

Ian Galbraith

List of Publications by Year in descending order

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docs citations

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times ranked

1548
citing authors

#	ARTICLE	IF	CITATIONS
1	Excitons and biexcitons in semiconductor quantum wires. <i>Physical Review B</i> , 1987, 36, 6099-6104.	1.1	234
2	Direct observation of the LO phonon bottleneck in wide GaAs/Al _x Ga _{1-x} As quantum wells. <i>Physical Review B</i> , 1997, 55, 5171-5176.	1.1	126
3	Intraband absorption for InAs/GaAs quantum dot infrared photodetectors. <i>Applied Physics Letters</i> , 2004, 84, 1934-1936.	1.5	100
4	Envelope-function matching conditions for GaAs/(Al,Ga)As heterojunctions. <i>Physical Review B</i> , 1988, 38, 10057-10059.	1.1	88
5	Exciton binding energy and external-field-induced blue shift in double quantum wells. <i>Physical Review B</i> , 1989, 40, 5515-5521.	1.1	73
6	Exciton-related lasing mechanism in ZnSe-(Zn,Cd)Se multiple quantum wells. <i>Physical Review B</i> , 1993, 48, 11994-12000.	1.1	69
7	Suppression of Auger recombination in arsenic-rich InAs _{1-x} Sbx strained layer superlattices. <i>Journal of Applied Physics</i> , 1996, 80, 2994-2997.	1.1	54
8	Optical nonlinearities in mixed type I-type II GaAs/AlAs multiple quantum wells. <i>Physical Review B</i> , 1992, 45, 13499-13508.	1.1	52
9	Two-dimensional time-dependent quantum-mechanical scattering event. <i>American Journal of Physics</i> , 1984, 52, 60-68.	0.3	48
10	Influence of electron temperature and carrier concentration on electron-LO-phonon intersubband scattering in wide GaAs/Al _x Ga _{1-x} As quantum wells. <i>Physical Review B</i> , 1995, 52, 1874-1881.	1.1	48
11	Intersubband and intrasubband electronic scattering rates in semiconductor quantum wells. <i>Physical Review B</i> , 1999, 59, 15796-15805.	1.1	47
12	Γ -X- Γ electron transfer in mixed type I-type II GaAs/AlAs quantum well structures. <i>Solid State Communications</i> , 1992, 83, 245-248.	0.9	44
13	Exciton binding energies in semiconductor superlattices: An anisotropic-effective-medium approach. <i>Physical Review B</i> , 1990, 42, 7084-7089.	1.1	42
14	Diffusive transverse coupling of bistable elements - Switching waves and crosstalk. <i>IEEE Journal of Quantum Electronics</i> , 1985, 21, 1399-1403.	1.0	40
15	Linewidth Enhancement Factor of Quantum-Dot Optical Amplifiers. <i>IEEE Journal of Quantum Electronics</i> , 2006, 42, 986-993.	1.0	40
16	Optical Excitations in Star-Shaped Fluorene Molecules. <i>Journal of Physical Chemistry A</i> , 2011, 115, 2913-2919.	1.1	40
17	Theory of band-edge optical nonlinearities in type-I and type-II quantum-well structures. <i>Physical Review B</i> , 1991, 44, 3031-3042.	1.1	39
18	Investigation of excitonic saturation by time-resolved circular dichroism in GaAs-Al _x Ga _{1-x} As multiple quantum wells. <i>Physical Review B</i> , 1994, 49, 17160-17169.	1.1	39

