Stephen O'Leary

List of Publications by Year
in descending order

84 papers	2,457 citations	279798 23 h-index	197818 49 g-index
84 all docs	84 docs citations	84 times ranked	1773 citing authors

#	Article	IF	Citations
1	Transient electron transport in wurtzite GaN, InN, and AlN. Journal of Applied Physics, 1999, 85, 7727-7734.	2.5	508
2	Electron transport in wurtzite indium nitride. Journal of Applied Physics, 1998, 83, 826-829.	2.5	282
3	The relationship between the distribution of electronic states and the optical absorption spectrum of an amorphous semiconductor: An empirical analysis. Journal of Applied Physics, 1997, 82, 3334-3340.	2.5	277
4	Steady-State and Transient Electron Transport Within the IIIâ€“V Nitride Semiconductors, GaN, AlN, and InN: A Review. Journal of Materials Science: Materials in Electronics, 2006, 17, 87-126.	2.2	124
5	Potential performance of indium-nitride-based devices. Applied Physics Letters, 2006, 88, 152113.	3.3	86
6	Steady-state and transient electron transport within bulk wurtzite indium nitride: An updated semiclassical three-valley Monte Carlo simulation analysis. Applied Physics Letters, 2005, 87, 222103.	3.3	79
7	Monte Carlo simulation of electron transport in wurtzite aluminum nitride. Solid State Communications, 1998, 105, 621-626.	1.9	69
8	Auger-Limited Carrier Recombination and Relaxation in CdSe Colloidal Quantum Wells. Journal of Physical Chemistry Letters, 2015, 6, 1032-1036.	4.6	61
9	On determining the optical gap associated with an amorphous semiconductor: A generalization of the Tauc model. Solid State Communications, 1997, 104, 17-21.	1.9	57
10	Semiclassical density-of-states and optical-absorption analysis of amorphous semiconductors. Physical Review B, 1995, 51, 4143-4149.	3.2	53
11	Optical absorption in amorphous semiconductors. Physical Review B, 1995, 52, 7795-7797.	3.2	49
12	Nonmonotonic Dependence of Auger Recombination Rate on Shell Thickness for CdSe/CdS Core/Shell Nanoplatelets. Nano Letters, 2017, 17, 6900-6906.	9.1	44
13	The dependence of the Fermi level on temperature, doping concentration, and disorder in disordered semiconductors. Journal of Applied Physics, 2000, 88, 3479-3483.	2.5	37
14	Recombination of drifting holes with trapped electrons in stabilized a-Se photoconductors: Langevin recombination. Applied Physics Letters, 2004, 84, 1991-1993.	3.3	35
15	Steady-state electron transport in the IIIâ€“V nitride semiconductors: A sensitivity analysis. Journal of Electronic Materials, 2003, 32, 327-334.	2.2	34
16	Steady-state and transient electron transport within the wide energy gap compound semiconductors gallium nitride and zinc oxide: an updated and critical review. Journal of Materials Science: Materials in Electronics, 2014, 25, 4675-4713.	2.2	34
17	A 2015 perspective on the nature of the steady-state and transient electron transport within the wurtzite phases of gallium nitride, aluminum nitride, indium nitride, and zinc oxide: a critical and retrospective review. Journal of Materials Science: Materials in Electronics, 2015, 26, 4475-4512.	2.2	33
18	A simplified joint density of states analysis of hydrogenated amorphous silicon. Journal of Applied Physics, 2002, 92, 4276-4282.	2.5	32

