Hugh Geaney

List of Publications by Citations

80 papers	2,614 citations	27 h-index	49 g-index
84 ext. papers	2,974 ext. citations	7.5 avg, IF	5.48 L-index

#	Paper	IF	Citations
80	Colloidal synthesis of wurtzite Cu2ZnSnS4 nanorods and their perpendicular assembly. *Journal of the American Chemical Society*, **2012**, 134, 2910-3	16.4	351
79	High-performance germanium nanowire-based lithium-ion battery anodes extending over 1000 cycles through in situ formation of a continuous porous network. *Nano Letters*, **2014**, 14, 716-23	11.5	288
78	Structuring materials for lithium-ion batteries: advancements in nanomaterial structure, composition, and defined assembly on cell performance. *Journal of Materials Chemistry A*, **2014**, 2, 9433	13	118
77	Key scientific challenges in current rechargeable non-aqueous Li-O2 batteries: experiment and theory. *Physical Chemistry Chemical Physics*, **2014**, 16, 12093-130	3.6	115
76	Bio-derived Carbon Nanofibres from Lignin as High-Performance Li-Ion Anode Materials. *ChemSusChem*, **2019**, 12, 4516-4521	8.3	90
75	Spontaneous room temperature elongation of CdS and Ag2S nanorods via oriented attachment. *Journal of the American Chemical Society*, **2009**, 131, 12250-7	16.4	85
74	Metal-assisted chemical etching of silicon and the behavior of nanoscale silicon materials as Li-ion battery anodes. *Nano Research*, **2015**, 8, 1395-1442	10	84
73	Synthesis of Tin Catalyzed Silicon and Germanium Nanowires in a Solvent Vapor System and Optimization of the Seed/Nanowire Interface for Dual Lithium Cycling. *Chemistry of Materials*, **2013**, 25, 1816-1822	9.6	72
72	Electrodeposited Structurally Stable V2O5 Inverse Opal Networks as High Performance Thin Film Lithium Batteries. *ACS Applied Materials & Interfaces*, **2015**, 7, 27006-15	9.5	66
71	High capacity binder-free nanocrystalline GeO2 inverse opal anodes for Li-ion batteries with long cycle life and stable cell voltage. *Nano Energy*, **2018**, 43, 11-21	17.1	65
70	2D and 3D photonic crystal materials for photocatalysis and electrochemical energy storage and conversion. *Science and Technology of Advanced Materials*, **2016**, 17, 563-582	7.1	62
69	Copper Sulfide (CuxS) Nanowire-in-Carbon Composites Formed from Direct Sulfurization of the Metal-Organic Framework HKUST-1 and Their Use as Li-Ion Battery Cathodes. *Advanced Functional Materials*, **2018**, 28, 1800587	15.6	59
68	Axial Si-Ge Heterostructure Nanowires as Lithium-Ion Battery Anodes. *Nano Letters*, **2018**, 18, 5569-5575	11.5	57
67	Behavior of Germanium and Silicon Nanowire Anodes with Ionic Liquid Electrolytes. *ACS Nano*, **2017**, 11, 5933-5943	16.7	54
66	Atomically abrupt silicon-germanium axial heterostructure nanowires synthesized in a solvent vapor growth system. *Nano Letters*, **2013**, 13, 1675-80	11.5	54
65	High Density Germanium Nanowire Growth Directly from Copper Foil by Self-Induced Solid Seeding. *Chemistry of Materials*, **2011**, 23, 4838-4843	9.6	51
64	Direct Synthesis of Alloyed SiGe Nanowires for Performance-Tunable Lithium Ion Battery Anodes. *ACS Nano*, **2017**, 11, 10088-10096	16.7	48

