

Erich Kr Runge

List of Publications by Year in descending order

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121
papers

9,961
citations

159358

30
h-index

33814

99
g-index

124
all docs

124
docs citations

124
times ranked

9664
citing authors

#	ARTICLE	IF	CITATIONS
1	Density-Functional Theory for Time-Dependent Systems. <i>Physical Review Letters</i> , 1984, 52, 997-1000.	2.9	7,180
2	Coherent Exciton-Surface-Plasmon-Polariton Interaction in Hybrid Metal-Semiconductor Nanostructures. <i>Physical Review Letters</i> , 2008, 101, 116801.	2.9	202
3	Ultrafast Manipulation of Strong Coupling in Metal-Molecular Aggregate Hybrid Nanostructures. <i>ACS Nano</i> , 2010, 4, 7559-7565.	7.3	172
4	Photoluminescence and radiative lifetime of trions in GaAs quantum wells. <i>Physical Review B</i> , 2000, 62, 8232-8239.	1.1	158
5	First-principles GW calculations for DNA and RNA nucleobases. <i>Physical Review B</i> , 2011, 83, .	1.1	152
6	Excitons in semiconductor nanostructures with disorder. <i>Pure and Applied Chemistry</i> , 1997, 69, 1179-1186.	0.9	102
7	Excitons in Narrow Quantum Wells: Disorder Localization and Luminescence Kinetics. <i>Physica Status Solidi A</i> , 1997, 164, 511-516.	1.7	92
8	Quantum Mechanical Repulsion of Exciton Levels in a Disordered Quantum Well. <i>Physical Review Letters</i> , 2001, 87, 076801.	2.9	88
9	Electron-phonon coupling in the C60 fullerene within the many-body GW approach. <i>Physical Review B</i> , 2011, 84, .	1.1	82
10	Theory of Trion Spectra in Semiconductor Nanostructures. <i>Physica Status Solidi (B): Basic Research</i> , 2001, 227, 317-330.	0.7	75
11	Voltage-Induced Adsorbate Damping of Single Gold Nanorod Plasmons in Aqueous Solution. <i>Nano Letters</i> , 2012, 12, 1247-1252.	4.5	75
12	Observing the localization of light in space and time by ultrafast second-harmonic microscopy. <i>Nature Photonics</i> , 2012, 6, 293-298.	15.6	57
13	Sub-bandgap absorption in organic solar cells: experiment and theory. <i>Physical Chemistry Chemical Physics</i> , 2013, 15, 16494.	1.3	55
14	Low-energy excitations in heavy fermion systems. <i>Physica B: Condensed Matter</i> , 1990, 163, 97-99.	1.3	50
15	Exciton localization, photoluminescence spectra, and interface roughness in thin quantum wells. <i>Physical Review B</i> , 1996, 54, 2733-2738.	1.1	48
16	Effective exciton mobility edge in narrow quantum wells. <i>Physical Review B</i> , 1997, 56, R4387-R4390.	1.1	48
17	Metalorganic vapor phase epitaxy of III-V on silicon: Experiment and theory. <i>Progress in Crystal Growth and Characterization of Materials</i> , 2018, 64, 103-132.	1.8	48
18	Competition between radiative decay and energy relaxation of carriers in disordered In _x Ga _{1-x} As/GaAs quantum wells. <i>Physical Review B</i> , 2000, 61, 10985-10993.	1.1	44

