.4	3

#	Article	IF	Citations
150	A fast transfer-free synthesis of high-quality monolayer graphene on insulating substrates by a simple rapid thermal treatment. Nanoscale, 2016, 8, 2594-2600.	2.8	20
151	Direct synthesis of multilayer graphene on an insulator by Ni-induced layer exchange growth of amorphous carbon. Applied Physics Letters, 2017, 110, .	1.5	26
153	Layer-by-Layer Growth of Graphene on Insulator in CO₂-Oxidizing Environment. ACS Omega, 2017, 2, 1523-1528.	1.6	4
154	Graphene growth by transfer-free chemical vapour deposition on a cobalt layer. Journal of Electrical Engineering, 2017, 68, 79-82.	0.4	6
155	Influence of graphene growth temperature by chemical vapour deposition on the hydrogen response of palladiumâ€“graphene junction. Journal of Materials Science: Materials in Electronics, 2017, 28, 13217-13228.	1.1	2
156	A visualization method for probing grain boundaries of single layer graphene via molecular beam epitaxy. Nanotechnology, 2017, 28, 305601.	1.3	5
157	Germanium-Assisted Direct Growth of Graphene on Arbitrary Dielectric Substrates for Heating Devices. Small, 2017, 13, 1700929.	5.2	33
158	In-plane growth of large ultra-thin SnS2 nanosheets by tellurium-assisted chemical vapor deposition. RSC Advances, 2017, 7, 29080-29087.	1.7	15
159	High-performance photodetectors based on CVD-grown high-quality SnS2 nanosheets. Applied Physics A: Materials Science and Processing, 2017, 123, 1.	1.1	29
160	Hydrogen sulfide gas sensor based on graphene-coated tapered photonic crystal fiber interferometer. Sensors and Actuators B: Chemical, 2017, 247, 540-545.	4.0	61
161	Preparation of Cuâ€“Feâ€“Alâ€“O nanosheets and their catalytic application in methanol steam reforming for hydrogen production. Materials Research Express, 2017, 4, 035005.	0.8	5
162	Scaling properties of polycrystalline graphene: a review. 2D Materials, 2017, 4, 012002.	2.0	62
163	Thermal Transport in Nanocrystalline Graphene: The Role of Grain Boundaries. Carbon Nanostructures, 2017, , 1-17.	0.1	1
164	Direct growth of graphene on rigid and flexible substrates: progress, applications, and challenges. Chemical Society Reviews, 2017, 46, 6276-6300.	18.7	81
165	Scalable fabrication of the graphitic substrates for graphene-enhanced Raman spectroscopy. Scientific Reports, 2017, 7, 8561.	1.6	9
166	A patterned single layer graphene resistance temperature sensor. Scientific Reports, 2017, 7, 8811.	1.6	117
167	Copper-vapor-catalyzed chemical vapor deposition of graphene on dielectric substrates. Applied Physics Letters, 2017, 111, .	1.5	5
168	Domain size, layer number and morphology control for graphene grown by chemical vapor deposition. Functional Materials Letters, 2017, 10, 1730003.	0.7	8

#	Article	IF	Citations
169	Source identification and method for drastic reduction of Fe contamination on wet transferred graphene. Thin Solid Films, 2017, 639, 36-41.	0.8	2
170	Surface topography and hydrogen sensor response of APCVD grown multilayer graphene thin films. Journal of Materials Science: Materials in Electronics, 2017, 28, 157-166.	1.1	4
171	The physics and chemistry of graphene-on-surfaces. Chemical Society Reviews, 2017, 46, 4417-4449.	18.7	309
172	Threeâ€dimensional macroporous graphene scaffolds for tissue engineering. Journal of Biomedical Materials Research - Part A, 2017, 105, 73-83.	2.1	19
173	High-quality multilayer graphene on an insulator formed by diffusion controlled Ni-induced layer exchange. Applied Physics Letters, 2017, 111, .	1.5	26
