Leigh M Smith

List of Publications by Citations

112 papers	3,124 citations	33 h-index	52 g-index
138 ext. papers	3,375 ext. citations	5.4 avg, IF	4.3 L-index

#	Paper	IF	Citations
112	III-V semiconductor nanowires for optoelectronic device applications. *Progress in Quantum Electronics*, **2011**, 35, 23-75	9.1	215
111	Polarization and temperature dependence of photoluminescence from zincblende and wurtzite InP nanowires. *Applied Physics Letters*, **2007**, 91, 263104	3.4	175
110	Carrier dynamics and quantum confinement in type II ZB-WZ InP nanowire homostructures. *Nano Letters*, **2009**, 9, 648-54	11.5	157
109	Temperature dependence of photoluminescence from single core-shell GaAs-AlGaAs nanowires. *Applied Physics Letters*, **2006**, 89, 173126	3.4	134
108	Unexpected benefits of rapid growth rate for III-V nanowires. *Nano Letters*, **2009**, 9, 695-701	11.5	114
107	Optical, structural, and numerical investigations of GaAs/AlGaAs core-multishell nanowire quantum well tubes. *Nano Letters*, **2013**, 13, 1016-22	11.5	94
106	Nearly intrinsic exciton lifetimes in single twin-free GaAs-AlGaAs core-shell nanowire heterostructures. *Applied Physics Letters*, **2008**, 93, 053110	3.4	91
105	Temperature-dependent micro-photoluminescence of individual CdSe self-assembled quantum dots. *Applied Physics Letters*, **1999**, 75, 214-216	3.4	91
104	Direct measure of strain and electronic structure in GaAs/GaP core-shell nanowires. *Nano Letters*, **2010**, 10, 880-6	11.5	89
103	The effect of V/III ratio and catalyst particle size on the crystal structure and optical properties of InP nanowires. *Nanotechnology*, **2009**, 20, 225606	3.4	86
102	Evidence for 2D precursors and interdiffusion in the evolution of self-assembled CdSe quantum dots on ZnSe. *Physical Review Letters*, **2000**, 85, 1124-7	7.4	86
101	High Purity GaAs Nanowires Free of Planar Defects: Growth and Characterization. *Advanced Functional Materials*, **2008**, 18, 3794-3800	15.6	83
100	Optically-induced magnetization of CdMnTe self-assembled quantum dots. *Applied Physics Letters*, **2004**, 84, 3337-3339	3.4	61
99	Picosecond imaging of photoexcited carriers in quantum wells: Anomalous lateral confinement at high densities. *Physical Review B*, **1988**, 38, 5788-5791	3.3	59
98	Doping-enhanced radiative efficiency enables lasing in unpassivated GaAs nanowires. *Nature Communications*, **2016**, 7, 11927	17.4	57
97	Phonon-wind-driven transport of photoexcited carriers in a semiconductor quantum well. *Physical Review B*, **1989**, 39, 1862-1870	3.3	53
96	Temperature dependent photoluminescence of single CdS nanowires. *Applied Physics Letters*, **2006**, 89, 123123	3.4	51

95	Room temperature photocurrent spectroscopy of single zincblende and wurtzite InP nanowires. *Applied Physics Letters*, **2009**, 94, 193115	3.4	48
94	Dynamics of strongly degenerate electron-hole plasmas and excitons in single InP nanowires. *Nano Letters*, **2007**, 7, 3383-7	11.5	44
93	Probing valence band structure in wurtzite InP nanowires using excitation spectroscopy. *Applied Physics Letters*, **2010**, 97, 023106	3.4	42
92	Emergence of localized states in narrow GaAs/AlGaAs nanowire quantum well tubes. *Nano Letters*, **2015**, 15, 1876-82	11.5	41
91	Exciton spin relaxation time in quantum dots measured by continuous-wave photoluminescence spectroscopy. *Applied Physics Letters*, **2003**, 83, 5524-5526	3.4	41
90	Defect-Free GaAs/AlGaAs Core□Shell Nanowires on Si Substrates. *Crystal Growth and Design*, **2011**, 11, 3109-3114	3.5	40
89	Spectroscopic characterization of the evolution of self-assembled CdSe quantum dots. *Applied Physics Letters*, **1998**, 73, 3399-3401	3.4	40
88	Quantum Dot Exciton Dynamics through a Nanoaperture: Evidence for Two Confined States. *Physical Review Letters*, **1999**, 83, 2797-2800	7.4	40
87	Polarized light absorption in wurtzite InP nanowire ensembles. *Nano Letters*, **2015**, 15, 998-1005	11.5	38
86	Time-resolved study of electron-hole plasmas near the liquid-gas critical point in Si: Evidence for a second condensed phase. *Physical Review B*, **1995**, 51, 7521-7543	3.3	38
85	Spatially Resolved Doping Concentration and Nonradiative Lifetime Profiles in Single Si-Doped InP Nanowires Using Photoluminescence Mapping. *Nano Letters*, **2015**, 15, 3017-23	11.5	37
84	Resonant excitation and imaging of nonequilibrium exciton spins in single core-shell GaAs-AlGaAs nanowires. *Nano Letters*, **2007**, 7, 588-95	11.5	35
83	Low-temperature photoluminescence imaging and time-resolved spectroscopy of single CdS nanowires. *Applied Physics Letters*, **2006**, 89, 053119	3.4	35
82	Tuning the properties of magnetic CdMnTe quantum dots. *Applied Physics Letters*, **2003**, 83, 3575-3577	3.4	35
81	Antimony Induced {112}A Faceted Triangular GaAs1□Sbx/InP Core/Shell Nanowires and Their Enhanced Optical Quality. *Advanced Functional Materials*, **2015**, 25, 5300-5308	15.6	34
80	Insights into single semiconductor nanowire heterostructures using time-resolved photoluminescence. *Semiconductor Science and Technology*, **2010**, 25, 024010	1.8	34
79	Resonant Raman scattering from CdS nanowires. *Applied Physics Letters*, **2006**, 88, 043118	3.4	32
78	Novel growth and properties of GaAs nanowires on Si substrates. *Nanotechnology*, **2010**, 21, 035604	3.4	31

