

# Hannah J Joyce

## List of Publications by Year in descending order

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135  
papers

5,621  
citations

71102

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76900

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136  
all docs

136  
docs citations

136  
times ranked

5604  
citing authors

#	ARTICLE	IF	CITATIONS
1	Giant Magnetoresistance in a Chemical Vapor Deposition Graphene Constriction. ACS Nano, 2022, , .	14.6	0
2	Long-Term Stability and Optoelectronic Performance Enhancement of InAsP Nanowires with an Ultrathin InP Passivation Layer. Nano Letters, 2022, 22, 3433-3439.	9.1	3
3	Active Terahertz Modulator and Slow Light Metamaterial Devices with Hybrid Graphene-superconductor Coupled Split-ring Resonator Arrays. , 2022, , .		1
4	Transparent Quasi-Random Structures for Multimodal Light Trapping in Ultrathin Solar Cells with Broad Engineering Tolerance. ACS Photonics, 2022, 9, 2724-2735.	6.6	9
5	Bifunctional Perovskite $\text{BiVO}_4$ Tandem Devices for Uninterrupted Solar and Electrocatalytic Water Splitting Cycles. Advanced Functional Materials, 2021, 31, 2008182.	14.9	36
6	Water-Assisted Growth: Bifunctional Perovskite $\text{BiVO}_4$ Tandem Devices for Uninterrupted Solar and Electrocatalytic Water Splitting Cycles (Adv. Funct. Mater. 15/2021). Advanced Functional Materials, 2021, 31, 2170104.	14.9	2
7	Millimeter-Wave-to-Terahertz Superconducting Plasmonic Waveguides for Integrated Nanophotonics at Cryogenic Temperatures. Materials, 2021, 14, 4291.	2.9	3
8	Active Terahertz Modulator and Slow Light Metamaterial Devices with Hybrid Graphene-Superconductor Photonic Integrated Circuits. Nanomaterials, 2021, 11, 2999.	4.1	19
9	High-Throughput Electrical Characterization of Nanomaterials from Room to Cryogenic Temperatures. ACS Nano, 2020, 14, 15293-15305.	14.6	5
10	Facet-Related Non-uniform Photoluminescence in Passivated GaAs Nanowires. Frontiers in Chemistry, 2020, 8, 607481.	3.6	2
11	Integrated, Portable, Tunable, and Coherent Terahertz Sources and Sensitive Detectors Based on Layered Superconductors. Proceedings of the IEEE, 2020, 108, 721-734.	21.3	50
12	Exploring the band structure of Wurtzite InAs nanowires using photocurrent spectroscopy. Nano Research, 2020, 13, 1586-1591.	10.4	7
13	Light management in ultra-thin solar cells: a guided optimisation approach. Optics Express, 2020, 28, 39093.	3.4	10
14	Terahertz Time-Domain Spectroscopy. , 2020, 1, 1-4.		1
15	High Charge Carrier Mobilities and Long Diffusion Lengths in Tin Based Metal Halide Perovskite. , 2020, , .		0
16	Scalable Quantum Integrated Circuits on Superconducting Two-Dimensional Electron Gas Platform. Journal of Visualized Experiments, 2019, , .	0.3	2
17	Andreev reflections and magnetotransport in 2D Josephson junctions. Journal of Physics: Conference Series, 2019, 1182, 012010.	0.4	0
18	Enhanced Performance of InAsP Nanowires with Ultra-thin Passivation Layer. , 2019, , .		0