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19	Steady-state and transient electron transport within bulk wurtzite zinc oxide. Solid State Communications, 2010, 150, 2182-2185.	1.9	32
20	The Urbach focus and hydrogenated amorphous silicon. Applied Physics Letters, 2004, 84, 523-525.	3.3	29
21	Steady-state and transient electron transport within wurtzite and zinc-blende indium nitride. Journal of Applied Physics, 2013, 113, 113709.	2.5	27
22	Optical properties vacuum deposited and chlorine doped a-Se thin films: aging effects. Journal of Materials Science: Materials in Electronics, 2007, 18, 429-433.	2.2	25
23	The sensitivity of the electron transport within bulk wurtzite indium nitride to variations in the crystal temperature, the doping concentration, and the non-parabolicity coefficient: an updated Monte Carlo analysis. Journal of Materials Science: Materials in Electronics, 2010, 21, 218-230.	2.2	23
24	The sensitivity of the steady-state and transient electron transport within bulk wurtzite zinc oxide to variations in the crystal temperature, the doping concentration, and the non-parabolicity coefficient. Journal of Materials Science: Materials in Electronics, 2013, 24, 2-12.	2.2	23
25	Optical transitions and the mobility edge in amorphous semiconductors: A joint density of states analysis. Journal of Applied Physics, 2008, 104, .	2.5	22
26	Optical transitions in hydrogenated amorphous silicon. Applied Physics Letters, 2002, 80, 790-792.	3.3	20
27	A detailed characterization of the transient electron transport within zinc oxide, gallium nitride, and gallium arsenide. Journal of Applied Physics, 2012, 112, 123722.	2.5	19
28	A transient electron transport analysis of bulk wurtzite zinc oxide. Journal of Applied Physics, 2012, 112, 033720.	2.5	19
29	Influence of growth temperature on order within silicon films grown by ultrahigh-vacuum evaporation on silica. Applied Physics Letters, 2006, 88, 121920.	3.3	18
30	Generalized Einstein relation for disordered semiconductors with exponential distributions of tail states and square-root distributions of band states. Applied Physics Letters, 2003, 83, 1998-2000.	3.3	17
31	A dimensionless joint density of states formalism for the quantitative characterization of the optical response of hydrogenated amorphous silicon. Journal of Applied Physics, 2010, 107, 083105.	2.5	17
32	An amorphous-to-crystalline phase transition within thin silicon films grown by ultra-high-vacuum evaporation and its impact on the optical response. Journal of Applied Physics, 2016, 119, .	2.5	17
33	An effectiveâ€mass model of hydrogenated amorphous silicon: A tail state analysis. Journal of Applied Physics, 1992, 72, 2272-2281.	2.5	15
34	Electron transport and electron energy distributions within the wurtzite and zinc-blende phases of indium nitride: Response to the application of a constant and uniform electric field. Journal of Applied Physics, 2015, 117, 125705.	2.5	15
35	Electron transport within the wurtzite and zinc-blende phases of gallium nitride and indium nitride. Journal of Materials Science: Materials in Electronics, 2018, 29, 3511-3567.	2.2	15
36	Influence of the spatial extent of the most probable potential well on the distribution of electronic states in disordered semiconductors. Journal of Applied Physics, 1997, 82, 3624-3626.	2.5	13