77	Exciton-controlled magnetization in single magnetic quantum dots. *Applied Physics Letters*, **2005**, 87, 072502	3.4	31
76	Resonant spectroscopy of II-VI self-assembled quantum dots: Excited states and exciton□ongitudinal optical phonon coupling. *Physical Review B*, **2004**, 70,	3.3	29
75	Intrinsic recombination and interface characterization in □urface-free□GaAs structures. *Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena*, **1991**, 9, 2369		29
74	Optical properties of annealed CdTe self-assembled quantum dots. *Applied Physics Letters*, **2003**, 83, 254-256	3.4	26
73	Second condensed phase of electron-hole plasma in Si. *Physical Review Letters*, **1986**, 57, 2314-2317	7.4	26
72	Growth and properties of III□V compound semiconductor heterostructure nanowires. *Semiconductor Science and Technology*, **2011**, 26, 014035	1.8	25
71	Selective excitation of exciton transitions in PTCDA crystals and films. *Physical Review B*, **2010**, 81,	3.3	24
70	Origin of two types of excitons in CdSe dots on ZnSe. *Physical Review B*, **2000**, 61, R2405-R2408	3.3	22
69	Illuminating the second conduction band and spin-orbit energy in single wurtzite InP nanowires. *Nano Letters*, **2013**, 13, 5367-72	11.5	21
68	Quantum Confined Stark Effect in a GaAs/AlGaAs Nanowire Quantum Well Tube Device: Probing Exciton Localization. *Nano Letters*, **2015**, 15, 7847-52	11.5	21
67	Phonons and exciton recombination in CdSe/ZnSe self-assembled quantum dots. *Applied Physics Letters*, **2000**, 77, 1813	3.4	21
66	Ultralong spin memory of optically excited single magnetic quantum dots. *Applied Physics Letters*, **2008**, 93, 153114	3.4	19
65	Observation of long-lived exciton magnetic polarons in Zn1-xMnxSe/ZnSe multiple quantum wells. *Physical Review B*, **1994**, 50, 18662-18665	3.3	19
64	Effects of surface passivation on twin-free GaAs nanosheets. *ACS Nano*, **2015**, 9, 1336-40	16.7	18
63	Exciton spin relaxation in quasiresonantly excited CdTe□ZnTe self-assembled quantum dots. *Physical Review B*, **2004**, 70,	3.3	18
62	Quantum confinement of excitons in wurtzite InP nanowires. *Journal of Applied Physics*, **2015**, 117, 194306	2.5	17
61	Transient Rayleigh scattering: a new probe of picosecond carrier dynamics in a single semiconductor nanowire. *Nano Letters*, **2012**, 12, 5389-95	11.5	17
60	Photomodulated rayleigh scattering of single semiconductor nanowires: probing electronic band structure. *Nano Letters*, **2011**, 11, 4329-36	11.5	17