#	ARTICLE	IF	CITATIONS
19	Terahertz Spectroscopy to Unveil Intraband Scattering in Photoexcited Graphene. , 2019, , .		0
20	Tin(IV) dopant removal through anti-solvent engineering enabling tin based perovskite solar cells with high charge carrier mobilities. Journal of Materials Chemistry C, 2019, 7, 8389-8397.	5.5	34
21	Long-Range Charge Extraction in Back-Contact Perovskite Architectures via Suppressed Recombination. Joule, 2019, 3, 1301-1313.	24.0	68
22	An Ultrafast Semiconducting Nanowire THz Polarization Modulator. , 2019, , .		0
23	Improving holographic search algorithms using sorted pixel selection. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2019, 36, 1456.	1.5	4
24	Engineering III-V Nanowires for Optoelectronics: From Visible to Terahertz. , 2019, , .		0
25	On-chip Hybrid Superconducting-Semiconducting Quantum Circuit. IEEE Transactions on Applied Superconductivity, 2018, 28, 1-4.	1.7	7
26	Proximity induced superconductivity in indium gallium arsenide quantum wells. Journal of Magnetism and Magnetic Materials, 2018, 459, 282-284.	2.3	11
27	The Route to Nanoscale Terahertz Technology: Nanowire-based Terahertz Detectors and Terahertz Modulators. , 2018, , .		0
28	Engineering III-V nanowires for optoelectronics: from epitaxy to terahertz photonics. , 2018, , .		0
29	Engineering semiconductor nanowires for photodetection: from visible to terahertz. , 2018, , .		0
30	The influence of surfaces on the transient terahertz conductivity and electron mobility of GaAs nanowires. Journal Physics D: Applied Physics, 2017, 50, 224001.	2.8	31
31	Choice of Polymer Matrix for a Fast Switchable III-V Nanowire Terahertz Modulator. MRS Advances, 2017, 2, 1475-1480.	0.9	1
32	An Ultrafast Switchable Terahertz Polarization Modulator Based on III-V Semiconductor Nanowires. Nano Letters, 2017, 17, 2603-2610.	9.1	77
33	Hybrid Nanowire Ion-to-Electron Transducers for Integrated Bioelectronic Circuitry. Nano Letters, 2017, 17, 827-833.	9.1	26
34	Semiconductor nanowires in terahertz photonics: From spectroscopy to ultrafast nanowire-based devices. , 2017, , .		0
35	The influence of atmosphere on the performance of pure-phase WZ and ZB InAs nanowire transistors. Nanotechnology, 2017, 28, 454001.	2.6	14
36	Properties of GaN nanowires with Sc <sub>x</sub> Ga <sub>1-x</sub> N insertion. Physica Status Solidi (B): Basic Research, 2017, 254, 1600740.	1.5	0

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37	On-Chip Andreev Devices: Hard Superconducting Gap and Quantum Transport in Ballistic Nb <sub>0.75</sub> Ga <sub>0.25</sub> As Quantum Well Nb Josephson Junctions. <i>Advanced Materials</i> , 2017, 29, 1701836.	21.0	18
38	Engineering the Photoresponse of InAs Nanowires. <i>ACS Applied Materials &amp; Interfaces</i> , 2017, 9, 43993-44000.	8.0	49
39	Coherent Quantum Transport in Hybrid Superconductor-2DEG-Superconductor Planar Josephson Junctions. , 2017, , .		0
40	Modulation of Terahertz Polarization on Picosecond Timescales using Polymer-Encapsulated Semiconductor Nanowires. , 2017, , .		0
41	Increased photoconductivity lifetimes in GaAs nanowires via n-type and p-type shell doping. , 2016, , .		0
42	Determination of band offsets at GaN/single-layer MoS <sub>2</sub> heterojunction. <i>Applied Physics Letters</i> , 2016, 109, .	3.3	64
43	Fast Room-Temperature Detection of Terahertz Quantum Cascade Lasers with Graphene-Loaded Bow-Tie Plasmonic Antenna Arrays. <i>ACS Photonics</i> , 2016, 3, 1747-1753.	6.6	42
44	A review of the electrical properties of semiconductor nanowires: insights gained from terahertz conductivity spectroscopy. <i>Semiconductor Science and Technology</i> , 2016, 31, 103003.	2.0	168
45	Increased Photoconductivity Lifetime in GaAs Nanowires by Controlled n-Type and p-Type Doping. <i>ACS Nano</i> , 2016, 10, 4219-4227.	14.6	62
46	Photoconductive terahertz receivers utilizing single semiconductor nanowires. , 2015, , .		0
47	Terahertz spectroscopy of modulation doped core-shell GaAs/AlGaAs nanowires. , 2015, , .		0
48	Modulation Doping of GaAs/AlGaAs Core-Shell Nanowires With Effective Defect Passivation and High Electron Mobility. <i>Nano Letters</i> , 2015, 15, 1336-1342.	9.1	78
49	Single Nanowire Terahertz Detectors. , 2015, , .		1
50	Single Nanowire Photoconductive Terahertz Detectors. <i>Nano Letters</i> , 2015, 15, 206-210.	9.1	105
51	Single GaAs/AlGaAs nanowire photoconductive terahertz detectors. , 2014, , .		1
52	How InAs crystal phase affects the electrical performance of InAs nanowire FETs. , 2014, , .		2
53	Nanoscale polymer electrolytes: Fabrication and applications using nanowire transistors. , 2014, , .		0
54	An ultrafast carbon nanotube terahertz polarisation modulator. <i>Journal of Applied Physics</i> , 2014, 115, .	2.5	36