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19	Optical absorption and exciton linewidths of Zn _{1-x} Cd _x Se quantum wells. <i>Physical Review B</i> , 1994, 49, 7424-7431.	1.1	42
20	Thermoelectric properties of anisotropic semiconductors. <i>Physical Review B</i> , 2002, 65, .	1.1	42
21	Exciton lineshape in semiconductor quantum structures with interface roughness. <i>Journal of Luminescence</i> , 1994, 60-61, 320-323.	1.5	40
22	Spatially Resolved Spectra, Effective Mobility Edge, and Level Repulsion in Narrow Quantum Wells. <i>Physica Status Solidi (B): Basic Research</i> , 1998, 206, 167-174.	0.7	40
23	Nonlinear plasmon-exciton coupling enhances sum-frequency generation from a hybrid metal/semiconductor nanostructure. <i>Nature Communications</i> , 2020, 11, 1464.	5.8	39
24	Response and transit times in quantum-well structures. <i>Physical Review B</i> , 1992, 45, 9145-9148.	1.1	36
25	Charge degrees of freedom in frustrated lattice structures. <i>Physical Review B</i> , 2004, 70, .	1.1	35
26	Trions in GaAs Quantum Wells: Photoluminescence Lineshape Analysis. <i>Physica Status Solidi A</i> , 2000, 178, 489-494.	1.7	33
27	Dual nature of f-electrons: Effect of intra-atomic correlations on hopping anisotropies. <i>Physical Review B</i> , 2004, 69, .	1.1	33
28	Long-lived electron emission reveals localized plasmon modes in disordered nanosponge antennas. <i>Light: Science and Applications</i> , 2017, 6, e17075-e17075.	7.7	33
29	Electronic structure of CeRu ₂ Si ₂ . <i>Physical Review B</i> , 1995, 51, 10375-10385.	1.1	32
30	Relaxation kinetics and photoluminescence lineshape of excitons in II-VI semiconductor quantum wells. <i>Physica Status Solidi (B): Basic Research</i> , 1995, 188, 547-555.	0.7	31
31	Subbandgap absorption in polymer-fullerene solar cells. <i>Applied Physics Letters</i> , 2010, 97, .	1.5	31
32	Excitons in Semiconductor Nanostructures. <i>Solid State Physics</i> , 2003, 57, 149-305.	1.3	30
33	Optical properties of localized excitons in nanostructures: Theoretical aspects. , 1999, , 251-263.		28
34	Thermodynamic stability of mixed Pb:Sn methylammonium halide perovskites. <i>Physica Status Solidi (B): Basic Research</i> , 2016, 253, 1907-1915.	0.7	28
35	Image excitons and plasmon-exciton strong coupling in two-dimensional perovskite semiconductors. <i>Physical Review B</i> , 2015, 91, .	1.1	27
36	Band structure of femtosecond-laser-pulse excited GaAs. <i>Solid State Communications</i> , 1994, 89, 119-122.	0.9	26

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37	Enhanced Resonant Backscattering of Excitons in Disordered Quantum Wells. <i>Physical Review Letters</i> , 2002, 89, 157401.	2.9	26
38	The design of efficient surface-plasmon-enhanced ultra-thin polymer-based solar cells. <i>Applied Physics Letters</i> , 2011, 99, 093307.	1.5	25
39	Sub-bandgap absorption in polymer-fullerene solar cells studied by temperature-dependent external quantum efficiency and absorption spectroscopy. <i>Chemical Physics Letters</i> , 2012, 542, 70-73.	1.2	25
40	Enhanced resonant backscattering of light from quantum-well excitons. <i>Physical Review B</i> , 2000, 62, R4805-R4808.	1.1	22
41	Doubly Resonant Plasmonic Hot Spotâ€“Exciton Coupling Enhances Second Harmonic Generation from Au/ZnO Hybrid Porous Nanosponges. <i>ACS Photonics</i> , 2019, 6, 2779-2787.	3.2	22
42	Spectral functions and optical conductivity of spinless fermions on a checkerboard lattice. <i>Physical Review B</i> , 2006, 73, .	1.1	21
43	Strong Spatial and Spectral Localization of Surface Plasmons in Individual Randomly Disordered Gold Nanosponges. <i>Nano Letters</i> , 2018, 18, 4957-4964.	4.5	20
44	Center-of-mass properties of the exciton in quantum wells. <i>Physical Review B</i> , 2000, 61, 10854-10867.	1.1	19
45	Tunable nanowires: An additional degree of freedom in plasmonics. <i>Physical Review B</i> , 2007, 76, .	1.1	18
46	Non-equilibrium transport in alloy based resonant tunneling systems. <i>Annals of Physics</i> , 1992, 219, 55-77.	1.0	17
47	Electron and Hole Trions in Wide GaAs Quantum Wells. <i>Physica Status Solidi (B): Basic Research</i> , 2000, 221, 281-286.	0.7	16
48	Electronic and Vibrational States of Single Tinâ€“Phthalocyanine Molecules in Double Layers on Ag(111). <i>Journal of Physical Chemistry C</i> , 2015, 119, 15716-15722.	1.5	16
49	Spin Relaxation without Coherence Loss: Fine-Structure Splitting of Localized Excitons. <i>Physica Status Solidi (B): Basic Research</i> , 2000, 221, 349-353.	0.7	15
50	Theory of Rayleigh scattering using finite-dimension random-matrix theory. <i>Physical Review B</i> , 2004, 69, .	1.1	15
51	Approximative treatment of f-systems with partial localization due to intra-atomic correlations. <i>Physical Review B</i> , 2004, 69, .	1.1	15
52	Influence of Phonon Scattering on Exciton and Charge Diffusion in Polymerâ€“Fullerene Solar Cells. <i>Advanced Energy Materials</i> , 2012, 2, 999-1003.	10.2	15
53	Near-field autocorrelation spectroscopy of disordered semiconductor quantum wells. <i>Physical Review B</i> , 2004, 69, .	1.1	14
54	Programmable Multiple Plasmonic Resonances of Nanoparticle Superlattice for Enhancing Photoelectrochemical Activity. <i>Advanced Functional Materials</i> , 2020, 30, 2005170.	7.8	14