59	Photoexcited carrier lifetimes and spatial transport in surface-free GaAs homostructures. *Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena*, **1990**, 8, 787		17
58	Raman stress mapping of CdS nanosheets. *Applied Physics Letters*, **2009**, 95, 083105	3.4	16
57	Subwavelength multichannel imaging using a solid immersion lens: Spectroscopy of excitons in single quantum dots. *Applied Physics Letters*, **2004**, 85, 5463-5465	3.4	16
56	Optical studies of zero-field magnetization of CdMnTe quantum dots: Influence of average size and composition of quantum dots. *Journal of Applied Physics*, **2004**, 96, 7407-7413	2.5	16
55	Optical observation of quantum-dot formation in sub-critical CdSe layers grown on ZnSe. *Journal of Crystal Growth*, **2000**, 214-215, 761-764	1.6	16
54	Carrier thermalization dynamics in single zincblende and wurtzite InP Nanowires. *Nano Letters*, **2014**, 14, 7153-60	11.5	15
53	Sensitivity of exciton spin relaxation in quantum dots to confining potential. *Applied Physics Letters*, **2005**, 86, 103101	3.4	15
52	Zn3As2 nanowires and nanoplatelets: highly efficient infrared emission and photodetection by an earth abundant material. *Nano Letters*, **2015**, 15, 378-85	11.5	14
51	Thermal relaxation of excitons in ZnSe and Zn1⊠MnxSe diluted magnetic semiconductors. *Physical Review B*, **1997**, 55, 5062-5064	3.3	13
50	Resonant photoluminescence imaging and the origin of excited states in self-assembled quantum dots. *Physical Review B*, **2007**, 76,	3.3	13
49	Direct imaging of the spatial diffusion of excitons in single semiconductor nanowires. *Applied Physics Letters*, **2011**, 99, 263110	3.4	12
48	The morphology and evolution of bipyramidal gold nanoparticles. *Nanotechnology*, **2011**, 22, 275607	3.4	12
47	Relaxation dynamics of bimodally distributed CdSe quantum dots. *Physical Review B*, **2007**, 75,	3.3	12
46	Revealing Optical Transitions and Carrier Recombination Dynamics within the Bulk Band Structure of BiSe. *Nano Letters*, **2018**, 18, 5875-5884	11.5	11
45	Exciton spin thermalization in strained and relaxed Zn1⊠MnxSe epilayers. *Physical Review B*, **1999**, 59, 7610-7619	3.3	11
44	Polarized photoluminescence and time-resolved photoluminescence from single CdS nanosheets. *Applied Physics Letters*, **2008**, 92, 143112	3.4	10
43	Strong Hot Carrier Effects in Single Nanowire Heterostructures. *Nano Letters*, **2019**, 19, 5062-5069	11.5	8
42	Spatially resolved photoluminescence mapping of single CdS nanosheets. *Applied Physics Letters*, **2008**, 92, 013111	3.4	8

41	Ultrafast photoinduced band splitting and carrier dynamics in chiral tellurium nanosheets. *Nature Communications*, **2020**, 11, 3991	17.4	8
40	Photocurrent spectroscopy of single CdS nanosheets: Valence band structure and two photon absorption. *Applied Physics Letters*, **2011**, 98, 143102	3.4	7
39	Thermal Delocalization of Excitons in GaAs/AlGaAs Quantum Well Tube Nanowires. *Nano Letters*, **2016**, 16, 1392-7	11.5	6
38	Interface Phonons in CdSe/ZnSe Self-Assembled Quantum Dot Structures. *Physica Status Solidi (B): Basic Research*, **2001**, 224, 165-168	1.3	6
37	Radiative Recombination and Carrier Lifetimes in Surface-Free GaAs Homostructures. *Materials Research Society Symposia Proceedings*, **1989**, 163, 95		6
36	Radiative recombination in surface-free n+/n/p+GaAs homostructures. *Applied Physics Letters*, **1990**, 57, 1572-1574	3.4	6
35	Tuning spin properties of excitons in single CdTe quantum dots by annealing. *Nanotechnology*, **2008** , 19, 125706	3.4	5
34	Tuning the optical and magnetic properties of II/VI quantum dots by post-growth rapid thermal annealing. *Physica Status Solidi (B): Basic Research*, **2004**, 241, 652-655	1.3	5
33	Exciton-LO phonon interaction in II/VI self-assembled quantum dots. *Physica Status Solidi C: Current Topics in Solid State Physics*, **2004**, 1, 767-770		5
32	Magnetic interference effect in the electrical resistivity of amorphous simple metal alloys: Mg-Zn(Gd). *Journal of Physics F: Metal Physics*, **1982**, 12, L101-L106		5
31	Nanowires for optoelectronic device applications. *Physica Status Solidi C: Current Topics in Solid State Physics*, **2009**, 6, 2678-2682		4
30	Probing the excited state distributions of CdTe/ZnTe self-assembled quantum dots using resonant Raman scattering. *Applied Physics Letters*, **2005**, 87, 183104	3.4	4
29	Probing CdSe/ZnSe self-assembled quantum dots by cw and time-resolved photoluminescence. *Physica E: Low-Dimensional Systems and Nanostructures*, **2001**, 11, 59-62	3	4
28	Time-dependent heterointerfacial band bending and quasi-two-dimensional excitonic transport in GaAs structures. *Physical Review B*, **1998**, 58, 4728-4732	3.3	4
27	Growth and properties of III/V compound semiconductor heterostructure nanowires. *Semiconductor Science and Technology*, **2012**, 27, 059501	1.8	3
26	Driven Spin-Transport of Exciton Magnetic Polarons in Zn0.86Mn0.14Se/ZnSe Quantum Wells. *Physica Status Solidi A*, **1997**, 164, 547-551		3
25	Smith and Wolfe respond. *Physical Review Letters*, **1987**, 58, 2823	7.4	3
24	A Raman probe of phonons and electron-phonon interactions in the Weyl semimetal NbIrTe. *Scientific Reports*, **2021**, 11, 8155	4.9	3