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55	Ultrafast Transient Terahertz Conductivity of Monolayer MoS <sub>2</sub> and WSe <sub>2</sub> Grown by Chemical Vapor Deposition. ACS Nano, 2014, 8, 11147-11153.	14.6	191
56	Dependence of Dye Regeneration and Charge Collection on the Pore-Filling Fraction in Solid-State Dye-Sensitized Solar Cells. Advanced Functional Materials, 2014, 24, 668-677.	14.9	29
57	Electron-Beam Patterning of Polymer Electrolyte Films To Make Multiple Nanoscale Gates for Nanowire Transistors. Nano Letters, 2014, 14, 94-100.	9.1	27
58	Understanding the True Shape of Au-Catalyzed GaAs Nanowires. Nano Letters, 2014, 14, 5865-5872.	9.1	52
59	Electron Mobilities Approaching Bulk Limits in "Surface-Free" GaAs Nanowires. Nano Letters, 2014, 14, 5989-5994.	9.1	79
60	Phase Separation Induced by Au Catalysts in Ternary InGaAs Nanowires. Nano Letters, 2013, 13, 643-650.	9.1	79
61	Optimizing the Energy Offset between Dye and Hole-Transporting Material in Solid-State Dye-Sensitized Solar Cells. Journal of Physical Chemistry C, 2013, 117, 19850-19858.	3.1	19
62	Electronic properties of GaAs, InAs and InP nanowires studied by terahertz spectroscopy. Nanotechnology, 2013, 24, 214006.	2.6	264
63	Direct Observation of Charge-Carrier Heating at WZ "ZB InP Nanowire Heterojunctions. Nano Letters, 2013, 13, 4280-4287.	9.1	31
64	Measuring the electrical properties of semiconductor nanowires using terahertz conductivity spectroscopy. Proceedings of SPIE, 2013, , .	0.8	0
65	Probing the critical electronic properties of III&#x2013;V nanowires using optical pump-terahertz probe spectroscopy. , 2013, , .		0
66	Transient terahertz spectroscopy of mono- and tri-layer CVD-grown MoS <sub>2</sub> . , 2013, , .		0
67	Electronic comparison of InAs wurtzite and zincblende phases using nanowire transistors. Physica Status Solidi - Rapid Research Letters, 2013, 7, 911-914.	2.4	15
68	III-V COMPOUND SEMICONDUCTOR NANOWIRES FOR OPTOELECTRONIC DEVICE APPLICATIONS. , 2013, , .		0
69	Taper-free and kinked germanium nanowires grown on silicon via purging and the two-temperature process. Nanotechnology, 2012, 23, 115603.	2.6	13
70	Precursor flow rate manipulation for the controlled fabrication of twin-free GaAs nanowires on silicon substrates. Nanotechnology, 2012, 23, 415702.	2.6	12
71	Strong Carrier Lifetime Enhancement in GaAs Nanowires Coated with Semiconducting Polymer. Nano Letters, 2012, 12, 6293-6301.	9.1	54
72	Extreme sensitivity of graphene photoconductivity to environmental gases. Nature Communications, 2012, 3, 1228.	12.8	120

