Oleg Rubel

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/50127/publications.pdf

Version: 2024-02-01

103 papers	2,724 citations	201575 27 h-index	197736 49 g-index
104 all docs	104 docs citations	104 times ranked	3801 citing authors

#	Article	IF	Citations
1	WloopPHI: A tool for ab initio characterization of Weyl semimetals. Computer Physics Communications, 2022, 270, 108147.	3.0	5
2	Length-Gauge Optical Matrix Elements in WIEN2k. Computation, 2022, 10, 22.	1.0	2
3	Electrochemical Stability of ZnMn₂O₄: Understanding Zn-Ion Rechargeable Battery Capacity and Degradation. Journal of Physical Chemistry C, 2022, 126, 10957-10967.	1.5	4
4	Benchmarking exchange-correlation potentials with the mstar60 dataset: Importance of the nonlocal exchange potential for effective mass calculations in semiconductors. Physical Review B, 2022, 106, .	1.1	3
5	Perturbation approach to ab initio effective mass calculations. Computer Physics Communications, 2021, 261, 107648.	3.0	21
6	Band alignment of monolayer CaP₃, CaAs₃, BaAs₃ and the role of pâ€“d orbital interactions in the formation of conduction band minima. Physical Chemistry Chemical Physics, 2021, 23, 7418-7425.	1.3	0
7	Giant spontaneous Hall effect in a nonmagnetic Weylâ€“Kondo semimetal. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	53
8	Rashba band splitting in two-dimensional Ruddlesdenâ€“Popper halide perovskites. Journal of Applied Physics, 2020, 128, 175101.	1.1	11
9	Deciphering the Role of Key Defects in Sb₂Se₃, a Promising Candidate for Chalcogenide-Based Solar Cells. ACS Applied Energy Materials, 2020, 3, 2496-2509.	2.5	49
10	Unraveling the Water Degradation Mechanism of CH₃NH₃PbI₃. Journal of Physical Chemistry C, 2019, 123, 19385-19394.	1.5	63
11	Electronic band structure of nitrogen diluted Ga(PAsN): Formation of the intermediate band, direct and indirect optical transitions, and localization of states. Journal of Applied Physics, 2019, 126, 175701.	1.1	8
12	Stacking defects in GaP nanowires: Electronic structure and optical properties. Journal of Applied Physics, 2019, 126, 084306.	1.1	3
13	Exploration of the bright and dark exciton landscape and fine structure of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>MoS</mml:mi><mml:mn>2</mml:mn></mml:msub></mml using <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi mathvariant="normal">G</mml:mi><mml:mn>0</mml:mn></mml:msub><mml:msub><mml:mi mathvariant="normal">W</mml:mi><mml:mn>0</mml:mn></mml:msub></mml:mrow></mml:math> -BSE.	1.1	15
14	Pressure dependence of direct optical transitions in ReS2 and ReSe2. Npj 2D Materials and Applications, 2019, 3, .	3.9	35
15	Electronic properties of Pb-I deficient lead halide perovskites. Journal of Chemical Physics, 2019, 151, 234704.	1.2	7
16	INSTITUTIONAL ECOSYSTEM AS A NEW PARADIGM OF NATURE MANAGEMENT DEVELOPMENT. Economic Innovations, 2019, 21, 139-149.	0.0	0
17	Aziridinium Lead Iodide: A Stable, Low-Band-Gap Hybrid Halide Perovskite for Photovoltaics. Journal of Physical Chemistry Letters, 2018, 9, 874-880.	2.1	27
18	Adsorption of Maleic Acid Monomer on the Surface of Hydroxyapatite and TiO2: A Pathway toward Biomaterial Composites. ACS Applied Materials & Interfaces, 2018, 10, 24382-24391.	4.0	11