23	Recent Advances in Semiconductor Nanowire Heterostructures. *ECS Transactions*, **2014**, 64, 1-5	1	2
22	Probing the valence band structure of wurtzite InP nanowires by photoluminescence excitation spectroscopy **2011**,		2
21	III-V compound semiconductor nanowires **2009**,		2
20	Vertical Integration of Nanotechnology Education. *ACS Symposium Series*, **2010**, 49-64	0.4	2
19	Optical studies of spin relaxation in CdTe self-assembled quantum dots. *Physica Status Solidi C: Current Topics in Solid State Physics*, **2004**, 1, 937-940		2
18	Photoluminescence of CdSe self-assembled quantum dots: Experiments and models. *Physical Review B*, **2003**, 68,	3.3	2
17	Time Resolved Photoluminescence from Patterned GaAs/AlGaAs Multiple Quantum Well Structures. *Materials Research Society Symposia Proceedings*, **1993**, 326, 531		2
16	Exploring the band structure of Wurtzite InAs nanowires using photocurrent spectroscopy. *Nano Research*, **2020**, 13, 1586-1591	10	2
15	III-V COMPOUND SEMICONDUCTOR NANOWIRES FOR OPTOELECTRONIC DEVICE APPLICATIONS. *International Journal of High Speed Electronics and Systems*, **2011**, 20, 131-141	0.5	1
14	Spatially-resolved Photoluminescence Imaging of CdS and GaAs/AlGaAs Nanowires. *AIP Conference Proceedings*, **2007**,	0	1
13	Optically controlled magnetization of zero-dimensional magnetic polarons in CdMnTe self-assembled quantum dots. *Physica Status Solidi (B): Basic Research*, **2004**, 241, 656-659	1.3	1
12	Using Exciton Dynamics to Probe the Internal Structure of CdSe/ZnSe Self-Assembled Quantum Dots. *Physica Status Solidi (B): Basic Research*, **2000**, 221, 55-58	1.3	1
11	Tuning Band Energies in a Combined Axial and Radial GaAs/GaP Heterostructure. *Materials Research Society Symposia Proceedings*, **2014**, 1659, 139-142		
10	Localization of Excitons in Thin Core-Multi-Shell Quantum Well Tubes. *Materials Research Society Symposia Proceedings*, **2014**, 1659, 135-138		
9	Nonlinear Two-Photon Photocurrent Spectroscopy of CdS Nanosheets. *Materials Research Society Symposia Proceedings*, **2012**, 1439, 77-81		
8	Photomodulated Rayleigh Scattering from Single Semiconductor Nanowires. *Materials Research Society Symposia Proceedings*, **2012**, 1408, 11		
7	Excited State Dynamics in In0.5Al0.04Ga0.46As/Al0.08Ga0.92As Self-Assembled Quantum Dots. *Physica Status Solidi (B): Basic Research*, **2001**, 224, 447-451	1.3	
6	Optical Properties of Semimagnetic Quantum Dots. *Materials Research Society Symposia Proceedings*, **2002**, 737, 242		

5	Resonant photoluminescence and excitation spectroscopy of CdSe/ZnSe and CdTe/ZnTe self-assembled quantum dots. *Materials Research Society Symposia Proceedings*, **2002**, 737, 248	
4	Mott ionization of excitons in n-type Zn1−xMnxSe epilayers. *Applied Physics Letters*, **1995**, 67, 3150-3152	3.4
3	Measuring the Energy Landscape in Single Semiconductor Nanowires. *Acta Physica Polonica A*, **2012**, 122, 316-320	0.6
2	Optical Properties of Semiconductor Nanowires: Insights into Band Structure and Carrier Dynamics. *Semiconductors and Semimetals*, **2016**, 94, 17-74	0.6
1	Band structure and polarization effects in photothermoelectric spectroscopy of a Bi2Se3 device. *Applied Physics Letters*, **2022**, 120, 122110	3.4