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37	An analysis of the distributions of electronic states associated with hydrogenated amorphous silicon. Journal of Materials Science: Materials in Electronics, 2005, 16, 177-181.	2.2	13
38	Hydrogenâ€induced quantum confinement in amorphous silicon. Journal of Applied Physics, 1995, 78, 4282-4284.	2.5	12
39	Transient electron transport in the IIIâ€"V compound semiconductors gallium arsenide and gallium nitride. Journal of Materials Science: Materials in Electronics, 2013, 24, 807-813.	2.2	12
40	A quantitative characterization of the optical absorption spectrum associated with hydrogenated amorphous silicon. Journal of Materials Science: Materials in Electronics, 2009, 20, 1033-1038.	2.2	10
41	A universal feature in the optical absorption spectrum associated with hydrogenated amorphous silicon: A dimensionless joint density of states analysis. Journal of Applied Physics, 2016, 120, .	2.5	10
42	Cubic boron nitride as a material for future electron device applications: A comparative analysis. Applied Physics Letters, 2022, 120, .	3.3	10
43	The role that conduction band tail states play in determining the optical response of hydrogenated amorphous silicon. Solid State Communications, 2011, 151, 730-733.	1.9	9
44	On the applicability of a semi-analytical approach to determining the transient electron transport response of gallium arsenide, gallium nitride, and zinc oxide. Journal of Materials Science: Materials in Electronics, 2013, 24, 1624-1634.	2.2	8
45	A Raman spectroscopic analysis of thin carbon films deposited onto curved Ti6Al4V substrates with and without silicon adhesion layers. Diamond and Related Materials, 2016, 70, 59-64.	3.9	7
46	Electron transport within the two-dimensional electron gas formed at a ZnO/ZnMgO heterojunction: Recent progress. Materials Research Society Symposia Proceedings, 2013, 1577, 1.	0.1	6
47	An approach to the spectral smoothing of Raman data applied to the specific case of thin-film carbon. Journal of Materials Science: Materials in Electronics, 2018, 29, 10026-10036.	2.2	6
48	Electron transport within bulk cubic boron nitride: A Monte Carlo simulation analysis. Journal of Applied Physics, 2020, 128, 185704.	2.5	6
49	Molecular Beam Epitaxially Deposited Amorphous Silicon. Materials Research Society Symposia Proceedings, 2000, 609, 511.	0.1	5
50	Spectral variations in the optical transition matrix element and their impact on the optical properties associated with hydrogenated amorphous silicon. Solid State Communications, 2011, 151, 411-414.	1.9	5
51	The electron transport within bulk wurtzite zinc oxide in response to strong applied electric field pulses. Materials Research Society Symposia Proceedings, 2013, 1577, 1.	0.1	5
52	A root-mean-square-error analysis of two-peak Gaussian and Lorentzian fittings of thin-film carbon Raman spectral data. Journal of Applied Physics, 2019, 126, .	2.5	5
53	An adhesion analysis of thin carbon films deposited onto curved and flat Ti6Al4V substrates using rf magnetron sputtering and plasma enhanced chemical vapor deposition techniques. Journal of Materials Science: Materials in Electronics, 2019, 30, 5185-5193.	2.2	5
54	Non-parabolicity and inter-valley transitions within zinc-blende indium nitride. Journal of Materials Science: Materials in Electronics, 2014, 25, 5524-5534.	2.2	4

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55	A scanning electron microscopy and energy dispersive X-ray spectroscopy analysis of the substrate-to-thin-film-surface cross-section of thin carbon films deposited on curved Ti6Al4V substrates with and without silicon adhesion layers. Journal of Non-Crystalline Solids, 2016, 442, 40-43.	3.1	4
56	Empirical model for the velocity-field characteristics of semiconductors exhibiting negative differential mobility. Solid State Communications, 2019, 299, 113658.	1.9	4
57	Empirical expressions for the spectral dependence of the refractive index for the case of thin-film silicon and some of its common alloys. Journal of Materials Science: Materials in Electronics, 2019, 30, 1637-1646.	2.2	4
58	A low-field electron mobility analysis of cubic boron nitride. Solid State Communications, 2022, 352, 114776.	1.9	4
59	Steady-State and Transient Electron Transport in ZnO: Recent Progress. Materials Research Society Symposia Proceedings, 2011, 1327, 32001.	0.1	3
60	Steady-state and transient electron transport within bulk wurtzite zinc oxide and the resultant electron device performance. Materials Research Society Symposia Proceedings, 2013, 1577, 1.	0.1	3
61	Electron transport within a zinc-oxide-based two-dimensional electron gas: The impact of variations in the electron effective mass. Materials Research Society Symposia Proceedings, 2014, 1674, 1.	0.1	3
62	Is zinc oxide a potential material for future high-power and high-frequency electron device applications?. Materials Research Society Symposia Proceedings, 2015, 1805, 1.	0.1	3
63	The relationship between the Raman spectral form and the location of the corresponding sample within the overall thin-film carbon genome. Solid State Communications, 2020, 322, 114059.	1.9	3
64	The impact of processing on the optical absorption onset of CdTe thin-films and solar cells. Journal of Applied Physics, 2021, 129, .	2.5	3
65	Optical Properties of Magnesium-Zinc Oxide for Thin Film Photovoltaics. Materials, 2021, 14, 5649.	2.9	3
66	Amorphous Silicon Films and Superlattices Grown by Molecular Beam Epitaxy: An Optical Analysis. Materials Research Society Symposia Proceedings, 2002, 715, 1911.	0.1	2
67	The dependence of the crystalline volume fraction on the crystallite size for hydrogenated nanocrystalline silicon based solar cells. Materials Research Society Symposia Proceedings, 2013, 1536, 113-118.	0.1	2
68	The sensitivity of the electron transport within bulk zinc-blende gallium nitride to variations in the crystal temperature, the doping concentration, and the non-parabolicity coefficient associated with the lowest energy conduction band valley. Journal of Applied Physics, 2016, 120, 095701.	2.5	2
69	A sensitivity analysis on the electron transport within zinc oxide and its device implications. MRS Advances, 2016, 1, 2777-2782.	0.9	2
70	A re-examination of experimental evidence on the spectral dependence of the optical transition matrix element associated with thin-film silicon. Journal of Materials Science: Materials in Electronics, 2019, 30, 9964-9972.	2.2	2
71	A Sellmeier extended empirical model for the spectral dependence of the refractive index applied to the case of thin-film silicon and some of its more common alloys. Journal of Materials Science: Materials in Electronics, 2020, 31, 212-225.	2.2	2
72	Influence of the growth temperature on the spectral dependence of the optical functions associated with thin silicon films grown by ultra-high-vacuum evaporation on optical quality fused quartz substrates. Journal of Materials Science: Materials in Electronics, 2020, 31, 13186-13198.	2.2	2