174	Multilayer graphene on insulator formed by Co-induced layer exchange. Japanese Journal of Applied Physics, 2017, 56, 05DE03.	0.8	10
175	4. Controlled Chemical Synthesis in CVD Graphene. , 2017, , .		1
176	Controlled Chemical Synthesis in CVD Graphene. ChemistrySelect, 2017, 2, .	0.7	7
177	Strong Quantum Confinement Effects in Nanometer Devices with Graphene Directly Grown on Insulator by Catalyst-free Chemical Vapor Deposition. Current Graphene Science, 2017, 1, .	0.5	0
178	Fabrication of a Schottky diode with transfer-free deposition of multilayer graphene on n-GaN by solid-phase reaction. Japanese Journal of Applied Physics, 2017, 56, 04CP08.	0.8	0
179	The integration of graphene into microelectronic devices. Beilstein Journal of Nanotechnology, 2017, 8, 1056-1064.	1.5	32
180	Fabrication of hierarchical porous hollow carbon spheres with few-layer graphene framework and high electrochemical activity for supercapacitor. Applied Surface Science, 2018, 443, 367-373.	3.1	26
181	Extremely Low Thermal Conductivity of Polycrystalline Silicene. Journal of Physical Chemistry C, 2018, 122, 9220-9228.	1.5	20
182	Transfer-free, lithography-free, and micrometer-precision patterning of CVD graphene on SiO2 toward all-carbon electronics. APL Materials, 2018, 6, 026802.	2.2	14
183	Switching Vertical to Horizontal Graphene Growth Using Faraday Cageâ€Assisted PECVD Approach for Highâ€Performance Transparent Heating Device. Advanced Materials, 2018, 30, 1704839.	11.1	62
184	Transfer-free chemical vapor deposition of graphene on silicon substrate at atmospheric pressure: A sacrificial catalyst. Thin Solid Films, 2018, 657, 55-60.	0.8	13
185	Fabrication of Metal/Graphene Hybrid Interconnects by Direct Graphene Growth and Their Integration Properties. Advanced Electronic Materials, 2018, 4, 1700624.	2.6	12
186	Self-propagated combustion synthesis of few-layered graphene: an optical properties perspective. Nanoscale, 2018, 10, 7581-7588.	2.8	10

#	Article	IF	Citations
187	Direct formation of wafer-scale single-layer graphene films on the rough surface substrate by PECVD. Carbon, 2018, 129, 456-461.	5.4	60
188	THE ROLE OF PRESSURE TO QUANTIFY THE DEFECTS AND ITS EFFECT ON THE MORPHOLOGY OF GRAPHENE LAYERS. Surface Review and Letters, 2018, 25, 1850055.	0.5	2
189	Role of the Cu substrate in the growth of ultra-flat crack-free highly-crystalline single-layer graphene. Nanoscale, 2018, 10, 21898-21909.	2.8	24
190	Direct Growth of Graphene on Flexible Substrates toward Flexible Electronics: A Promising Perspective. , 0, , .		10
191	Influence of Graphene layers on Tunable Range and Pulsewidth in Mode-Locked Lasers. , 2018, , .		0
192	Low-Temperature CVD Graphene Nanostructures on Cu and Their Corrosion Properties. Materials, 2018, 11, 1989.	1.3	15
193	Metal Catalysts for Layer-Exchange Growth of Multilayer Graphene. ACS Applied Materials & Interfaces, 2018, 10, 41664-41669.	4.0	23
194	Synthesis and Optical Characterization of CVD Graphene. , 2018, , 793-804.		0
195	Highly Conductive Nitrogen-Doped Graphene Grown on Glass toward Electrochromic Applications. ACS Applied Materials & Interfaces, 2018, 10, 32622-32630.	4.0	37
197	Transfer-free, lithography-free and fast growth of patterned CVD graphene directly on insulators by using sacrificial metal catalyst. Nanotechnology, 2018, 29, 365301.	1.3	22
198	Fabrication and Characterization of Two-Dimensional Layered MoS₂ Thin Films by Pulsed Laser Deposition. Advances in Condensed Matter Physics, 2018, 2018, 1-5.	0.4	8