63	A rapid, solvent-free protocol for the synthesis of germanium nanowire lithium-ion anodes with a long cycle life and high rate capability. *ACS Applied Materials & Interfaces*, **2014**, 6, 18800-7	9.5	44
62	High Density Growth of Indium seeded Silicon Nanowires in the Vapor phase of a High Boiling Point Solvent. *Chemistry of Materials*, **2012**, 24, 2204-2210	9.6	43
61	Carbon-Coated Honeycomb Ni-Mn-Co-O Inverse Opal: A High Capacity Ternary Transition Metal Oxide Anode for Li-ion Batteries. *Scientific Reports*, **2017**, 7, 42263	4.9	38
60	High performance inverse opal Li-ion battery with paired intercalation and conversion mode electrodes. *Journal of Materials Chemistry A*, **2016**, 4, 4448-4456	13	32
59	Solution phase synthesis of silicon and germanium nanowires. *Journal of Materials Chemistry C*, **2013**, 1, 4996	7.1	31
58	A Copper Silicide Nanofoam Current Collector for Directly Grown Si Nanowire Networks and their Application as Lithium-Ion Anodes. *Advanced Functional Materials*, **2020**, 30, 2003278	15.6	31
57	Perpendicular growth of catalyst-free germanium nanowire arrays. *Chemical Communications*, **2011**, 47, 3843-5	5.8	29
56	2D and 3D vanadium oxide inverse opals and hollow sphere arrays. *CrystEngComm*, **2014**, 16, 10804-10815	3.3	28
55	Growth of Crystalline Copper Silicide Nanowires in High Yield within a High Boiling Point Solvent System. *Chemistry of Materials*, **2012**, 24, 4319-4325	9.6	28
54	Role of Defects and Growth Directions in the Formation of Periodically Twinned and Kinked Unseeded Germanium Nanowires. *Crystal Growth and Design*, **2011**, 11, 3266-3272	3.5	27
53	Electrochemical investigation of the role of MnO2 nanorod catalysts in water containing and anhydrous electrolytes for Li-O2 battery applications. *Physical Chemistry Chemical Physics*, **2015**, 17, 6748-59	3.6	25
52	Examining the Role of Electrolyte and Binders in Determining Discharge Product Morphology and Cycling Performance of Carbon Cathodes in Li-O2Batteries. *Journal of the Electrochemical Society*, **2016**, 163, A43-A49	3.9	23
51	Copper Silicide Nanowires as Hosts for Amorphous Si Deposition as a Route to Produce High Capacity Lithium-Ion Battery Anodes. *Nano Letters*, **2019**, 19, 8829-8835	11.5	22
50	The effect of particle size, morphology and C-rates on 3D structured Co3O4 inverse opal conversion mode anode materials. *Materials Research Express*, **2017**, 4, 025011	1.7	21
49	The influence of carrier density and doping type on lithium insertion and extraction processes at silicon surfaces. *Electrochimica Acta*, **2014**, 135, 356-367	6.7	21
48	The influence of 1D, meso- and crystal structures on charge transport and recombination in solid-state dye-sensitized solar cells. *Journal of Materials Chemistry A*, **2013**, 1, 12088	13	21
47	Metal surface nucleated supercritical fluid–solid–solid growth of Si and Ge/SiOx core–shell nanowires. *Journal of Materials Chemistry*, **2010**, 20, 135-144		20
46	Tunable Core-Shell Nanowire Active Material for High Capacity Li-Ion Battery Anodes Comprised of PECVD Deposited aSi on Directly Grown Ge Nanowires. *ACS Applied Materials & Interfaces*, **2019**, 11, 19372-19380	9.5	19