#	Article	IF	Citations
19	Kinetic mechanism for reversible structural transition in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>MoTe</mml:mi><mml:mn>2</mml:mn></mml:msub><m induced by excess charge carriers. Physical Review B, 2018, 97, .	1.1	6
20	Î¼SR study of spin freezing and persistent spin dynamics in NaCaNi₂F₇. Journal of Physics Condensed Matter, 2018, 30, 385802.	0.7	3
21	Structural dynamics in hybrid halide perovskites: Bulk Rashba splitting, spin texture, and carrier localization. Physical Review Materials, 2018, 2, .	0.9	19
22	INSTITUTIONAL MECHANISMS FOR IMPLEMENTATION OF MARINE STRATEGY FRAMEWORK DIRECTIVE: SYSTEM, DYNAMICS AND MEASURES. Economic Innovations, 2018, 20, 185-196.	0.0	1
23	Ionization Energy as a Stability Criterion for Halide Perovskites. Journal of Physical Chemistry C, 2017, 121, 11977-11984.	1.5	42
24	One-dimensional electron gas in strained lateral heterostructures of single layer materials. Scientific Reports, 2017, 7, 4316.	1.6	4
25	Alloying strategy for two-dimensional GaN optical emitters. Physical Review B, 2017, 96, .	1.1	15
26	Localization of Electronic States in III-V Semiconductor Alloys: A Comparative Study. Physical Review Applied, 2017, 7, .	1.5	22
27	Optimal phase on biaxial driven transducers based only on electrical power measurements. , 2017, , .		1
28	Optimal phase on biaxial driven transducers based only on electrical power measurements. , 2017, , .		2
29	Charge Transport in Disordered Materials. Springer Handbooks, 2017, , 1-1.	0.3	7
30	Thermodynamic origin of instability in hybrid halide perovskites. Scientific Reports, 2016, 6, 37654.	1.6	76
31	Recent developments in the ABINIT software package. Computer Physics Communications, 2016, 205, 106-131.	3.0	662
32	Configuration dependence of band-gap narrowing and localization in dilute<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>GaAs</mml:mi><mml:mrow><mml:mn>1</m Physical Review B, 2016, 93, .	1.1	31
33	Microscopic modelling of opto-electronic properties of dilute bismide materials for the mid-IR. , 2016, , .		1
34	Molecular Dynamics of Fibrinogen Adsorption onto Graphene, but Not onto Poly(ethylene glycol) Surface, Increases Exposure of Recognition Sites That Trigger Immune Response. Journal of Chemical Information and Modeling, 2016, 56, 706-720.	2.5	19
35	Density functional theory and experimental studies of caffeic acid adsorption on zinc oxide and titanium dioxide nanoparticles. RSC Advances, 2015, 5, 106877-106885.	1.7	48
36	Efficient Driving of Piezoelectric Transducers Using a Biaxial Driving Technique. PLoS ONE, 2015, 10, e0139178.	1.1	11

#	Article	IF	Citations
37	Unfolding the band structure of disordered solids: From bound states to high-mobility Kane fermions. Physical Review B, 2014, 90, .	1.1	76
38	Binding of solvated peptide (EPLQLKM) with a graphene sheet via simulated coarse-grained approach. Journal of Chemical Physics, 2014, 140, 204901.	1.2	7
39	An atomic charge model for graphene oxide for exploring its bioadhesive properties in explicit water. Journal of Chemical Physics, 2014, 141, 044705.	1.2	40
40	First-principle modelling of the ferroelectric switching in BaTiO₃: concurrent switching versus domain wall motion. Modelling and Simulation in Materials Science and Engineering, 2014, 22, 055014.	0.8	10
41	Marble game with optimal ferroelectric switching. Journal of Physics Condensed Matter, 2014, 26, 135901.	0.7	10
42	BerryPI: A software for studying polarization of crystalline solids with WIEN2k density functional all-electron package. Computer Physics Communications, 2013, 184, 647-651.	3.0	50
43	Bismuth-containing IIIâ€“V semiconductors. , 2013, , 139-158.		6
44	Lead monoxide Î±-PbO: electronic properties and point defect formation. Journal of Physics Condensed Matter, 2013, 25, 075803.	0.7	13
45	First-principle prediction of single-carrier avalanche multiplication in chalcopyrite semiconductors. Journal of Applied Physics, 2013, 113, .	1.1	2
46	Favorable adsorption of capped amino acids on graphene substrate driven by desolvation effect. Journal of Chemical Physics, 2013, 139, 174711.	1.2	37
47	Impact ionization threshold energy of trigonal selenium: An ab initio study. Canadian Journal of Physics, 2013, 91, 483-485.	0.4	7
48	Modeling the radiation ionization energy and energy resolution of trigonal and amorphous selenium from first principles. Journal of Physics Condensed Matter, 2012, 24, 455502.	0.7	3
49	Interaction of hot carriers with optical phonons in Selenium. Journal of Non-Crystalline Solids, 2012, 358, 2434-2436.	1.5	5
50	Determination of Nitrogen Concentration in Dilute GaNAs by STEM HAADF Z-Contrast Imaging. Journal of Physics: Conference Series, 2011, 326, 012033.	0.3	8
51	TEM 3-beam study of annealing effects in InGaNAs using ab-initio structure factors for strain-relaxed supercells. Journal of Physics: Conference Series, 2011, 326, 012026.	0.3	1
52	Evidence of two disorder scales in Ga(AsBi). Physica Status Solidi (B): Basic Research, 2011, 248, 851-854.	0.7	15
53	Generalized lucky-drift model for impact ionization in semiconductors with disorder. Journal of Physics Condensed Matter, 2011, 23, 055802.	0.7	25
54	Bulk Properties of Î±-PbO From First-principle Self-consistent Calculations. , 2011, , .		1

