Dechao Geng

List of Publications by Year
in descending order

77 papers	4,642 citations	136950 32 h-index	98798 67 g-index
79 all docs	79 docs citations	79 times ranked	6510 citing authors

#	Article	IF	Citations
1	Uniform hexagonal graphene flakes and films grown on liquid copper surface. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 7992-7996.	7.1	417
2	Oxygen-Aided Synthesis of Polycrystalline Graphene on Silicon Dioxide Substrates. Journal of the American Chemical Society, 2011, 133, 17548-17551.	13.7	315
3	Direct Synthesis of Largeâ€Area 2D Mo₂C on In Situ Grown Graphene. Advanced Materials, 2017, 29, 1700072.	21.0	305
4	Low Temperature Growth of Highly Nitrogen-Doped Single Crystal Graphene Arrays by Chemical Vapor Deposition. Journal of the American Chemical Society, 2012, 134, 11060-11063.	13.7	287
5	Chemical Vapor Deposition of Large-Size Monolayer MoSe₂ Crystals on Molten Glass. Journal of the American Chemical Society, 2017, 139, 1073-1076.	13.7	258
6	Robust microscale superlubricity under high contact pressure enabled by graphene-coated microsphere. Nature Communications, 2017, 8, 14029.	12.8	235
7	Recent Advances in Growth of Novel 2D Materials: Beyond Graphene and Transition Metal Dichalcogenides. Advanced Materials, 2018, 30, e1800865.	21.0	203
8	Equiangular Hexagonâ€Shapeâ€Controlled Synthesis of Graphene on Copper Surface. Advanced Materials, 2011, 23, 3522-3525.	21.0	173
9	Self-organized graphene crystal patterns. NPG Asia Materials, 2013, 5, e36-e36.	7.9	153
10	Fractal Etching of Graphene. Journal of the American Chemical Society, 2013, 135, 6431-6434.	13.7	140
11	Nearâ€Equilibrium Chemical Vapor Deposition of Highâ€Quality Singleâ€Crystal Graphene Directly on Various Dielectric Substrates. Advanced Materials, 2014, 26, 1348-1353.	21.0	132
12	Chemical Vapor Deposition of Highâ€Quality Largeâ€Sized MoS₂ Crystals on Silicon Dioxide Substrates. Advanced Science, 2016, 3, 1500033.	11.2	128
13	Synthesis of large-area, few-layer graphene on iron foil by chemical vapor deposition. Nano Research, 2011, 4, 1208-1214.	10.4	120
14	Twoâ€Stage Metalâ€Catalystâ€Free Growth of Highâ€Quality Polycrystalline Graphene Films on Silicon Nitride Substrates. Advanced Materials, 2013, 25, 992-997.	21.0	112
15	Controlled growth of ultrathin Mo ₂ C superconducting crystals on liquid Cu surface. 2D Materials, 2017, 4, 011012.	4.4	112
16	Mo-Terminated Edge Reconstructions in Nanoporous Molybdenum Disulfide Film. Nano Letters, 2018, 18, 482-490.	9.1	105
17	Graphene Single Crystals: Size and Morphology Engineering. Advanced Materials, 2015, 27, 2821-2837.	21.0	99
18	Two-Dimensional Polymer Synthesized <i>via</i> Solid-State Polymerization for High-Performance Supercapacitors. ACS Nano, 2018, 12, 852-860.	14.6	91