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19	Variable-phase method and Levinson's theorem in two dimensions: Application to a screened Coulomb potential. <i>Solid State Communications</i> , 1997, 103, 325-329.	0.9	38
20	Ionization degree of the electron-hole plasma in semiconductor quantum wells. <i>Physical Review B</i> , 1999, 60, 5570-5581.	1.1	36
21	Time resolved self-defocusing in InSb at room temperature. <i>IEEE Journal of Quantum Electronics</i> , 1985, 21, 94-99.	1.0	35
22	General Force-Field Parametrization Scheme for Molecular Dynamics Simulations of Conjugated Materials in Solution. <i>Journal of Chemical Theory and Computation</i> , 2016, 12, 3813-3824.	2.3	35
23	Effect of exciton self-trapping and molecular conformation on photophysical properties of oligofluorenes. <i>Journal of Chemical Physics</i> , 2009, 131, 154906.	1.2	33
24	Dynamics of fluorescence depolarisation in star-shaped oligofluorene-truxene molecules. <i>Physical Chemistry Chemical Physics</i> , 2012, 14, 9176.	1.3	33
25	cw and femtosecond optical nonlinearities of type-II quantum wells. <i>Physical Review Letters</i> , 1991, 66, 1358-1361.	2.9	30
26	Comparison of optical nonlinearities in piezoelectric strained [111] and [001] grown (In,Ga)As/(Al,Ga)As quantum wells. <i>Applied Physics Letters</i> , 1994, 65, 2771-2773.	1.5	28
27	Band alignments and offsets in In(As,Sb)/InAs superlattices. <i>Physical Review B</i> , 1997, 55, 4589-4595.	1.1	27
28	Levinson's theorem and scattering phase-shift contributions to the partition function of interacting gases in two dimensions. <i>Physical Review B</i> , 1998, 58, 3963-3968.	1.1	23
29	Nonlinear optical properties of type-II quantum wells. <i>Physical Review B</i> , 1991, 44, 3043-3053.	1.1	22
30	A comparison of lasing mechanisms in ZnSe and GaAs. <i>Journal of Crystal Growth</i> , 1996, 159, 667-671.	0.7	22
31	Biexcitonic nonlinearity in GaAs/GaxAl1-xAs quantum wells and quantum-well wires. <i>Physical Review B</i> , 1988, 38, 3931-3936.	1.1	21
32	Photoluminescence excitation spectroscopy of the lasing transition in ZnSe-(Zn,Cd)Se quantum wells. <i>Journal of Crystal Growth</i> , 1994, 138, 759-763.	0.7	21
33	Low-power, all-optical nonlinear absorption in asymmetric double quantum wells. <i>Applied Physics Letters</i> , 1991, 58, 2889-2891.	1.5	19
34	Excited-State Absorption of Conjugated Polymers in the Near-Infrared and Visible: A Computational Study of Oligofluorenes. <i>Journal of Physical Chemistry C</i> , 2013, 117, 6889-6895.	1.5	19
35	Coherent Dynamics of the Localized Vibrational Modes of Hydrogen in CaF ₂ . <i>Physical Review Letters</i> , 2000, 84, 4998-5001.	2.9	18
36	Time resolved studies of intersubband relaxation in GaAs/AlGaAs quantum wells below the optical phonon energy using a free electron laser. <i>Superlattices and Microstructures</i> , 1996, 19, 17-24.	1.4	17