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73	An Optical Gap Calibration Applied to the Case of Hydrogenated Amorphous Silicon. Materials Research Society Symposia Proceedings, 1999, 557, 55.	0.1	1
74	The electron transport that occurs within wurtzite zinc oxide and the application of stress. MRS Advances, 2017, 2, 2627-2632.	0.9	1
75	A steady-state and transient analysis of the electron transport that occurs within bulk wurtzite zinc-magnesium-oxide alloys subjected to high-fields. MRS Advances, 2018, 3, 3439-3444.	0.9	1
76	Sensitivity analysis for an electron transport system: application to the case of wurtzite gallium nitride. Journal of Computational Electronics, 2020, 19, 103-110.	2.5	1
77	A single-oscillator long-wave-length limit Sellmeier equation based fitting approach applied to the case of thin-film silicon and some of its more common alloys. Journal of Materials Science: Materials in Electronics, 2021, 32, 397-419.	2.2	1
78	An improved empirical model for a semiconductorâ€™s velocity-field characteristic applied to gallium arsenide. Solid State Communications, 2021, 330, 114240.	1.9	1
79	Crystallinity, order, the thin-film silicon continuum, and the spectral dependence of the refractive index in thin silicon films grown through ultra-high-vacuum evaporation for a range of growth temperatures. Journal of Non-Crystalline Solids, 2021, 559, 120657.	3.1	1
80	Threading dislocation lines within indium nitride versus gallium nitride: The implications of different dominant dislocation line charge screening mechanisms. Solid State Communications, 2022, , 114833.	1.9	1
81	The occupancy of the threading dislocation lines within n-type gallium nitride: Recent progress. Materials Research Society Symposia Proceedings, 2012, 1432, 91.	0.1	0
82	An amorphous-to-crystalline phase transition within thin silicon films grown through ultra-high-vacuum evaporation on fused quartz substrates. MRS Advances, 2016, 1, 3257-3262.	0.9	0
83	How changes in the crystal temperature and the doping concentration impact upon bulk wurtzite zinc oxideâ€™s electron transport response. MRS Advances, 2019, 4, 2673-2678.	0.9	0
84	Thin-film optical function acquisition from experimental measurements of the reflectance and transmittance spectra: a case study. Journal of Materials Science: Materials in Electronics, 2021, 32, 17033-17060.	2.2	0