#	Article	IF	Citations
19	Hierarchy of graphene wrinkles induced by thermal strain engineering. Applied Physics Letters, 2013, 103, .	3.3	87
20	Organic Field Effect Transistorâ€Based Photonic Synapses: Materials, Devices, and Applications. Advanced Functional Materials, 2021, 31, 2106151.	14.9	67
21	Homoepitaxial Growth of Largeâ€Scale Highly Organized Transition Metal Dichalcogenide Patterns. Advanced Materials, 2018, 30, 1704674.	21.0	63
22	Lateral Epitaxy of Atomically Sharp WSe₂/WS₂ Heterojunctions on Silicon Dioxide Substrates. Chemistry of Materials, 2016, 28, 7194-7197.	6.7	59
23	Edge Segregated Polymorphism in 2D Molybdenum Carbide. Advanced Materials, 2019, 31, e1808343.	21.0	56
24	Controlled Growth of Singleâ€Crystal Twelveâ€Pointed Graphene Grains on a Liquid Cu Surface. Advanced Materials, 2014, 26, 6423-6429.	21.0	55
25	Facile growth of vertically-aligned graphene nanosheets via thermal CVD: The experimental and theoretical investigations. Carbon, 2017, 121, 1-9.	10.3	53
26	Primary Nucleation-Dominated Chemical Vapor Deposition Growth for Uniform Graphene Monolayers on Dielectric Substrate. Journal of the American Chemical Society, 2019, 141, 11004-11008.	13.7	52
27	Gramâ€Scale Synthesis of Graphene Sheets by a Catalytic Arcâ€Discharge Method. Small, 2013, 9, 1330-1335.	10.0	49
28	Etching-Controlled Growth of Graphene by Chemical Vapor Deposition. Chemistry of Materials, 2017, 29, 1022-1027.	6.7	49
29	Selfâ€Aligned Singleâ€Crystal Graphene Grains. Advanced Functional Materials, 2014, 24, 1664-1670.	14.9	47
30	Recent Advances in Growth of Transition Metal Carbides and Nitrides (MXenes) Crystals. Advanced Functional Materials, 2022, 32, .	14.9	43
31	Layerâ€Stacking Growth and Electrical Transport of Hierarchical Graphene Architectures. Advanced Materials, 2014, 26, 3218-3224.	21.0	39
32	Direct Topâ€Down Fabrication of Largeâ€Area Graphene Arrays by an In Situ Etching Method. Advanced Materials, 2015, 27, 4195-4199.	21.0	36
33	Synthesis and morphology transformation of single-crystal graphene domains based on activated carbon dioxide by chemical vapor deposition. Journal of Materials Chemistry C, 2013, 1, 2990.	5.5	30
34	Chemical vapor deposition of bilayer graphene with layer-resolved growth through dynamic pressure control. Journal of Materials Chemistry C, 2016, 4, 7464-7471.	5.5	28
35	The More, the Betterâ€"Recent Advances in Construction of 2D Multiâ€Heterostructures. Advanced Functional Materials, 2021, 31, 2102049.	14.9	27
36	In situ epitaxial engineering of graphene and h-BN lateral heterostructure with a tunable morphology comprising h-BN domains. NPG Asia Materials, 2019, 11, .	7.9	26

#	Article	IF	Citations
37	Recent Advances in Growth of Largeâ€Sized 2D Single Crystals on Cu Substrates. Advanced Materials, 2021, 33, e2003956.	21.0	26
38	Formation of Twinned Graphene Polycrystals. Angewandte Chemie - International Edition, 2019, 58, 7723-7727.	13.8	25
39	From Selfâ€Assembly Hierarchical hâ€BN Patterns to Centimeterâ€Scale Uniform Monolayer hâ€BN Film. Advanced Materials Interfaces, 2019, 6, 1801493.	3.7	23
40	High-Concentration Niobium-Substituted WS2 Basal Domains with Reconfigured Electronic Band Structure for Hydrogen Evolution Reaction. ACS Applied Materials & Interfaces, 2019, 11, 34862-34868.	8.0	21
41	Pattern evolution characterizes the mechanism and efficiency of CVD graphene growth. Carbon, 2019, 141, 316-322.	10.3	21
42	Liquid catalysts: an innovative solution to 2D materials in CVD processes. Materials Horizons, 2018, 5, 1021-1034.	12.2	19
43	Ultrahigh density modulation of aligned single-walled carbon nanotube arrays. Nano Research, 2011, 4, 931-937.	10.4	17
44	Effects of precursor pre-treatment on the vapor deposition of WS₂ monolayers. Nanoscale Advances, 2019, 1, 953-960.	4.6	17
45	Controllable fabrication of ultrathin free-standing graphene films. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2014, 372, 20130017.	3.4	16
46	Location-selective growth of two-dimensional metallic/semiconducting transition metal dichalcogenide heterostructures. Nanoscale, 2019, 11, 4183-4189.	5.6	16
47	Largeâ€Area Growth of Fiveâ€Lobed and Triangular Graphene Grains on Textured Cu Substrate. Advanced Materials Interfaces, 2016, 3, 1600347.	3.7	15
48	A minireview on chemical vapor deposition growth of wafer-scale monolayer<i>h</i>-BN single crystals. Nanoscale, 2021, 13, 17310-17317.	5.6	14
49	Evaluation of metallic and semiconducting single-walled carbon nanotube characteristics. Nanoscale, 2011, 3, 2074.	5.6	13
50	Controllable growth of centimeter-scale 2D crystalline conjugated polymers for photonic synaptic transistors. Journal of Materials Chemistry C, 2022, 10, 2681-2689.	5.5	11
51	Additiveâ€Assisted Growth of Scaled and Quality 2D Materials. Small, 2022, 18, e2107241.	10.0	11
52	Graphene-Induced in Situ Growth of Monolayer and Bilayer 2D SiC Crystals Toward High-Temperature Electronics. ACS Applied Materials & Interfaces, 2019, 11, 39109-39115.	8.0	10
53	Recent advances in the controlled chemical vapor deposition growth of bilayer 2D single crystals. Journal of Materials Chemistry C, 2022, 10, 13324-13350.	5.5	10
54	Oxygen-Assisted Anisotropic Chemical Etching of MoSe₂ for Enhanced Phototransistors. Chemistry of Materials, 2022, 34, 4212-4223.	6.7	10

