Stuart Brand

List of Publications by Year
in descending order

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120 papers	4,326 citations	159358 30 h-index	110170 64 g-index
121 all docs	121 docs citations	121 times ranked	3016 citing authors

#	Article	IF	Citations
1	Two-dimensional photonic-bandgap structures operating at near-infrared wavelengths. Nature, 1996, 383, 699-702.	13.7	723
2	Tamm plasmon-polaritons: Possible electromagnetic states at the interface of a metal and a dielectric Bragg mirror. Physical Review B, 2007, 76, .	1.1	692
3	Tamm plasmon polaritons: Slow and spatially compact light. Applied Physics Letters, 2008, 92, .	1.5	344
4	A new quantitative optical biosensor for protein characterisation. Biosensors and Bioelectronics, 2003, 19, 383-390.	5.3	205
5	Electronic structure calculations on nitride semiconductors. Semiconductor Science and Technology, 1999, 14, 23-31.	1.0	153
6	Localized defects in III-V semiconductors. Physical Review B, 1976, 14, 4494-4505.	1.1	130
7	The metrics of surface adsorbed small molecules on the Young's fringe dual-slab waveguide interferometer. Journal Physics D: Applied Physics, 2004, 37, 74-80.	1.3	112
8	Diffraction and transmission of light in low-refractive index Penrose-tiled photonic quasicrystals. Journal of Physics Condensed Matter, 2001, 13, 10459-10470.	0.7	111
9	Structure and electronic properties ofFeSi2. Physical Review B, 1998, 58, 10389-10393.	1.1	110
10	Hybrid states of Tamm plasmons and exciton polaritons. Applied Physics Letters, 2009, 95, .	1.5	97
11	Two-dimensional Penrose-tiled photonic quasicrystals: from diffraction pattern to band structure. Nanotechnology, 2000, 11, 274-280.	1.3	71
12	Direct calculation ofkâ‹…pparameters for wurtzite AlN, GaN, and InN. Physical Review B, 2000, 61, 12933-12938.	1.1	69
13	Optical Tamm states above the bulk plasma frequency at a Bragg stack/metal interface. Physical Review B, 2009, 79, .	1.1	69
14	Two-dimensional penrose-tiled photonic quasicrystals: Diffraction of light and fractal density of modes. Journal of Modern Optics, 2000, 47, 1771-1778.	0.6	49
15	Terahertz frequency bandpass filters. Journal of Applied Physics, 2007, 102, 023102.	1.1	49
16	Band-gap and k.p. parameters for GaAlN and GaInN alloys. Journal of Applied Physics, 1999, 86, 3768-3772.	1.1	47
17	Real time, high resolution studies of protein adsorption and structure at the solidâ€“liquid interface using dual polarization interferometry. Journal of Physics Condensed Matter, 2004, 16, S2493-S2496.	0.7	47
18	Overlap integrals for Auger recombination in direct-bandgap semiconductors: calculations for conduction and heavy-hole bands in GaAs and InP. Journal of Physics C: Solid State Physics, 1984, 17, 6385-6401.	1.5	45

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19	Characteristics of impact ionization rates in direct and indirect gap semiconductors. Journal of Applied Physics, 1999, 85, 8186-8192.	1.1	45
20	Self-consistent pseudopotential calculation of electronic states associated with a reconstructed silicon vacancy. Physical Review B, 1979, 19, 3137-3151.	1.1	44
21	Whispering gallery polaritons in cylindrical cavities. Physical Review B, 2007, 75, .	1.1	41
22	Electronic states associated with the substitutional nitrogen impurity in GaPxAs1-x. Journal of Physics C: Solid State Physics, 1979, 12, 525-539.	1.5	39
23	Bandgap structure of optical Fibonacci lattices after light diffraction. Optics and Spectroscopy (English Translation of Optika I Spektroskopiya), 2001, 91, 109-118.	0.2	38
24	Complex photonic band structure and effective plasma frequency of a two-dimensional array of metal rods. Physical Review B, 2007, 75, .	1.1	38
25	Passband filters for terahertz radiation based on dual metallic photonic structures. Applied Physics Letters, 2007, 91, 161115.	1.5	36
26	Stability of the photonic band gap in the presence of disorder. Physical Review B, 2006, 73, .	1.1	34
27	First-principles studies of the structural and electronic properties of poly-para-phenylene vinylene. Journal of Physics Condensed Matter, 2004, 16, 8609-8620.	0.7	33
28	Self-consistent pseudopotential calculations of the electronic structure of a hydrogen interstitial in crystalline silicon. Solid State Communications, 1979, 31, 43-45.	0.9	31
29	Experimental technique to determine the band structure of two-dimensional photonic lattices. IEE Proceedings: Optoelectronics, 1998, 145, 398-402.	0.8	31
30	Calculations of bound states in the valence band of AlAs/GaAs/AlAs and AlGaAs/GaAs/AlGaAs quantum wells. Semiconductor Science and Technology, 1987, 2, 607-614.	1.0	30
31	Intervalence band absorption in semiconductor laser materials. Semiconductor Science and Technology, 1986, 1, 116-120.	1.0	28
32	Impact ionization rate calculations in wide band gap semiconductors. Journal of Applied Physics, 1999, 85, 8178-8185.	1.1	28
33	First-principles calculations of2Ã—2reconstructions of GaN(0001) surfaces involving N, Al, Ga, In, and As atoms. Physical Review B, 2005, 72, .	1.1	28
34	Statistics of the eigenmodes and optical properties of one-dimensional disordered photonic crystals. Physical Review E, 2006, 73, 056616.	0.8	28
35	Calculations of overlap integrals for Auger processes involving direct band gap semiconductors. Journal of Physics C: Solid State Physics, 1984, 17, L201-L206.	1.5	27
36	Terahertz filter based on refractive properties of metallic photonic crystal. Optics Express, 2008, 16, 7330.	1.7	27

