John L Lyons

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/1448204/publications.pdf

Version: 2024-02-01

57	4,148	186265	155660
papers	citations	28 h-index	55 g-index

59	59	59	5245
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Bright triplet excitons in caesium lead halide perovskites. Nature, 2018, 553, 189-193.	27.8	716
2	Carbon impurities and the yellow luminescence in GaN. Applied Physics Letters, 2010, 97, .	3.3	531
3	Why nitrogen cannot lead to p-type conductivity in ZnO. Applied Physics Letters, 2009, 95, .	3.3	364
4	Shallow versus Deep Nature of Mg Acceptors in Nitride Semiconductors. Physical Review Letters, 2012, 108, 156403.	7.8	230
5	Computationally predicted energies and properties of defects in GaN. Npj Computational Materials, 2017, 3, .	8.7	196
6	First-Principles Calculations of Luminescence Spectrum Line Shapes for Defects in Semiconductors: The Example of GaN and ZnO. Physical Review Letters, 2012, 109, 267401.	7.8	187
7	A survey of acceptor dopants forÎ²-Ga₂O₃. Semiconductor Science and Technology, 2018, 33, 05LT02.	2.0	151
8	Editors' Choiceâ€”Reviewâ€”Theory and Characterization of Doping and Defects in Î²-Ga₂O₃. ECS Journal of Solid State Science and Technology, 2019, 8, Q3187-Q3194.	1.8	148
9	Deep acceptors and their diffusion in Ga2O3. APL Materials, 2019, 7, .	5.1	143
10	Exciton Fine Structure in Perovskite Nanocrystals. Nano Letters, 2019, 19, 4068-4077.	9.1	128
11	Firstâ€principles theory of acceptors in nitride semiconductors. Physica Status Solidi (B): Basic Research, 2015, 252, 900-908.	1.5	115
12	Impact of carbon and nitrogen impurities in high-Îº dielectrics on metal-oxide-semiconductor devices. Applied Physics Letters, 2013, 102, .	3.3	96
13	First-Principles Calculations of Point Defects for Quantum Technologies. Annual Review of Materials Research, 2018, 48, 1-26.	9.3	93
14	Gallium vacancy complexes as a cause of Shockley-Read-Hall recombination in III-nitride light emitters. Applied Physics Letters, 2016, 108, .	3.3	91
15	Role of excited states in Shockley-Read-Hall recombination in wide-band-gap semiconductors. Physical Review B, 2016, 93, .	3.2	89
16	Quasicubic model for metal halide perovskite nanocrystals. Journal of Chemical Physics, 2019, 151, 234106.	3.0	64
17	A first-principles understanding of point defects and impurities in GaN. Journal of Applied Physics, 2021, 129, .	2.5	55
18	Defect identification based on first-principles calculations for deep level transient spectroscopy. Applied Physics Letters, 2018, 113, .	3.3	51

#	Article	IF	Citations
19	Electron and chemical reservoir corrections for point-defect formation energies. Physical Review B, 2016, 93, .	3.2	50
20	Band alignments and polarization properties of BN polymorphs. Applied Physics Express, 2014, 7, 031001.	2.4	46
21	Impact of Group-II Acceptors on the Electrical and Optical Properties of GaN. Japanese Journal of Applied Physics, 2013, 52, 08JJ04.	1.5	44
22	Prospects for n-type doping of (AlxGa1â^'x)2O3 alloys. Applied Physics Letters, 2020, 116, .	3.3	44
23	Semiconductorâ€Based Photoelectrochemical Water Splitting at the Limit of Very Wide Depletion Region. Advanced Functional Materials, 2016, 26, 219-225.	14.9	39
24	Impurity-derived p-type conductivity in cubic boron arsenide. Applied Physics Letters, 2018, 113, .	3.3	39
25	Dark and Bright Excitons in Halide Perovskite Nanoplatelets. Advanced Science, 2022, 9, e2103013.	11.2	36
26	First-principles study of vacancy-assisted impurity diffusion in ZnO. APL Materials, 2014, 2, 096101.	5.1	35
27	Electronic Properties of Ga₂O₃ Polymorphs. ECS Journal of Solid State Science and Technology, 2019, 8, Q3226-Q3228.	1.8	34
28	Effect of Anisotropic Confinement on Electronic Structure and Dynamics of Band Edge Excitons in Inorganic Perovskite Nanowires. Journal of Physical Chemistry A, 2020, 124, 1867-1876.	2.5	33
29	Impact of native defects in highâ€k dielectric oxides on GaN/oxide metalâ€“oxideâ€“semiconductor devices. Physica Status Solidi (B): Basic Research, 2013, 250, 787-791.	1.5	25
30	Band Alignment of Sc_xAl_{1â€“x}N/GaN Heterojunctions. ACS Applied Materials & Interfaces, 2020, 12, 52192-52200.	8.0	22
31	Carbon complexes in highly C-doped GaN. Physical Review B, 2021, 104, .	3.2	18
32	Deep levels in cesium lead bromide from native defects and hydrogen. Journal of Materials Chemistry A, 2021, 9, 7491-7495.	10.3	18
33	Role of carbon and hydrogen in limiting <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>n</mml:mi></mml:math> -type doping of monoclinic <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mo>(</mml:mo><mml:msub><mml:mi>Al</mml:mi><mml:mi>m</mml:mi></mml:msub></mml:mrow></mml:math> -Ga₂O₃. Physical Review B, 2022, 105, .	3.2	18
34	Identification of yellow luminescence centers in Be-doped GaN through pressure-dependent studies. Journal Physics D: Applied Physics, 2017, 50, 22LT03.	2.8	17
35	Ultrathin Amorphous Titania on Nanowires: Optimization of Conformal Growth and Elucidation of Atomic-Scale Motifs. Nano Letters, 2019, 19, 3457-3463.	9.1	14
36	Radiative capture rates at deep defects from electronic structure calculations. Physical Review B, 2020, 102, .	3.2	14