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73	Environment induced variation in the photoconductivity of graphene observed by terahertz spectroscopy. , 2012, , .		0
74	Ultralow Surface Recombination Velocity in InP Nanowires Probed by Terahertz Spectroscopy. Nano Letters, 2012, 12, 5325-5330.	9.1	158
75	Taper-Free and Vertically Oriented Ge Nanowires on Ge/Si Substrates Grown by a Two-Temperature Process. Crystal Growth and Design, 2012, 12, 135-141.	3.0	31
76	Noncontact Measurement of Charge Carrier Lifetime and Mobility in GaN Nanowires. Nano Letters, 2012, 12, 4600-4604.	9.1	61
77	Ultrafast Dynamics of Exciton Formation in Semiconductor Nanowires. Small, 2012, 8, 1725-1731.	10.0	16
78	Removal of Surface States and Recovery of Band-Edge Emission in InAs Nanowires through Surface Passivation. Nano Letters, 2012, 12, 3378-3384.	9.1	98
79	Self-Healing of Fractured GaAs Nanowires. Nano Letters, 2011, 11, 1546-1549.	9.1	48
80	Defect-Free GaAs/AlGaAs Core-Shell Nanowires on Si Substrates. Crystal Growth and Design, 2011, 11, 3109-3114.	3.0	42
81	Tailoring GaAs, InAs, and InGaAs Nanowires for Optoelectronic Device Applications. IEEE Journal of Selected Topics in Quantum Electronics, 2011, 17, 766-778.	2.9	40
82	Growth of Straight InAs-on-GaAs Nanowire Heterostructures. Nano Letters, 2011, 11, 3899-3905.	9.1	44
83	III-V semiconductor nanowires for optoelectronic device applications. Progress in Quantum Electronics, 2011, 35, 23-75.	7.0	256
84	Super Deformability and Young's Modulus of GaAs Nanowires. Advanced Materials, 2011, 23, 1356-1360.	21.0	114
85	III-V COMPOUND SEMICONDUCTOR NANOWIRES FOR OPTOELECTRONIC DEVICE APPLICATIONS. International Journal of High Speed Electronics and Systems, 2011, 20, 131-141.	0.7	1
86	Compound semiconductor nanowires for optoelectronic device applications. , 2011, , .		0
87	Characterisation of nanostructures via terahertz spectroscopy. , 2010, , .		0
88	Novel growth and properties of GaAs nanowires on Si substrates. Nanotechnology, 2010, 21, 035604.	2.6	38
89	CdS/CdSe lateral heterostructure nanobelts by a two-step physical vapor transport method. Nanotechnology, 2010, 21, 145602.	2.6	16
90	Phase Perfection in Zinc Blende and Wurtzite III-V Nanowires Using Basic Growth Parameters. Nano Letters, 2010, 10, 908-915.	9.1	443

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91	Vertically oriented epitaxial germanium nanowires on silicon substrates using thin germanium buffer layers. <i>Nanotechnology</i> , 2010, 21, 295602.	2.6	8
92	Improvement of morphology, structure, and optical properties of GaAs nanowires grown on Si substrates. , 2010, , .		0
93	Effect of high temperature post-annealing on sidewalls of GaAs NWs grown by MOCVD. , 2010, , .		0
94	Au-catalyzed InP nanowires: The influence of growth temperature and V/III ratio. , 2010, , .		0
95	Structural and optical characterization of vertical GaAs/GaP core-shell nanowires grown on Si substrates. , 2010, , .		0
96	Growth temperature and V/III ratio effects on the morphology and crystal structure of InP nanowires. <i>Journal Physics D: Applied Physics</i> , 2010, 43, 445402.	2.8	52
97	A comparative study of transistors based on wurtzite and zincblende InAs nanowires. , 2010, , .		0
98	Crystallographically driven Au catalyst movement during growth of InAs/GaAs axial nanowire heterostructures. <i>Journal of Applied Physics</i> , 2009, 105, 073503.	2.5	15
99	Epitaxy of III-V semiconductor nanowires towards optoelectronic devices. , 2009, , .		0
100	Formation of Hierarchical InAs Nanoringâ€™s/GaAs Nanowire Heterostructures. <i>Angewandte Chemie - International Edition</i> , 2009, 48, 780-783.	13.8	43
101	Evolution of Wurtzite Structured GaAs Shells Around InAs Nanowire Cores. <i>Nanoscale Research Letters</i> , 2009, 4, 846-849.	5.7	30
102	Evolution of Epitaxial InAs Nanowires on GaAs (111)B. <i>Small</i> , 2009, 5, 366-369.	10.0	51
103	Nanowires for optoelectronic device applications. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2009, 6, 2678-2682.	0.8	4
104	Carrier Lifetime and Mobility Enhancement in Nearly Defect-Free Coreâ€™Shell Nanowires Measured Using Time-Resolved Terahertz Spectroscopy. <i>Nano Letters</i> , 2009, 9, 3349-3353.	9.1	253
105	Unexpected Benefits of Rapid Growth Rate for IIIâ€™V Nanowires. <i>Nano Letters</i> , 2009, 9, 695-701.	9.1	126
106	III-V compound semiconductor nanowires. , 2009, , .		3
107	High Purity GaAs Nanowires Free of Planar Defects: Growth and Characterization. <i>Advanced Functional Materials</i> , 2008, 18, 3794-3800.	14.9	97
108	Optical properties of single InP and GaAs nanowire heterostructures. , 2008, , .		0