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37	Optical cross sections associated with deep levels in semiconductors. I. Journal of Physics C: Solid State Physics, 1980, 13, 6167-6180.	1.5	24
38	Binding to deep impurities in semiconductors. Journal of Physics C: Solid State Physics, 1980, 13, L333-L337.	1.5	20
39	Optical eigenmodes of a multilayered spherical microcavity. Journal of Modern Optics, 2001, 48, 1503-1516.	0.6	20
40	Pseudopotential calculations of the effect of displacement upon the impurity levels introduced by deep donor oxygen in GaAs, GaP, Si and nitrogen in diamond. Solid State Communications, 1977, 21, 875-877.	0.9	18
41	Properties of two-dimensional photonic crystals with octagonal quasicrystalline unit cells. Journal of Modern Optics, 2006, 53, 407-416.	0.6	18
42	Whispering-gallery exciton polaritons in submicron spheres. Physical Review B, 2009, 79, .	1.1	18
43	Exciton polaritons in a cylindrical microcavity with an embedded quantum wire. Physical Review B, 2000, 61, 13791-13797.	1.1	16
44	Ab initio dynamics study of poly-para-phenylene vinylene. Journal of Chemical Physics, 2005, 123, 024904.	1.2	15
45	Screened-exchange stress tensor in density functional theory. Physical Review B, 2006, 73, .	1.1	15
46	Calculations of the commonly neglected terms in the matrix element for Auger and impact ionisation processes in semiconductors. Journal of Physics C: Solid State Physics, 1984, 17, L571-L574.	1.5	14
47	Lattice dynamics of polyaniline and poly(p-pyridyl vinyline): First-principles determination. Physical Review B, 2006, 74, .	1.1	14
48	Interface photonic states at the boundary between a metal and a dielectric Bragg mirror. Physica Status Solidi (A) Applications and Materials Science, 2007, 204, 522-525.	0.8	14
49	The binding of electrons by nitrogen pairs in GaP. Journal of Physics C: Solid State Physics, 1979, 12, 2789-2796.	1.5	13
50	Electronic structure of the divacancy in silicon. Journal of Physics C: Solid State Physics, 1983, 16, L337-L343.	1.5	13
51	Bragg reflector enhanced attenuated total reflectance. Journal of Applied Physics, 2009, 106, 113109.	1.1	13
52	Tamm plasmon polaritons in multilayered cylindrical structures. Physical Review B, 2012, 86, .	1.1	13
53	Optimisation studies of localised defect calculations in semiconductors. Journal of Physics C: Solid State Physics, 1978, 11, 4963-4973.	1.5	12
54	Electromagnetic theory of the coupling of zero-dimensional exciton and photon states: A quantum dot in a spherical microcavity. Physical Review B, 2001, 64, .	1.1	12