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37	A magneto-photoluminescence investigation of the band offset between InAs and arsenic-rich InAs _{1-x} Sb _x alloys. Applied Physics Letters, 1996, 69, 2501-2503.	1.5	17
38	Subpicosecond Exciton Dynamics in Polyfluorene Films from Experiment and Microscopic Theory. Journal of Physical Chemistry C, 2015, 119, 9734-9744.	1.5	17
39	Simple formula for exciton binding energy in quantum wells with zero band offsets. Physical Review B, 1992, 45, 6950-6952.	1.1	16
40	Topography measurements of the critical thickness of ZnSe grown on GaAs. Applied Physics Letters, 1998, 72, 3148-3150.	1.5	15
41	Multisubband nonequilibrium electron-electron scattering in semiconductor quantum wells. Physical Review B, 1997, 55, R16025-R16028.	1.1	14
42	Tuning biexciton binding and antibinding in core/shell quantum dots. Physical Review B, 2012, 86, .	1.1	14
43	Band-edge refractive optical nonlinearities in molecular beam-grown ZnSe epilayers. Applied Physics Letters, 1993, 63, 709-711.	1.5	13
44	Dynamics of photoexcitation and stimulated optical emission in conjugated polymers: A multiscale quantum-chemistry and Maxwell-Bloch-equations approach. Physical Review B, 2010, 81, .	1.1	13
45	Self-trapping and excited state absorption in fluorene homo-polymer and copolymers with benzothiadiazole and tri-phenylamine. Physical Chemistry Chemical Physics, 2016, 18, 21937-21948.	1.3	13
46	Influence of growth interruption on inverted interface quality in single AlAs-GaAs quantum wells grown by molecular beam epitaxy. Journal of Applied Physics, 1990, 68, 5595-5600.	1.1	12
47	Excitation induced shift and broadening of the exciton resonance. Physica B: Condensed Matter, 2002, 314, 309-313.	1.3	12
48	Quantitative description of interactions between linear organic chromophores. Journal of Chemical Physics, 2012, 137, 224102.	1.2	12
49	Exceptional points and dynamics of an asymmetric non-Hermitian two-level system. Physical Review A, 2018, 98, .	1.0	12
50	Exciton-acoustic-phonon scattering in (Zn,Cd)Se/ZnSe quantum wells: The influence of quantum confinement. Physical Review B, 1999, 59, 9756-9759.	1.1	11
51	Spatiotemporal chaos in a ring cavity. Journal of the Optical Society of America B: Optical Physics, 1987, 4, 1116.	0.9	10
52	Magneto-Excitons in Semiconductor Quantum Rings. Physica Status Solidi A, 2002, 190, 781-785.	1.7	10
53	Influence of exchange scattering and dynamic screening on electron-electron scattering rates in semiconductor quantum wells. Physical Review B, 2000, 62, 15327-15330.	1.1	9
54	Quantum Dot Versus Quantum Well Semiconductor Optical Amplifiers for Subpicosecond Pulse Amplification. Optical and Quantum Electronics, 2004, 36, 539-549.	1.5	9

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55	Enhancement and reduction of line broadening due to Auger scattering in modulation-doped InGaAs/GaAs quantum dot devices. Applied Physics Letters, 2007, 91, 1611-1613.	1.5	9
56	Comparison of the biexciton and exciton coherent polarization lifetimes in ZnSe/(Zn,Cd)Se multiple quantum wells. Semiconductor Science and Technology, 1997, 12, 820-824.	1.0	8
57	Photon emission induced by elastic exciton-carrier scattering in semiconductor quantum wells. European Physical Journal B, 2008, 65, 195-206.	0.6	8
58	Highly efficient THz four-wave mixing in doped silicon. Light: Science and Applications, 2021, 10, 71.	7.7	8
59	Rapid hot-electron capture in self-assembled quantum dots via phonon processes. Applied Physics Letters, 2006, 89, 1531-1539.	1.5	7
60	Coulomb effects in the absorbance spectra of two-dimensional Dirac materials. Physical Review B, 2018, 98, .	1.1	7
61	Empirical determination of the electroabsorption coefficient in semiconductors. Journal of Applied Physics, 1993, 74, 4145-4148.	1.1	6
62	Band structure and band offsets in quantum wells. Journal of Crystal Growth, 1996, 159, 542-545.	0.7	6
63	The Role of Spin Orientation and Relaxation in Exciton-Exciton Scattering. Physica Status Solidi (B): Basic Research, 2000, 221, 477-480.	0.7	6
64	Dispersion-induced ultrafast pulse reshaping in 1.55- μ m InGaAs-InGaAsP optical amplifiers. IEEE Journal of Quantum Electronics, 2003, 39, 1388-1393.	1.0	6
65	Rabi oscillations of ultrashort optical pulses in 1.55- μ m InGaAs-InGaAsP quantum-well amplifiers. Journal of Applied Physics, 2004, 96, 922-924.	1.1	6
66	Direct measurement of the effective-mass renormalization in n-type modulation-doped Al _{0.23} Ga _{0.77} As/In _{0.08} Ga _{0.92} As/GaAs quantum wells. Physical Review B, 1992, 46, 13611-13614.	1.1	5
67	Screening effects in piezoelectric strained [111]-Grown (In, Ga) As/(Al, Ga) As quantum wells. Nuovo Cimento Della Societa Italiana Di Fisica D - Condensed Matter, Atomic, Molecular and Chemical Physics, Biophysics, 1995, 17, 1595-1599.	0.4	5
68	Biexciton emission from thick ZnSe epilayer grown by molecular beam epitaxy. Journal of Applied Physics, 1998, 83, 2035-2040.	1.1	5
69	Measurement of the critical thickness of ZnCdSe quantum wells in ZnSe barrier layers by the piezoelectric effect. Applied Physics Letters, 1998, 73, 3141-3143.	1.5	5
70	Lateral spatial switching of excitons using vertical electric fields in semiconductor quantum rings. Applied Physics Letters, 2010, 97, .	1.5	5
71	Surface Effects in Optically Bistable and Transphaser Devices. Journal of Modern Optics, 1987, 34, 137-150.	0.6	4
72	Direct measurement of the polarization-dependent absorption and saturation in an InGaAs/InGaAsP single quantum well. Journal of Applied Physics, 1996, 80, 4027-4032.	1.1	4