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109	Nature of heterointerfaces in GaAs/InAs and InAs/GaAs axial nanowire heterostructures. Applied Physics Letters, 2008, 93, .	3.3	90
110	Growth behavior of epitaxial semiconductor axial nanowire heterostructures. Optoelectronic and Microelectronic Materials and Devices (COMMAD), Conference on, 2008, , .	0.0	0
111	Growth, Structural and Optical Properties of High Quality GaAs Nanowires for Optoelectronics. , 2008, , .		0
112	Nearly intrinsic exciton lifetimes in single twin-free GaAs <sup>+</sup> AlGaAs core-shell nanowire heterostructures. Applied Physics Letters, 2008, 93, .	3.3	109
113	Vertically standing Ge nanowires on GaAs(110) substrates. Nanotechnology, 2008, 19, 125602.	2.6	23
114	Polarity driven formation of InAs/GaAs hierarchical nanowire heterostructures. Applied Physics Letters, 2008, 93, 201908.	3.3	36
115	Growth, Structural and Optical Properties of GaAs, InGaAs and AlGaAs Nanowires and Nanowire Heterostructures. Conference Proceedings - Lasers and Electro-Optics Society Annual Meeting-LEOS, 2007, , .	0.0	2
116	Structural and Optical Properties of III-V Nanowires and Nanowire Heterostructures Grown by Metalorganic Chemical Vapour Deposition. , 2007, , .		0
117	Polarization and temperature dependence of photoluminescence from zincblende and wurtzite InP nanowires. Applied Physics Letters, 2007, 91, .	3.3	196
118	Evolution of InAs branches in InAs <sup>+</sup> GaAs nanowire heterostructures. Applied Physics Letters, 2007, 91, 133115.	3.3	39
119	Growth, Structural and Optical Properties of III-V Nanowires for Optoelectronic Applications. , 2007, , .		1
120	Failure and Formation of Axial Nanowire Heterostructures in Vapor-Liquid-Solid Growth. Materials Research Society Symposia Proceedings, 2007, 1058, 1.	0.1	0
121	Growth of III-V Nanowires and Nanowire Heterostructures by Metalorganic Chemical Vapor Deposition. , 2007, , .		1
122	Twin-Free Uniform Epitaxial GaAs Nanowires Grown by a Two-Temperature Process. Nano Letters, 2007, 7, 921-926.	9.1	297
123	Resonant Excitation and Imaging of Nonequilibrium Exciton Spins in Single Core <sup>+</sup> Shell GaAs <sup>+</sup> AlGaAs Nanowires. Nano Letters, 2007, 7, 588-595.	9.1	41
124	Growth Mechanism of Truncated Triangular III <sup>+</sup> V Nanowires. Small, 2007, 3, 389-393.	10.0	136
125	Novel Growth Phenomena Observed in Axial InAs/GaAs Nanowire Heterostructures. Small, 2007, 3, 1873-1877.	10.0	93
126	Dynamics of Strongly Degenerate Electron <sup>+</sup> Hole Plasmas and Excitons in Single InP Nanowires. Nano Letters, 2007, 7, 3383-3387.	9.1	49



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127	Influence of Nanowire Density on the Shape and Optical Properties of Ternary InGaAs Nanowires. Nano Letters, 2006, 6, 599-604.	9.1	222
128	Growth, Structural and Optical Properties of GaAs/AlGaAs Core/Shell Nanowires with and without Quantum Well Shells. , 2006, , .		3
129	III-V nanowires for optoelectronics. , 2006, , .		2
130	Quantum Dots and Nanowires for Optoelectronic Device Applications. , 2006, , .		0
131	Quantum dots and nanowires for photonics applications. , 2006, , .		0
132	Temperature dependence of photoluminescence from single core-shell GaAs/AlGaAs nanowires. Applied Physics Letters, 2006, 89, 173126.	3.3	158
133	Optimised Two-Temperature Growth of GaAs Nanowires by Metalorganic Chemical Vapour Deposition. , 2006, , .		0
134	Ultrafast spectroscopy of lattice-charge carrier interactions in bismuth-based perovskites. , 0, , .		0
135	Mapping Bulk and Interfacial Charge Carrier Recombination Dynamics in Perovskite Optoelectronic Devices. , 0, , .		0