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55	Theoretical adlayer surface morphology of wurtzite 2 Ã— 2 reconstructions of the GaN(0001) surface. Journal of Physics Condensed Matter, 2005, 17, 17-26.	0.7	10
56	Effect of longitudinal excitations on surface plasmons. Solid State Communications, 2007, 144, 413-417.	0.9	10
57	The use of realistic band structure in impact ionization calculations for wide bandgap semiconductors: thresholds and anti-thresholds in indium phosphide. Semiconductor Science and Technology, 1993, 8, 1546-1556.	1.0	9
58	Spatio-temporal impact ionisation transients: A Lucky drift model study in GaAs. Solid-State Electronics, 1995, 38, 287-296.	0.8	9
59	Density of states in 1D disordered photonic crystals: Analytical solution. Solid State Communications, 2008, 146, 157-160.	0.9	9
60	Evanescently coupled interface states in the gap between two Bragg reflectors. Optics Letters, 2010, 35, 2085.	1.7	9
61	Negative refraction and the spectral filtering of terahertz radiation by a photonic crystal prism. Optics Letters, 2011, 36, 1641.	1.7	9
62	Hybrid states of Tamm plasmons and exciton-polaritons. Superlattices and Microstructures, 2011, 49, 229-232.	1.4	9
63	Defect states dominated by localised potentials in semiconductors. Journal of Physics C: Solid State Physics, 1981, 14, 1243-1253.	1.5	8
64	Calculations of electronic states in the valence band of (100) GaAs/AlGaAs superlattices. Semiconductor Science and Technology, 1987, 2, 123-126.	1.0	8
65	Two-dimensional penrose-tiled photonic quasicrystals: Diffraction of light and fractal density of modes. , 0, .		8
66	Appearance of photonic minibands in disordered photonic crystals. Journal of Physics Condensed Matter, 2003, 15, 785-790.	0.7	7
67	Directionality of light transmission and reflection in two-dimensional Penrose tiled photonic quasicrystals. Journal of Physics Condensed Matter, 2004, 16, 1269-1278.	0.7	7
68	Ab initiostudies of strained wurtzite GaN surfaces. Journal of Physics Condensed Matter, 2004, 16, 531-542.	0.7	7
69	Disorder induced modification of reflection and transmission spectra of a two-dimensional photonic crystal with an incomplete band-gap. Journal of Physics Condensed Matter, 2005, 17, 4049-4055.	0.7	7
70	Self-consistent calculations of electron and hole sub-band energies for an n-p superlattice in GaAs. Journal of Physics C: Solid State Physics, 1983, 16, 6111-6120.	1.5	6
71	The use of realistic band structure in impact ionization calculations for wide bandgap semiconductors: thresholds, anti-thresholds and rates in GaAs and AlGaAs. Semiconductor Science and Technology, 1993, 8, 1944-1956.	1.0	6
72	Optimization of an optical filter with a square-shaped passband based on coupled microcavities. Journal of Modern Optics, 2004, 51, 437-446.	0.6	6

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73	Non-Local Density Functional Description of Poly- Para -Phenylene Vinylene. Chinese Physics Letters, 2007, 24, 807-810.	1.3	6
74	Excited states of neutral defects in semiconductors. Journal of Physics C: Solid State Physics, 1982, 15, L743-L747.	1.5	5
75	Electronic properties and stability of first-row impurities in semiconductors. The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties, 1983, 47, 199-210.	0.6	5
76	Optical transitions in (Si)4 (Ge)4 superlattices. Superlattices and Microstructures, 1989, 5, 185-188.	1.4	5
77	Optical Eigenmodes of a Spherical Microcavity. Physica Status Solidi A, 2001, 183, 183-187.	1.7	5
78	Some theory of a dual-polarization interferometer for sensor applications. Journal Physics D: Applied Physics, 2015, 48, 125101.	1.3	5
79	A study of a phase formalism for calculating the cumulative density of states of one-dimensional photonic crystals. Journal of Modern Optics, 2017, 64, 1501-1509.	0.6	5
80	New aspects of the electronic structure of the GaSb-InAs (001) superlattice. Superlattices and Microstructures, 1985, 1, 385-388.	1.4	4
81	Spatial impact ionization transients in GaAs: their origin and characteristics. Semiconductor Science and Technology, 1994, 9, 1171-1175.	1.0	4
82	Negative refraction can make non-diffracting beams. Optics Express, 2008, 16, 14582.	1.7	4
83	Tailor-made surface plasmon polaritons above the bulk plasma frequency: a design strategy for indium tin oxide. Journal Physics D: Applied Physics, 2010, 43, 145104.	1.3	4
84	Electronic states at line defects in silicon. The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties, 1980, 42, 577-582.	0.6	3
85	Complex band structure calculations of the electric field dependence of the transmission of holes through a (100) GaAs/AlGaAs/GaAs barrier structure. Superlattices and Microstructures, 1987, 3, 697-700.	1.4	3
86	Avalanche multiplication properties of GaAs calculated from spatially transient ionisation coefficients. Solid-State Electronics, 1995, 38, 2095-2100.	0.8	3
87	Stimulated emission due to light localization in the bandgap of disordered opals. Physica Status Solidi C: Current Topics in Solid State Physics, 2004, 1, 1522-1530.	0.8	3
88	Waveguide polaritons: interaction of a quantum well exciton with an electromagnetic mode of a planar waveguide. Physica Status Solidi C: Current Topics in Solid State Physics, 2005, 2, 787-790.	0.8	3
89	The electronic properties of dangling bonds in silicon. Physica B: Physics of Condensed Matter & C: Atomic, Molecular and Plasma Physics, Optics, 1983, 116, 79-84.	0.9	2
90	Dipole matrix elements and the nature of charge oscillation under coherent interband excitation in quantum wells. Physical Review B, 1999, 60, 13306-13309.	1.1	2