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55	Roughness of heterointerfaces and averaging effects by excitons: Interpretation of cathodoluminescence images. <i>Physical Review B</i> , 1995, 52, 12207-12211.	1.1	13
56	Level repulsion of exciton states in disordered semiconductor nanostructures. <i>Physica Status Solidi (B): Basic Research</i> , 2003, 238, 478-485.	0.7	13
57	Functionals of fractional form in variational scattering theory. <i>Physical Review A</i> , 1982, 26, 3004-3007.	1.0	12
58	Noise in alloy-based resonant-tunneling structures. <i>Physical Review B</i> , 1993, 47, 2003-2009.	1.1	12
59	Exciton capture and losses in a stacked submicron array of sidewall quantum wires on patterned GaAs(311)A substrates. <i>Physical Review B</i> , 1999, 60, 11038-11044.	1.1	12
60	Localized excitons in quantum wells show spin relaxation without coherence loss. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2001, 10, 40-44.	1.3	12
61	Level repulsion in excitonic spectra of disordered systems and local relaxation kinetics. <i>Annalen Der Physik</i> , 1998, 7, 417-426.	0.9	11
62	Statistical properties of speckle distributions in resonant secondary emission. <i>Physical Review B</i> , 2000, 61, 4786-4794.	1.1	11
63	Near-field wave-function spectroscopy of excitons and biexcitons. <i>Physical Review B</i> , 2005, 71, .	1.1	11
64	Spectral functions for strongly correlated 5 electrons. <i>Physical Review B</i> , 2006, 73, .	1.1	10
65	Quantum-wire exciton dispersion in a multiband real-space scheme. <i>Physical Review B</i> , 2000, 61, 16854-16861.	1.1	8
66	Thermal conductivity reduction in HgTe/CdTe superlattices. <i>Journal of Applied Physics</i> , 2002, 91, 2033-2036.	1.1	8
67	Exact calculation of distributions for excitonic oscillator strength and inverse participation ratio in disordered quantum wires. <i>Physical Review B</i> , 2003, 67, .	1.1	8
68	Interpretation of near-field images of semiconductor nanostructures. <i>Applied Physics B: Lasers and Optics</i> , 2006, 84, 103-110.	1.1	8
69	The influence of wire shape on surface plasmon mode distribution. <i>Applied Physics B: Lasers and Optics</i> , 2008, 93, 111-115.	1.1	8
70	Cathodoluminescence microscopy of inhomogeneities in semiconductor heterostructures. <i>Physica Status Solidi A</i> , 1995, 150, 439-452.	1.7	7
71	<title>Radiative lifetime in semiconductors: influence of photon recycling</title>. , 1997, , .		7
72	Efficient optical excitation transfer in layered quantum dot nanostructures networked via optical near-field interactions. <i>Physical Review B</i> , 2010, 82, .	1.1	7