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73	Static screening approximations for calculations of intersubband electron-phonon electron scattering rates in semiconductor quantum wells. <i>Physica B: Condensed Matter</i> , 1999, 272, 237-240.	1.3	4
74	Spin-Dependent Exciton-Exciton Interaction in ZnSe Quantum Wells. <i>Physica Status Solidi A</i> , 2000, 178, 535-538.	1.7	4
75	Rabi oscillations for subpicosecond pulses in quantum-well optical amplifiers: interplay of carrier heating, nonlinear, and spectral effects. <i>IEEE Journal of Quantum Electronics</i> , 2005, 41, 1083-1091.	1.0	4
76	Excitonic electroabsorption and electrorefraction in semiconductors. <i>Physical Review B</i> , 1993, 48, 5105-5112.	1.1	3
77	Red-shift of stimulated emission in ZnSe-based semiconductors. <i>Optical Materials</i> , 1998, 10, 235-240.	1.7	3
78	The intrasubband and intersubband relaxation of nonequilibrium electron populations in wide semiconductor quantum wells. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2000, 7, 229-232.	1.3	3
79	Wavelet transforms for optical pulse analysis. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 2005, 22, 2890.	0.8	3
80	Intersubband lifetimes in quantum wells. <i>Solid-State Electronics</i> , 1996, 40, 59-62.	0.8	2
81	Intersubband Dynamics below the Optical Phonon Energy for Single and Coupled Quantum Well Systems. <i>Physica Status Solidi (B): Basic Research</i> , 1997, 204, 208-211.	0.7	2
82	Organic photovoltaics and energy: general discussion. <i>Faraday Discussions</i> , 2014, 174, 341-355.	1.6	2
83	Lateral excitonic switching in vertically stacked quantum dots. <i>Journal of Applied Physics</i> , 2016, 119, 224303.	1.1	2
84	Long-lived nonlinear oscillatory states in interacting relativistic Bose-Einstein condensates. <i>Physical Review A</i> , 2020, 102, .	1.0	2
85	Optical nonlinearities due to long-lived electron-hole plasmas. , 1991, , .		1
86	Plasma-expansion induced absorption and refraction changes in ZnSe epilayers. <i>Journal of Modern Optics</i> , 2000, 47, 1995-2004.	0.6	1
87	Exciton/Free-Carrier Plasma in GaN-Based Quantum Wells: Scattering and Screening. <i>Physica Status Solidi A</i> , 2001, 183, 87-90.	1.7	1
88	Properties of Conjugated Materials from Quantum Chemistry Coupled to Molecular Dynamics Generated Ensembles. <i>Journal of Physical Chemistry A</i> , 2020, 124, 10667-10677.	1.1	1
89	The Radiative Lifetime of Charged Excitons in a Single Self-Assembled Quantum Dot. <i>AIP Conference Proceedings</i> , 2007, , .	0.3	0
90	Phase control of photon-echo dynamics with overlapping pulse pairs. <i>Physical Review A</i> , 2017, 95, .	1.0	0

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91	Theory of Stimulated Optical Emission Dynamics in Conjugated Polymers. , 2010, , .		0