Robert M Jacobberger

List of Publications by Year
in descending order

49 papers	1,738 citations	257450 24 h-index	276875 41 g-index
50 all docs	50 docs citations	50 times ranked	2948 citing authors

#	Article	IF	Citations
1	Direct oriented growth of armchair graphene nanoribbons on germanium. Nature Communications, 2015, 6, 8006.	12.8	157
2	Highly Stretchable Carbon Nanotube Transistors with Ion Gel Gate Dielectrics. Nano Letters, 2014, 14, 682-686.	9.1	152
3	Graphene Growth Dynamics on Epitaxial Copper Thin Films. Chemistry of Materials, 2013, 25, 871-877.	6.7	133
4	Layer-Controlled Chemical Vapor Deposition Growth of MoS₂ Vertical Heterostructures via van der Waals Epitaxy. ACS Nano, 2016, 10, 7039-7046.	14.6	122
5	Materials Science Challenges to Graphene Nanoribbon Electronics. ACS Nano, 2021, 15, 3674-3708.	14.6	108
6	Electronic and Mechanical Properties of Grapheneâ€“Germanium Interfaces Grown by Chemical Vapor Deposition. Nano Letters, 2015, 15, 7414-7420.	9.1	103
7	Invariance of Water Permeance through Size-Differentiated Graphene Oxide Laminates. ACS Nano, 2018, 12, 7855-7865.	14.6	71
8	Non-fullerene acceptors with direct and indirect hexa-fluorination afford >17% efficiency in polymer solar cells. Energy and Environmental Science, 2022, 15, 645-659.	30.8	65
9	Simple Graphene Synthesis via Chemical Vapor Deposition. Journal of Chemical Education, 2015, 92, 1903-1907.	2.3	57
10	Rare Earth Hexaboride Nanowires: General Synthetic Design and Analysis Using Atom Probe Tomography. Chemistry of Materials, 2011, 23, 2606-2610.	6.7	55
11	Semiconducting Carbon Nanotube Aerogel Bulk Heterojunction Solar Cells. Small, 2014, 10, 3299-3306.	10.0	52
12	Seed-Initiated Anisotropic Growth of Unidirectional Armchair Graphene Nanoribbon Arrays on Germanium. Nano Letters, 2018, 18, 898-906.	9.1	43
13	Aligned 2D carbon nanotube liquid crystals for wafer-scale electronics. Science Advances, 2021, 7, eabh0640.	10.3	40
14	High-Performance Charge Transport in Semiconducting Armchair Graphene Nanoribbons Grown Directly on Germanium. ACS Nano, 2017, 11, 8924-8929.	14.6	38
15	Graphene-induced Ge (001) surface faceting. Surface Science, 2016, 647, 90-95.	1.9	35
16	Using Molecular Design to Enhance the Coherence Time of Quintet Multiexcitons Generated by Singlet Fission in Single Crystals. Journal of the American Chemical Society, 2022, 144, 2276-2283.	13.7	35
17	Substrateâ€Wide Confined Shear Alignment of Carbon Nanotubes for Thin Film Transistors. Advanced Electronic Materials, 2019, 5, 1800593.	5.1	34
18	Diffusion-Assisted Photoexcitation Transfer in Coupled Semiconducting Carbon Nanotube Thin Films. ACS Nano, 2014, 8, 5383-5394.	14.6	33