199	Intergrain Diffusion of Carbon Radical for Wafer-Scale, Direct Growth of Graphene on Silicon-Based Dielectrics. ACS Applied Materials & Interfaces, 2018, 10, 26517-26525.	4.0	11
200	Optimization of stacking graphene layers as a saturable absorber for mode-locked lasers. , 2018, , .		0
201	Enhanced photolithography with Al film insertion for large-scale patterning of CVD graphene. Optical Materials Express, 2018, 8, 2403.	1.6	3
202	Growth and carrier transport performance of single-crystalline monolayer graphene over electrodeposited copper film on quartz glass. Ceramics International, 2019, 45, 24254-24259.	2.3	3
203	Epitaxial growth and characterization of GaN thin films on graphene/sapphire substrate by embedding a hybrid-AlN buffer layer. Applied Surface Science, 2019, 494, 644-650.	3.1	18
204	Ultrafast Catalyst-Free Graphene Growth on Glass Assisted by Local Fluorine Supply. ACS Nano, 2019, 13, 10272-10278.	7.3	32
205	Recent Developments in Stability and Passivation Techniques of Phosphorene toward Nextâ€Generation Device Applications. Advanced Functional Materials, 2019, 29, 1903419.	7.8	113

#	Article	IF	Citations
206	Impact of Amorphous-C/Ni Multilayers on Ni-Induced Layer Exchange for Multilayer Graphene on Insulators. ACS Omega, 2019, 4, 14251-14254.	1.6	7
207	Electrodeposition Cu and roll transfer of graphene for large scale fabrication of Cu-graphene nanolayered composite. 2D Materials, 2019, 6, 045051.	2.0	5
208	Strong optical nonlinearity of ultrathin graphitic films synthesized on dielectric substrates. Applied Surface Science, 2019, 497, 143766.	3.1	3
209	Design of on-chip polarizers based on graphene-on-silicon nanowires. Applied Physics Express, 2019, 12, 072001.	1.1	7
210	Morphology Evolution of Graphene during Chemical Vapor Deposition Growth: A Phase-Field Theory Simulation. Journal of Physical Chemistry C, 2019, 123, 9902-9908.	1.5	15
211	High-Electrical-Conductivity Multilayer Graphene Formed by Layer Exchange with Controlled Thickness and Interlayer. Scientific Reports, 2019, 9, 4068.	1.6	89
212	Low-Temperature (400 Â°C) Synthesis of Multilayer Graphene by Metal-Assisted Sputtering Deposition. ACS Omega, 2019, 4, 6677-6680.	1.6	19
213	Metal-Catalyst-Free Growth of Patterned Graphene on SiO₂ Substrates by Annealing Plasma-Induced Cross-Linked Parylene for Optoelectronic Device Applications. ACS Applied Materials & Interfaces, 2019, 11, 14427-14436.	4.0	8
214	Optical properties of GaN nanowires grown on chemical vapor deposited-graphene. Nanotechnology, 2019, 30, 214005.	1.3	11
215	Direct formation of continuous multilayer graphene films with controllable thickness on dielectric substrates. Thin Solid Films, 2019, 675, 136-142.	0.8	5
216	Solid-State Carbon-Doped GaN Schottky Diodes by Controlling Dissociation of the Graphene Interlayer with a Sputtered AlN Capping Layer. ACS Applied Materials & Interfaces, 2019, 11, 48086-48094.	4.0	4
217	Direct CVD Growth of Graphene on Traditional Glass: Methods and Mechanisms. Advanced Materials, 2019, 31, e1803639.	11.1	114
218	Single-step growth of graphene and graphene-based nanostructures by plasma-enhanced chemical vapor deposition. Nanotechnology, 2019, 30, 162001.	1.3	37
219	Nanomaterials. , 2020, , 515-539.		3
220	Stretchability of PMMA-supported CVD graphene and of its electrical contacts. 2D Materials, 2020, 7, 014003.	2.0	17
221	Grapheneâ€Based Devices for Thermal Energy Conversion and Utilization. Advanced Functional Materials, 2020, 30, 1903888.	7.8	30