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91	Interaction of quantum well excitons with evanescent plane electromagnetic waves. Journal of Physics Condensed Matter, 2004, 16, 3401-3409.	0.7	2
92	Propagation of electromagnetic waves through a system of randomly placed cylinders: the partial scattering wave resonance. Journal of Modern Optics, 2006, 53, 2089-2097.	0.6	2
93	Micromachining for Terahertz Artificial Materials. Materials Research Society Symposia Proceedings, 2007, 1016, 1.	0.1	2
94	Density of states of a one-dimensional disordered photonic crystal. Physics of the Solid State, 2007, 49, 1999-2003.	0.2	2
95	Negative refracting materials at THz frequencies. , 2008, , .		2
96	Wavelength-dependent frustrated internal reflection via photonic interface states. Applied Physics Letters, 2011, 99, .	1.5	2
97	Simulation of electron transport in a (GaAs)12/(AlAs)12superlattice. Semiconductor Science and Technology, 1991, 6, 784-789.	1.0	1
98	Calculations of electronic states and optical matrix elements of freestanding (100) (CdTe)nî—¸(ZnTe)n superlattices. Superlattices and Microstructures, 1991, 10, 13-18.	1.4	1
99	Electronic structure calculations on nitride semiconductors. Semiconductor Science and Technology, 1999, 14, 1175-1175.	1.0	1
100	First-Principles Calculations of 2Ã—2 reconstructions of GaN Surfaces. AIP Conference Proceedings, 2005, , .	0.3	1
101	Screened Exchange Calculations of Semiconductor Band Structures. AIP Conference Proceedings, 2005, , .	0.3	1
102	Molecular dynamics calculations of the thermal expansion properties and melting points of Si and Ge. Journal of Physics Condensed Matter, 2006, 18, 3489-3498.	0.7	1
103	Artificial plasmonic materials for THz applications. , 2007, , .		1
104	Polarization beats in a pillar microcavity. Superlattices and Microstructures, 2010, 47, 24-28.	1.4	1
105	Pseudopotential and K.P Calculations of Overlap integrals for Auger processes in Direct gap Semiconductors. , 1985, , 1013-1016.		1
106	Optical eigenmodes of a multilayered spherical microcavity. , 0, .		1
107	Optimization of an optical filter with a square-shaped passband based on coupled microcavities. Journal of Modern Optics, 2004, 51, 437-446.	0.6	1
108	THz frequency studies of metallic structures. , 2006, , .		1

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109	On the binding mechanism concerning medium-deep localised levels in IIIâ€“V semiconductors. Physics Letters, Section A: General, Atomic and Solid State Physics, 1981, 87, 110-112.	0.9	0
110	Pseudopotential calculations of energy states and momentum matrix elements for strained layer structures. Superlattices and Microstructures, 1991, 10, 323-326.	1.4	0
111	THE USE OF REALISTIC BANDSTRUCTURE IN IMPACT IONISATION CALCULATIONS FOR WIDE BANDGAP SEMICONDUCTORS: APPLICATION TO INP AND GaAS. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 1993, 12, 457-473.	0.5	0
112	Determination of Band Structure Parameters in Nitride Alloys for Use in Quantum Well Calculations. Physica Status Solidi (B): Basic Research, 1999, 216, 351-354.	0.7	0
113	The Interaction of Quantum Well Excitons with Evanescent EM Waves and the Spectroscopy of Waveguide Polaritons. AIP Conference Proceedings, 2005, , .	0.3	0
114	Enhanced THz transmission apertures through sub-wavelength annular apertures. , 2006, , .		0
115	Stability of Photonic Band Gap in the Presence of Disorder. AIP Conference Proceedings, 2007, , .	0.3	0
116	Spectral filtering of THz radiation using negative refraction in a photonic crystal. , 2011, , .		0
117	An â€˜electromagnetic wigglerâ€™ originating from refraction of waves at the side edge of a Bragg reflector. Journal of Modern Optics, 2011, 58, 686-693.	0.6	0
118	Light-exciton coupling in semiconductor microcavities of cylindrical and spherical symmetry. Springer Proceedings in Physics, 2001, , 699-700.	0.1	0
119	Propagation and Localization of Light inÂTwo-Dimensional Photonic Crystals. Series in Optics and Optoelectronics, 2012, , 23-38.	0.0	0
120	CALCULATION OF BOUND STATES IN A STRAINED Ge0.25Si0.75/Si/Ge0.25Si0.75 QUANTUM WELL. Journal De Physique Colloque, 1987, 48, C5-565-C5-568.	0.2	0