#	Article	IF	Citations
55	Microscale annealing effects on In<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow /><mml:mrow><mml:mi>x</mml:mi></mml:mrow></mml:msub></mml:mrow></mml:math>Ga<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow /><mml:mrow><mml:mn>1</mml:mn><mml:mo>â</mml:mo><mml:mi>x</mml:mi></mml:mrow></mml:msub></mml:mrow></mml:m	1.1	11
56	Luminescence dynamics in Ga(AsBi). Applied Physics Letters, 2011, 98, 161104.	1.5	27
57	Investigation of optical and concentration profile changes of InGaNAs/GaAs heterostructures induced by thermal annealing. Journal of Physics: Conference Series, 2011, 326, 012038.	0.3	0
58	Quantum modeling of semiconductor gain materials and verticalâ€externalâ€cavity surfaceâ€emitting laser systems. Physica Status Solidi (B): Basic Research, 2010, 247, 789-808.	0.7	8
59	Effect of bonding and static atomic displacements on composition quantification in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>In</mml:mtext></mml:mrow><mml:mi>x</mml:mi></mml:msu Physical Review B, 2010, 81, .	1.1	19
60	Lone-pair states as a key to understanding impact ionization in chalcogenide semiconductors. Journal of Physics Condensed Matter, 2010, 22, 355803.	0.7	6
61	Clustering effects in Ga(AsBi). Applied Physics Letters, 2010, 96, .	1.5	120
62	Development and optimization of a 1 eV (GaIn)(NAs) solar cell. , 2009, , .		2
63	Reversible vs irreversible photodarkening in a-Se: the kinetics study. Journal of Materials Science: Materials in Electronics, 2009, 20, 111-115.	1.1	8
64	Lucky-drift model for impact ionization in amorphous semiconductors. Journal of Materials Science: Materials in Electronics, 2009, 20, 221-225.	1.1	29
65	Description of Charge Transport in Disordered Organic Materials. Advances in Polymer Science, 2009, , 1-28.	0.4	4
66	Formation Energies of Antiphase Boundaries in GaAs and GaP: An ab Initio Study. International Journal of Molecular Sciences, 2009, 10, 5104-5114.	1.8	45
67	One-dimensional lucky-drift model with scattering and movement asymmetries for impact ionization in amorphous semiconductors. Physica Status Solidi C: Current Topics in Solid State Physics, 2008, 5, 796-799.	0.8	4
68	Hopping energy relaxation of localized excitons in GaP(N). Physica Status Solidi C: Current Topics in Solid State Physics, 2008, 5, 768-771.	0.8	3
69	Photoconductivity in amorphous selenium blocking structures. Physica Status Solidi C: Current Topics in Solid State Physics, 2008, 5, 790-795.	0.8	12
70	Scattering and movement asymmetry in the one-dimensional lucky-drift simulation of the avalanche processes in disordered semiconductors. Journal of Non-Crystalline Solids, 2008, 354, 2657-2661.	1.5	2
71	Avalanche multiplication in amorphous selenium and its utilization in imaging. Journal of Non-Crystalline Solids, 2008, 354, 2691-2696.	1.5	32
72	Spectral and time dependences of the energy transfer of bound optical excitations in GaP(N). Journal of Physics Condensed Matter, 2008, 20, 015217.	0.7	15