222	Synthesis of single-layer graphene film by chemical vapor deposition with molten gallium catalyst on silicon dioxide. Journal of Materials Science, 2020, 55, 2787-2795.	1.7	11
223	Electrical, Transport, and Optical Properties of Multifunctional Graphitic Films Synthesized on Dielectric Surfaces by Nickel Nanolayer-Assisted Pyrolysis. ACS Applied Materials & Interfaces, 2020, 12, 6226-6233.	4.0	5

#	Article	IF	Citations
224	Very low-temperature growth of few-layer graphene by Ni-induced crystallization of amorphous carbon in vacuum. Carbon, 2020, 159, 37-44.	5.4	15
225	In Situ Growth of CVD Graphene Directly on Dielectric Surface toward Application. ACS Applied Electronic Materials, 2020, 2, 238-246.	2.0	17
226	Studies on directly grown few layer graphene processed using tape-peeling method. Carbon, 2020, 158, 749-755.	5.4	12
227	An Effort Towards Full Graphene Photodetectors. Photonic Sensors, 2022, 12, 31-67.	2.5	16
228	Multilayer Graphene Battery Anodes on Plastic Sheets for Flexible Electronics. ACS Applied Energy Materials, 2020, 3, 8410-8414.	2.5	10
229	Sustainable production of value-added carbon nanomaterials from biomass pyrolysis. Nature Sustainability, 2020, 3, 753-760.	11.5	124
230	Highly-sensitive graphene field effect transistor biosensor using PNA and DNA probes for RNA detection. Applied Surface Science, 2020, 527, 146839.	3.1	45
231	Fundamental limitations in transferred CVD graphene caused by Cu catalyst surface morphology. Carbon, 2020, 163, 95-104.	5.4	40
232	Direct Growth of Graphene over Insulators by Gaseousâ€Promotorâ€Assisted CVD: Progress and Prospects. ChemNanoMat, 2020, 6, 483-492.	1.5	6
233	Direct synthesis of single-layer graphene films on quartz substrate by a nanoparticle-assisted method. Applied Surface Science, 2020, 529, 147082.	3.1	11
234	Production and processing of graphene and related materials. 2D Materials, 2020, 7, 022001.	2.0	333
235	Impact of the carbon membrane inserted below Ni in the layer exchange of multilayer graphene. CrystEngComm, 2020, 22, 3106-3109.	1.3	1
236	Wafer scale growth of MoS2 and WS2 by pulsed laser deposition. Materials Today: Proceedings, 2021, 35, 494-496.	0.9	12
237	Oxygen-assisted direct growth of large-domain and high-quality graphene on glass targeting advanced optical filter applications. Nano Research, 2021, 14, 260-267.	5.8	20
238	Boron-doped graphene from boron-doped copper substrate for self-powered photodetector. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2021, 263, 114814.	1.7	1
239	Multilayer graphene in situ formed in carbonized waste paper with the synergism of nickel and sodium. New Journal of Chemistry, 2021, 45, 6254-6262.	1.4	6
240	Carbon-based Multi-layered Films for Electronic Application: A Review. Journal of Electronic Materials, 2021, 50, 1845-1892.	1.0	14
241	Single-Step Direct Growth of Graphene on Cu Ink toward Flexible Hybrid Electronic Applications by Plasma-Enhanced Chemical Vapor Deposition. ACS Applied Materials & Interfaces, 2021, 13, 6951-6959.	4.0	10

#	Article	IF	Citations
242	Chemical vapor deposition of graphene on thin-metal films. Cell Reports Physical Science, 2021, 2, 100372.	2.8	44
243	Photolithographically-patterned C-MEMS graphene by carbon diffusion through nickel. Nanotechnology, 2021, 32, 265302.	1.3	6
244	Synthesis of Waferâ€Scale Graphene with Chemical Vapor Deposition for Electronic Device Applications. Advanced Materials Technologies, 2021, 6, 2000744.	3.0	46