#	Article	IF	Citations
19	To Fluorinate or Not to Fluorinate in Organic Solar Cells: Achieving a Higher PCE of 15.2% when the Donor Polymer is Halogenâ€Free. Advanced Energy Materials, 2021, 11, 2102648.	19.5	33
20	Sub-5â€‰nm, globally aligned graphene nanoribbons on Ge(001). Applied Physics Letters, 2016, 108, .	3.3	31
21	Dynamics of Antimoneneâ€“Graphene Van Der Waals Growth. Advanced Materials, 2019, 31, e1900569.	21.0	30
22	Controlling the density of pinhole defects in monolayer graphene synthesized via chemical vapor deposition on copper. Carbon, 2016, 100, 1-6.	10.3	26
23	Alignment of semiconducting graphene nanoribbons on vicinal Ge(001). Nanoscale, 2019, 11, 4864-4875.	5.6	26
24	Passivation of Germanium by Graphene. ACS Applied Materials & Interfaces, 2017, 9, 17629-17636.	8.0	25
25	Boundary-directed epitaxy of block copolymers. Nature Communications, 2020, 11, 4151.	12.8	22
26	Directed self-assembly of block copolymer films on atomically-thin graphene chemical patterns. Scientific Reports, 2016, 6, 31407.	3.3	20
27	Design length scales for carbon nanotube photoabsorber based photovoltaic materials and devices. Journal of Applied Physics, 2013, 113, 204504.	2.5	17
28	Growth and Luminescence of Polytypic InP on Epitaxial Graphene. Advanced Functional Materials, 2018, 28, 1705592.	14.9	17
29	Anisotropic Synthesis of Armchair Graphene Nanoribbon Arrays from Sub-5 nm Seeds at Variable Pitches on Germanium. Journal of Physical Chemistry Letters, 2019, 10, 4266-4272.	4.6	17
30	Orientation Control of Selected Organic Semiconductor Crystals Achieved by Monolayer Graphene Templates. Advanced Materials Interfaces, 2016, 3, 1600621.	3.7	16
31	Epitaxial graphene-encapsulated surface reconstruction of Ge(110). Physical Review Materials, 2018, 2, .	2.4	16
32	Tailoring the Growth Rate and Surface Facet for Synthesis of High-Quality Continuous Graphene Films from CH₄ at 750 Â°C via Chemical Vapor Deposition. Journal of Physical Chemistry C, 2015, 119, 11516-11523.	3.1	14
33	Synthesis of Armchair Graphene Nanoribbons on Germanium-on-Silicon. Journal of Physical Chemistry C, 2019, 123, 18445-18454.	3.1	12
34	Passivation of Germanium by Graphene for Stable Graphene/Germanium Heterostructure Devices. ACS Applied Nano Materials, 2019, 2, 4313-4322.	5.0	11
35	Effect of Crystallinity on Endoergic Singlet Fission in Perylenediimide Single Crystals and Polycrystalline Films. Journal of Physical Chemistry C, 2022, 126, 10287-10297.	3.1	10
36	Driving chemical interactions at graphene-germanium van der Waals interfaces via thermal annealing. Applied Physics Letters, 2018, 113, .	3.3	9

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37	Graphene nanoribbons initiated from molecularly derived seeds. Nature Communications, 2022, 13, .	12.8	9
38	Existence of Erbium Hexaboride Nanowires. Journal of the American Ceramic Society, 2012, 95, 3992-3996.	3.8	8
39	Exploring driving forces for length growth in graphene nanoribbons during chemical vapor deposition of hydrocarbons on Ge(0ÂÂ0ÂÂ1) via kinetic Monte Carlo simulations. Applied Surface Science, 2020, 527, 146784.	6.1	8
40	Pnictogens Allotropy and Phase Transformation during van der Waals Growth. Nano Letters, 2020, 20, 8258-8266.	9.1	7
41	Rotational self-alignment of graphene seeds for nanoribbon synthesis on Ge(001) via chemical vapor deposition. APL Materials, 2020, 8, .	5.1	5
42	Effect of Germanium Surface Orientation on Graphene Chemical Vapor Deposition and Graphene-Induced Germanium Nanofaceting. Chemistry of Materials, 2022, 34, 6769-6778.	6.7	4
43	Scalable Alignment of Carbon Nanotubes via Shear. ECS Transactions, 2019, 93, 117-120.	0.5	3
44	Tightly Pitched sub-10 nm Graphene Nanoribbon Arrays via Seed Mediated Growth on Ge (001). ECS Transactions, 2019, 93, 121-124.	0.5	3
45	CVD Synthesis of Armchair Graphene Nanoribbons on Ge/Si(001). ECS Transactions, 2019, 93, 133-136.	0.5	2
46	Synthesis of Semiconducting Graphene Nanoribbons on Ge and Ge/Si via Chemical Vapor Deposition. ECS Transactions, 2019, 93, 129-132.	0.5	2
47	Van Der Waals Growth of III-V Semiconductors on Graphene. ECS Meeting Abstracts, 2020, MA2020-01, 835-835.	0.0	1
48	Photophysics of Zinc 2,11,20,29-Tetra-tert-butyl-2,3-Naphthalocyanine: Aggregation-Induced S₂ Emission and Rapid Intersystem Crossing in the Solid State. Journal of Physical Chemistry C, 2022, 126, 11680-11689.	3.1	1
49	CVD Synthesis of Graphene Nanomesh on Ge(001). ECS Meeting Abstracts, 2022, MA2022-01, 876-876.	0.0	0