#	Article	IF	Citations
55	A General Approach for Fast Detection of Charge Carrier Type and Conductivity Difference in Nanoscale Materials. Advanced Materials, 2013, 25, 7015-7019.	21.0	9
56	When graphene meets white graphene â€“ recent advances in the construction of graphene and <i>h</i>-BN heterostructures. Nanoscale, 2021, 13, 13174-13194.	5.6	9
57	Controlled assembly of SiO_x nanoparticles in graphene. Materials Horizons, 2016, 3, 568-574.	12.2	8
58	One-Pot Confined Epitaxial Growth of 2D Heterostructure Arrays. , 2021, 3, 217-223.		8
59	Controlled growth of Mo₂C pyramids on liquid Cu surface. Journal of Semiconductors, 2020, 41, 082001.	3.7	7
60	Magnetic Properties of a Bottomâ€Up Synthesis Analogous Graphene with Nâ€Doped Zigzag Edges. Advanced Electronic Materials, 2015, 1, 1500084.	5.1	6
61	Formation of Twinned Graphene Polycrystals. Angewandte Chemie, 2019, 131, 7805-7809.	2.0	6
62	Self-Assembly Graphene Arrays on a Liquid Cuâ€“Ag Alloy. Chemistry of Materials, 2021, 33, 8649-8655.	6.7	6
63	Multi-stage anisotropic etching of two-dimensional heterostructures. Nano Research, 2022, 15, 4909-4915.	10.4	6
64	Thermal-Assisted Vertical Electron Injections in Few-Layer Pyramidal-Structured MoS₂ Crystals. Journal of Physical Chemistry Letters, 2019, 10, 1292-1299.	4.6	5
65	Controlled growth of 2D ultrathin Ga₂O₃crystals on liquid metal. Nanoscale Advances, 2021, 3, 4411-4415.	4.6	5
66	Growth and Etching of Centimeter-Scale Self-Assembly Grapheneâ€“h-BN Super-Ordered Arrays: Implications for Integrated Electronic Devices. ACS Applied Nano Materials, 2022, 5, 774-781.	5.0	5
67	Graphene: Twoâ€Stage Metalâ€Catalystâ€Free Growth of Highâ€Quality Polycrystalline Graphene Films on Silicon Nitride Substrates (Adv. Mater. 7/2013). Advanced Materials, 2013, 25, 938-938.	21.0	4
68	Graphene Arrays: Direct Top-Down Fabrication of Large-Area Graphene Arrays by an In Situ Etching Method (Adv. Mater. 28/2015). Advanced Materials, 2015, 27, 4194-4194.	21.0	3
69	Continuous orientated growth of scaled single-crystal 2D monolayer films. Nanoscale Advances, 2021, 3, 6545-6567.	4.6	3
70	The way towards for ultraflat and superclean graphene. Nano Select, 2022, 3, 485-504.	3.7	2
71	Graphene: Near-Equilibrium Chemical Vapor Deposition of High-Quality Single-Crystal Graphene Directly on Various Dielectric Substrates (Adv. Mater. 9/2014). Advanced Materials, 2014, 26, 1471-1471.	21.0	1
72	Graphene: Controlled Growth of Single-Crystal Twelve-Pointed Graphene Grains on a Liquid Cu Surface (Adv. Mater. 37/2014). Advanced Materials, 2014, 26, 6519-6519.	21.0	1

#	Article	IF	Citations
73	Controlled Growth of Graphene Crystals by Chemical Vapor Deposition: From Solid Metals to Liquid Metals. , 2017, , 238-256.		1
74	Reply to Harutyunyan: Continuous and uniform graphene film grown on liquid Cu surface. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, E2100-E2100.	7.1	0
75	Graphene Sheets: Gramâ€Scale Synthesis of Graphene Sheets by a Catalytic Arcâ€Discharge Method (Small) Tj ETQq1 1 0.784314 rgBT	10.0	0
76	Nanoscale Materials: A General Approach for Fast Detection of Charge Carrier Type and Conductivity Difference in Nanoscale Materials (Adv. Mater. 48/2013). Advanced Materials, 2013, 25, 6916-6916.	21.0	0
77	Graphene: Layerâ€Stacking Growth and Electrical Transport of Hierarchical Graphene Architectures (Adv. Mater. 20/2014). Advanced Materials, 2014, 26, 3355-3355.	21.0	0