45	Fully porous GaN p-n junction diodes fabricated by chemical vapor deposition. *ACS Applied Materials & Interfaces*, **2014**, 6, 17954-64	9.5	19
44	Size controlled growth of germanium nanorods and nanowires by solution pyrolysis directly on a substrate. *Chemical Communications*, **2012**, 48, 5446-8	5.8	19
43	Solvent-less method for efficient photocatalytic Fe2O3 nanoparticles using macromolecular polymeric precursors. *New Journal of Chemistry*, **2016**, 40, 6768-6776	3.6	18
42	Optimizing vanadium pentoxide thin films and multilayers from dip-coated nanofluid precursors. *ACS Applied Materials & Interfaces*, **2014**, 6, 2031-8	9.5	18
41	Long Cycle Life, Highly Ordered SnO2/GeO2 Nanocomposite Inverse Opal Anode Materials for Li-Ion Batteries. *Advanced Functional Materials*, **2020**, 30, 2005073	15.6	18
40	Enhancing the performance of germanium nanowire anodes for Li-ion batteries by direct growth on textured copper. *Chemical Communications*, **2019**, 55, 7780-7783	5.8	17
39	On the Use of Gas Diffusion Layers as Current Collectors in Li-O2Battery Cathodes. *Journal of the Electrochemical Society*, **2014**, 161, A1964-A1968	3.9	17
38	Alternative anodes for low temperature lithium-ion batteries. *Journal of Materials Chemistry A*, **2021**, 9, 14172-14213	13	17
37	Doping controlled roughness and defined mesoporosity in chemically etched silicon nanowires with tunable conductivity. *Journal of Applied Physics*, **2013**, 114, 034309	2.5	16
36	Influence of Binders and Solvents on Stability of Ru/RuO Nanoparticles on ITO Nanocrystals as Li-O Battery Cathodes. *ChemSusChem*, **2017**, 10, 575-586	8.3	15
35	Aligned Copper Zinc Tin Sulfide Nanorods as Lithium-Ion Battery Anodes with High Specific Capacities. *Journal of Physical Chemistry C*, **2018**, 122, 20090-20098	3.8	15
34	Two-Dimensional SnSe Nanonetworks: Growth and Evaluation for Li-Ion Battery Applications. *ACS Applied Energy Materials*, **2020**, 3, 6602-6610	6.1	12
33	Electrophoretic Deposition of Tin Sulfide Nanocubes as High-Performance Lithium-Ion Battery Anodes. *ChemElectroChem*, **2019**, 6, 3049-3056	4.3	11
32	Mesoporosity in doped silicon nanowires from metal assisted chemical etching monitored by phonon scattering. *Semiconductor Science and Technology*, **2016**, 31, 014003	1.8	11
31	Direct Growth of Si, Ge, and Si-Ge Heterostructure Nanowires Using Electroplated Zn: An Inexpensive Seeding Technique for Li-Ion Alloying Anodes. *Small*, **2021**, 17, e2005443	11	11
30	Linking Precursor Alterations to Nanoscale Structure and Optical Transparency in Polymer Assisted Fast-Rate Dip-Coating of Vanadium Oxide Thin Films. *Scientific Reports*, **2015**, 5, 11574	4.9	10
29	Synthesis of silicon-germanium axial nanowire heterostructures in a solvent vapor growth system using indium and tin catalysts. *Physical Chemistry Chemical Physics*, **2015**, 17, 6919-24	3.6	10
28	Fabrication of p-type porous GaN on silicon and epitaxial GaN. *Applied Physics Letters*, **2013**, 103, 112103	3.4	10