245	Graphene Directly Growth on Non-Metal Substrate from Amorphous Carbon Nano Films Without Transfer and Its Application in Photodetector. Science of Advanced Materials, 2021, 13, 574-582.	0.1	3
246	Adhesion-Enhanced Vertically Oriented Graphene on Titanium-Covered Quartz Glass toward High-Stability Light-Dimming-Related Applications. ACS Nano, 2021, 15, 10514-10524.	7.3	11
247	Large-Size Suspended Mono-Layer Graphene Film Transfer Based on the Inverted Floating Method. Micromachines, 2021, 12, 525.	1.4	2
248	Controllable Synthesis of Waferâ€Scale Graphene Films: Challenges, Status, and Perspectives. Small, 2021, 17, e2008017.	5.2	23
249	A Simplified Method for Patterning Graphene on Dielectric Layers. ACS Applied Materials & Interfaces, 2021, 13, 37510-37516.	4.0	0
250	Rational Design on Wrinkleâ€Less Transfer of Transition Metal Dichalcogenide Monolayer by Adjustable Wettabilityâ€Assisted Transfer Method. Advanced Functional Materials, 2021, 31, 2104978.	7.8	17
251	Growth of wrinkle-free and ultra-flat Bi-layer graphene on sapphire substrate using Cu sacrificial layer. Nanotechnology, 2021, 32, 475603.	1.3	2
252	Experimental advances in charge and spin transport in chemical vapor deposited graphene. JPhys Materials, 2021, 4, 042007.	1.8	10
253	A Review of Graphene: Material Synthesis from Biomass Sources. Waste and Biomass Valorization, 2022, 13, 1385-1429.	1.8	34
255	Spatial Confinement Approach Using Ni to Modulate Local Carbon Supply for the Growth of Uniform Transfer-Free Graphene Monolayers. Journal of Physical Chemistry C, 2020, 124, 23094-23105.	1.5	7
256	Transfer-Free Graphene Growth on Dielectric Substrates: A Review of the Growth Mechanism. Critical Reviews in Solid State and Materials Sciences, 2019, 44, 157-209.	6.8	17
258	An Overview: Recent Development of Titanium Dioxide Loaded Graphene Nanocomposite Film for Solar Application. Current Organic Chemistry, 2015, 19, 1882-1895.	0.9	16
259	Direct Growth of Graphene at Low Temperature for Future Device Applications. Journal of the Korean Ceramic Society, 2018, 55, 203-223.	1.1	8
260	Toward clean and crackless polymer-assisted transfer of CVD-grown graphene and its recent advances in GFET-based biosensors. Materials Today Chemistry, 2021, 22, 100578.	1.7	9
261	Graphene Growth from Spin-Coated Polymers without a Gas. Japanese Journal of Applied Physics, 2012, 51, 06FD01.	0.8	1

#	Article	IF	Citations
262	Direct Growth of Graphene and Graphene Nanoribbon on an Insulating Substrate by Rapid-Heating Plasma CVD. , 2015, , 37-52.		1
263	Direct synthesized graphene-like film on SiO2: Mechanical and optical properties. Semiconductor Physics, Quantum Electronics and Optoelectronics, 2016, 19, 328-333.	0.3	0
264	Research progress of direct synthesis of graphene on dielectric layer. Wuli Xuebao/Acta Physica Sinica, 2017, 66, 216804.	0.2	1
265	Graphene Preparation Methods Traceability, Research Progress and Development Status. Material Sciences, 2018, 08, 202-221.	0.0	0
266	YÃ¼zeyi Kimyasal Buhar Biriktirme YÃ¶ntemiyle Grafen KaplanmÄ±ÅŸ GÃ¼mÃ¼ÅŸ YÃ¼zeyin YansÄ±tma ve IslatÄ±labilme Ã–zelliklerinin Ä°ncelenmesi. Journal of the Institute of Science and Technology, 2020, 10, 141-148.	0.3	1
267	Highly-defective graphene as a metal-free catalyst for chemical vapor deposition growth of graphene glass. Carbon, 2022, 187, 272-279.	5.4	3
268	Wafer-scale single-crystal monolayer graphene grown on sapphire substrate. Nature Materials, 2022, 21, 740-747.	13.3	92