#	Article	IF	Citations
37	Deepâ€Level Defects and Impurities in InGaN Alloys. Physica Status Solidi (B): Basic Research, 2020, 257, 1900534.	1.5	13
38	Sulfur doping of AlN and AlGaN for improved n-type conductivity. Physica Status Solidi - Rapid Research Letters, 2015, 9, 462-465.	2.4	12
39	Carbon-induced trapping levels in oxide dielectrics. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2015, 33, .	2.1	12
40	Atomic Layer Epitaxy of Aluminum Nitride: Unraveling the Connection between Hydrogen Plasma and Carbon Contamination. ACS Applied Materials & Interfaces, 2018, 10, 20142-20149.	8.0	11
41	Properties of orthorhombic Ga2O3 alloyed with In2O3 and Al2O3. Applied Physics Letters, 2021, 119, .	3.3	11
42	Rashba exciton in a 2D perovskite quantum dot. Nanoscale, 2021, 13, 16769-16780.	5.6	11
43	Orthorhombic alloys of Ga2O3 and Al2O3. Applied Physics Letters, 2020, 116, .	3.3	10
44	Effective Donor Dopants for Lead Halide Perovskites. Chemistry of Materials, 2021, 33, 6200-6205.	6.7	10
45	Prospects for n-type conductivity in cubic boron nitride. Applied Physics Letters, 2021, 119, .	3.3	9
46	Self-trapped holes and polaronic acceptors in ultrawide-bandgap oxides. Journal of Applied Physics, 2022, 131, 025701.	2.5	9
47	Optical transitions of neutral Mg in Mg-doped Î²-Ga2O3. APL Materials, 2022, 10, .	5.1	9
48	Theory and Modeling of Oxide Semiconductors. Semiconductors and Semimetals, 2013, 88, 1-37.	0.7	8
49	Identification of Microscopic Hole-Trapping Mechanisms in Nitride Semiconductors. IEEE Electron Device Letters, 2016, 37, 154-156.	3.9	7
50	Multicomponent Oxynitride Thin Films: Precise Growth Control and Excited State Dynamics. Chemistry of Materials, 2019, 31, 3461-3467.	6.7	7
51	Electronic structure of cubic boron arsenide probed by scanning tunneling spectroscopy. Journal Physics D: Applied Physics, 2021, 54, 31LT01.	2.8	4
52	Atomic Layer Epitaxy of III-Nitrides: A Microscopic Model of Homoepitaxial Growth. ACS Applied Materials & Interfaces, 2020, 12, 49245-49251.	8.0	3
53	Hole Trapping at Acceptor Impurities and Alloying Elements in AlN. Physica Status Solidi - Rapid Research Letters, 2021, 15, 2100218.	2.4	3
54	Evaluation of alternatives to paraffin for antirelaxation coatings. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2020, 38, .	2.1	2

#	Article	IF	Citations
55	Shedding light on doping of gallium nitride. SPIE Newsroom, 0, , .	0.1	2
56	(Invited) First-Principles Understanding of Deep-Level Defects and Impurities in GaN and Nitride Alloys. ECS Meeting Abstracts, 2020, MA2020-02, 1822-1822.	0.0	0
57	(Invited, Digital Presentation) Doping Gallium Oxide and Competing Ultra-Wide Bandgap Oxides. ECS Meeting Abstracts, 2022, MA2022-01, 1319-1319.	0.0	0