27	Influence of Carbonate-Based Additives on the Electrochemical Performance of Si NW Anodes Cycled in an Ionic Liquid Electrolyte. *Nano Letters*, **2020**, 20, 7011-7019	11.5	9
26	Investigation into the Selenization Mechanisms of Wurtzite CZTS Nanorods. *ACS Applied Materials & Interfaces*, **2018**, 10, 7117-7125	9.5	9
25	Assessing Charge Contribution from Thermally Treated Ni Foam as Current Collectors for Li-Ion Batteries. *Journal of the Electrochemical Society*, **2016**, 163, A1805-A1811	3.9	9
24	Dense Silicon Nanowire Networks Grown on a Stainless-Steel Fiber Cloth: A Flexible and Robust Anode for Lithium-Ion Batteries. *Advanced Materials*, **2021**, e2105917	24	9
23	Alloying Germanium Nanowire Anodes Dramatically Outperform Graphite Anodes in Full-Cell Chemistries over a Wide Temperature Range. *ACS Applied Energy Materials*, **2021**, 4, 1793-1804	6.1	9
22	Layered Bimetallic Metal-Organic Material Derived Cu2SnS3/SnS2/C Composite for Anode Applications in Lithium-Ion Batteries. *ChemElectroChem*, **2018**, 5, 3764-3770	4.3	9
21	The selective synthesis of nickel germanide nanowires and nickel germanide seeded germanium nanowires within a solvent vapour growth system. *CrystEngComm*, **2017**, 19, 2072-2078	3.3	8
20	Colloidal WSe nanocrystals as anodes for lithium-ion batteries. *Nanoscale*, **2020**, 12, 22307-22316	7.7	8
19	A Nanowire Nest Structure Comprising Copper Silicide and Silicon Nanowires for Lithium-Ion Battery Anodes with High Areal Loading. *Small*, **2021**, 17, e2102333	11	8
18	Epitaxial growth of (0001) oriented porous GaN layers by chemical vapour deposition. *CrystEngComm*, **2014**, 16, 10255-10261	3.3	6
17	Palladium Nanoparticles as Catalysts for Li-O2 Battery Cathodes. *ECS Transactions*, **2014**, 58, 21-29	1	5
16	Tailoring Asymmetric Discharge-Charge Rates and Capacity Limits to Extend Li-O2 Battery Cycle Life. *ChemElectroChem*, **2017**, 4, 628-635	4.3	4
15	Electrophoretic Deposition of Spherical and Rod-Shaped Nanocrystals into Close Packed Superlattices. *ECS Transactions*, **2009**, 19, 209-219	1	4
14	Synthesis and Characterization of CuZnSe2 Nanocrystals in Wurtzite, Zinc Blende, and Core□Shell Polytypes. *Chemistry of Materials*, **2019**, 31, 10085-10093	9.6	4
13	Tin-Based Oxide, Alloy, and Selenide Li-Ion Battery Anodes Derived from a Bimetallic Metal□Organic Material. *Journal of Physical Chemistry C*, **2021**, 125, 1180-1189	3.8	4
12	Highlighting the Importance of Full-Cell Testing for High Performance Anode Materials Comprising Li Alloying Nanowires. *Journal of the Electrochemical Society*, **2019**, 166, A2784-A2790	3.9	3
11	Growing Oxide Nanowires and Nanowire Networks by Solid State Contact Diffusion into Solution-Processed Thin Films. *Small*, **2016**, 12, 5954-5962	11	3
10	Novel solid-state route to nanostructured tin, zinc and cerium oxides as potential materials for sensors. *Journal of Nanoscience and Nanotechnology*, **2014**, 14, 6748-53	1.3	3

9	Linear heterostructured NiSi/Si nanowires with abrupt interfaces synthesised in solution. *Nanoscale* , **2018**, 10, 19182-19187	7.7	3
8	Amorphization driven Na-alloying in SixGe1− alloy nanowires for Na-ion batteries. *Journal of Materials Chemistry A*, **2021**, 9, 20626-20634	13	3
7	Evolution of Hierarchically Layered Cu-Rich Silicide Nanoarchitectures. *Crystal Growth and Design*, **2020**, 20, 6677-6682	3.5	2
6	Multimodal surface analyses of chemistry and structure of biominerals in rodent pineal gland concretions. *Applied Surface Science*, **2019**, 469, 378-386	6.7	2
5	Patterning optically clear films: Coplanar transparent and color-contrasted thin films from interdiffused electrodeposited and solution-processed metal oxides. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **2017**, 35, 020602	2.9	1
4	Common Battery Anode Testing Protocols Are Not Suitable for New Combined Alloying and Conversion Materials. *ChemElectroChem*, **2018**, 5, 3757-3763	4.3	1
3	Temperature induced diameter variation of silicon nanowires a liquid-solid phase transition in the Zn seed. *Chemical Communications*, **2021**, 57, 12504-12507	5.8	0
2	Silicon Nanowire Growth on Carbon Cloth for Flexible Li-ion Battery Anodes. *Materials Today Energy* , **2022**, 101030	7	0
1	Pseudocapacitive Charge Storage at Nanoscale Silicon Electrodes. *ECS Transactions*, **2015**, 66, 39-48	1	