269	Highly sensitive detection of kinetin with electrochemical exfoliation of graphene nanosheets. Applied Physics A: Materials Science and Processing, 2022, 128, 1.	1.1	3
270	Chemical Interactions of Nano Islandic Graphene Grown on Titanium Dioxide Substrates by Chemical Vapor Deposition. Arabian Journal for Science and Engineering, 0, , 1.	1.7	0
271	Microscopic investigation of Cu-induced crystallization of amorphous carbon at low temperatures. Applied Surface Science, 2022, 595, 153507.	3.1	1
272	In Situ Constructed Multilayer Graphene Structure Enabling Improved Supercapacitive Charge Storage. SSRN Electronic Journal, 0, , .	0.4	0
273	Growth Dynamics of Epitaxial Interfacial Carbon Layers at the Epitaxial Al2o3(0001)/Cu(111) Interface for Scalable High-Quality Graphene Transfer Applications. SSRN Electronic Journal, 0, , .	0.4	0
274	Facile flame catalytic growing carbon coating on Cu panel with surface protection performance comparable to that of graphene film via CVD. Surface and Coatings Technology, 2022, 445, 128720.	2.2	5
275	In situ constructed multilayer graphene structure enabling improved supercapacitive charge storage. Electrochimica Acta, 2022, 426, 140827.	2.6	4
276	Interfacial chemical vapor deposition of wrinkle-free bilayer graphene on dielectric substrates. Applied Surface Science, 2022, 602, 154367.	3.1	3
278	Recent advances in chemical vapour deposition techniques for graphene-based nanoarchitectures: From synthesis to contemporary applications. Coordination Chemistry Reviews, 2023, 475, 214910.	9.5	41
279	Transfer-Free CVD Growth of High-Quality Wafer-Scale Graphene at 300 Â°C for Device Mass Fabrication. ACS Applied Materials & Interfaces, 2022, 14, 53174-53182.	4.0	4
280	Impact of the Density and Oxygen Concentration of Initial Amorphous Carbon on Layer Exchange of Multilayer Graphene. Crystal Growth and Design, 2022, 22, 7564-7568.	1.4	0

#	Article	IF	Citations
281	Study of solid carbon source-based graphene growth directly on SiO2 substrate with Cu or Cu/Ni as the sacrificial catalysts. MRS Communications, 0, , .	0.8	0
282	CO2-promoted transfer-free growth of conformal graphene. Nano Research, 2023, 16, 6334-6342.	5.8	2
283	Zero to Three Dimension Structure Evolution from Carbon Allotropes to Phosphorus Allotropes. Advanced Materials Interfaces, 2023, 10, .	1.9	7
284	In Situ Growth of Graphene Catalyzed by a Phaseâ€Change Material at 400ÂÂ°C for Waferâ€Scale Optoelectronic Device Application. Small, 2023, 19, .	5.2	1
285	Ultraclean and Facile Patterning of CVD Graphene by a UV-Light-Assisted Dry Transfer Method. ACS Applied Materials & Interfaces, 2023, 15, 4826-4834.	4.0	3
286	Direct growth of patterned graphene based on metal proximity catalytic mechanism. Journal of Experimental Nanoscience, 2023, 18, 1-13.	1.3	1
287	Water absorption behavior of functionalized graphene reinforced PVA based composite crosslinked using citric acid. Materials Today: Proceedings, 2023, , .	0.9	0
288	Significant Enhanced Mechanical Properties of Suspended Graphene Film by Stacking Multilayer CVD Graphene Films. Micromachines, 2023, 14, 745.	1.4	0
289	Some Aspects of Novel Materials from Optical to THz Engineering. Progress in Optical Science and Photonics, 2023, , 59-80.	0.3	1
294	Transfer-free chemical vapor deposition graphene for nitride epitaxy: challenges, current status and future outlook. Science China Chemistry, 2024, 67, 824-840.	4.2	0
302	Carbon-based nanomaterials and nanocomposites synthesis, characterization, properties and applications: A review. , 2024, , .		0