#	Article	IF	Citations
73	Resonant tunneling as a dominant transport mechanism in n-GaAsâˆ•p-GaAs tunnel diodes. Applied Physics Letters, 2008, 92, 243504.	1.5	3
74	Resonant electron tunneling through defects in GaAs tunnel diodes. Journal of Applied Physics, 2008, 104, 094506.	1.1	22
75	Exact Solution for Hopping Dissociation of Geminate Electron-Hole Pairs in a Disordered Chain. Physical Review Letters, 2008, 100, 196602.	2.9	71
76	Modeling the compositional dependence of electron diffraction in dilute GaAs- and GaP-based compound semiconductors. Physical Review B, 2008, 78, .	1.1	10
77	Direct structural evidence of the change in N-III bonding in (GaIn)(NAs) before and after thermal annealing. Journal of Applied Physics, 2008, 104, 053504.	1.1	8
78	Compositional dependence of the (200) electron diffraction in dilute IIIâ€“V semiconductor solid solutions. , 2008, , 223-224.		0
79	Material Development for Improved 1eV(GaIn)(NAs) Solar Cell Structures. Journal of Solar Energy Engineering, Transactions of the ASME, 2007, 129, 266-271.	1.1	25
80	Annealing effects on the nanoscale indium and nitrogen distribution in Ga(NAs) and (GaIn)(NAs) quantum wells. Journal of Applied Physics, 2007, 102, 083504.	1.1	6
81	Spectral dependence of the photoluminescence decay in disordered semiconductors. Applied Physics Letters, 2007, 91, 021903.	1.5	26
82	Avalanche multiplication phenomenon in amorphous semiconductors: Amorphous selenium versus hydrogenated amorphous silicon. Journal of Applied Physics, 2007, 102, .	1.1	52
83	Kinetic effects in recombination of optical excitations in disordered quantum heterostructures: Theory and experiment. Journal of Luminescence, 2007, 127, 285-290.	1.5	9
84	Relaxation and recombination in InAs quantum dots. Physica Status Solidi (B): Basic Research, 2007, 244, 2803-2815.	0.7	10
85	Charge Transport in Disordered Materials. , 2006, , 161-186.		7
86	Kinetics of the photostructural changes in a-Se films. Journal of Applied Physics, 2006, 100, 113506.	1.1	20
87	On the concentration and field dependences of the hopping mobility in disordered organic solids. Journal of Non-Crystalline Solids, 2006, 352, 1644-1647.	1.5	11
88	Non-radiative recombination of optical excitations in (GaIn)(NAs) quantum wells. Physica Status Solidi C: Current Topics in Solid State Physics, 2006, 3, 2481-2484.	0.8	2
89	Nature and dynamics of carrier escape from InAs/GaAs quantum dots. Physica Status Solidi C: Current Topics in Solid State Physics, 2006, 3, 2397-2401.	0.8	10
90	Model of temperature quenching of photoluminescence in disordered semiconductors and comparison to experiment. Physical Review B, 2006, 73, .	1.1	65

#	Article	IF	Citations
91	Model of annealing-induced short-range order effects in (GaIn)(NP) alloys. Physical Review B, 2006, 74, .	1.1	8
92	Nanoanalytical quantification of the nitrogen content in Ga(NAs)âˆ•GaAs by using transmission electron microscopy in combination with refined structure factor calculation. Applied Physics Letters, 2006, 88, 081910.	1.5	11
93	Description of Charge Transport in Disordered Organic Materials. , 2006, , 221-266.		3
94	Description of Charge Transport in Amorphous Semiconductors. , 2006, , 49-96.		10
95	Theoretical description of hopping transport in disordered materials. Thin Solid Films, 2005, 487, 2-7.	0.8	32
96	Quantitative description of disorder parameters in (GaIn)(NAs) quantum wells from the temperature-dependent photoluminescence spectroscopy. Journal of Applied Physics, 2005, 98, 063518.	1.1	81
97	Temperature-dependent optical properties ofInAsâˆ•GaAsquantum dots: Independent carrier versus exciton relaxation. Physical Review B, 2005, 72, .	1.1	53
98	Concentration dependence of the hopping mobility in disordered organic solids. Physical Review B, 2004, 69, .	1.1	78
99	Hopping relaxation of excitons in GaInNAs/GaNAs quantum wells. Physica Status Solidi C: Current Topics in Solid State Physics, 2004, 1, 109-112.	0.8	43
100	Concentration dependence of the hopping mobility in disordered organic solids. Physica Status Solidi C: Current Topics in Solid State Physics, 2004, 1, 168-171.	0.8	2
101	Lucky-drift model for avalanche multiplication in amorphous semiconductors. Physica Status Solidi C: Current Topics in Solid State Physics, 2004, 1, 1186-1193.	0.8	24
102	Specific structural and compositional properties of (GaIn)(NAs) and their influence on optoelectronic device performance. Journal of Crystal Growth, 2004, 272, 739-747.	0.7	37
103	Columnar [001]-oriented nitrogen order in Ga(NAs) and (GaIn)(NAs) alloys. Applied Physics Letters, 2004, 85, 5908-5910.	1.5	34