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73	Impact of Rotational Twin Boundaries and Lattice Mismatch on III-V Nanowire Growth. ACS Nano, 2017, 11, 8679-8689.	7.3	7
74	Electronic structure calculations and strong correlations: A model study. Annalen Der Physik, 1996, 508, 333-354.	0.9	6
75	German-Algerian University Exchange from the Perspective of Students and Teachers. Journal of Studies in International Education, 2010, 14, 240-258.	1.9	6
76	Entanglement enhancement in spatially inhomogeneous many-body systems. Physical Review A, 2013, 87, .	1.0	6
77	Towards Optimal Disorder in Gold Nanosponges for Long-Lived Localized Plasmonic Modes. Annalen Der Physik, 2017, 529, 1600234.	0.9	6
78	Level Repulsion of Localized Excitons in Disordered Quantum Wells. Physica Status Solidi A, 2002, 190, 625-629.	1.7	5
79	Classical correlations of defects in lattices with geometrical frustration in the motion of a particle. Physical Review B, 2006, 73, .	1.1	5
80	Calculation of exciton wave functions in electric fields. Journal of Physics: Conference Series, 2010, 210, 012047.	0.3	5
81	Smoothing and regularization strategies for optimization of hybrid dynamic systems. Optimization and Engineering, 2015, 16, 541-569.	1.3	5
82	Exciton dispersion in quantum wells. Annalen Der Physik, 1998, 7, 523-528.	0.9	4
83	Partial dephasing in interacting many-particle systems and current echo. Physical Review B, 1998, 57, 4299-4303.	1.1	4
84	Theory of Ultrafast Rayleigh Scattering in Semiconductor Quantum Wells. Physica Status Solidi (B): Basic Research, 2000, 221, 365-371.	0.7	4
85	Excitons and exciton-phonon coupling in the optical response of GaN. Physica Status Solidi C: Current Topics in Solid State Physics, 2014, 11, 297-301.	0.8	4
86	QUASIPARTICLE BAND STRUCTURE OF Ce-BASED HEAVY-FERMION COMPOUNDS. Journal De Physique Colloque, 1988, 49, C8-753-C8-754.	0.2	4
87	Two Decades of Secondary Emission in Quantum Wells. Physica Status Solidi (B): Basic Research, 2002, 234, 96-106.	0.7	3
88	Theory of the surface plasmon polariton-exciton interaction in multi-layer systems. Physica Status Solidi (B): Basic Research, 2008, 245, 1071-1075.	0.7	3
89	Direct observation of optical excitation transfer based on resonant optical near-field interaction. Applied Physics B: Lasers and Optics, 2012, 107, 257-262.	1.1	3
90	Reconstructions of the As-Terminated GaAs(001) Surface Exposed to Atomic Hydrogen. ACS Omega, 2022, 7, 5064-5068.	1.6	3

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91	<title>Luminescence kinetics and lifetime of excitons in quantum wells with interface roughness</title>. , 1994, , .		2
92	Dynamics of Exciton Recombination in II-VI Semiconductor Quantum Wells. Japanese Journal of Applied Physics, 1995, 34, 155.	0.8	2
93	Lateral variations of the quantum well confinement energy reflected by SEM-cathodoluminescence. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 1996, 42, 133-140.	1.7	2
94	Preface: phys. stat. sol. (b) 234/1. Physica Status Solidi (B): Basic Research, 2002, 234, 3-6.	0.7	2
95	Excitons in disordered nanostructures: From the Schrödinger equation to random matrix theory. Physica Status Solidi A, 2004, 201, 389-397.	1.7	2
96	FRACTIONALLY CHARGED EXCITATIONS ON FRUSTRATED LATTICES. International Journal of Modern Physics B, 2007, 21, 2215-2231.	1.0	2
97	Charge degrees in the quarter-filled checkerboard lattice. Journal of Magnetism and Magnetic Materials, 2007, 310, 966-968.	1.0	2
98	CALCULATION AND INTERPRETATION OF SURFACE-PLASMON-POLARITON FEATURES IN THE REFLECTIVITY OF METALLIC NANOWIRE ARRAYS. International Journal of Modern Physics B, 2008, 22, 4442-4451.	1.0	2
99	Coherent exciton-surface plasmon polariton interactions in hybrid metal semiconductor nanostructures. Physica Status Solidi C: Current Topics in Solid State Physics, 2009, 6, 466-469.	0.8	2
100	Surface plasmon polaritons on square-lattice arrays of three-fold symmetric nanostructures. Photonics and Nanostructures - Fundamentals and Applications, 2010, 8, 297-302.	1.0	2
101	Mechanism of twin-reduced III-V epitaxy on As-modified vicinal Si(111). Physical Review Materials, 2018, 2, .	0.9	2
102	Near-field spectroscopy of a coupled wire-dot nanostructure grown on (311)A GaAs. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2002, 91-92, 105-114.	1.7	1
103	Quantum mechanical repulsion of exciton levels in a disordered quantum well evidenced by near-field spectroscopy. Physica E: Low-Dimensional Systems and Nanostructures, 2002, 13, 178-181.	1.3	1
104	Coherent exciton - surface plasmon polariton interactions in hybrid metal semiconductor nanostructures. , 2007, , .		1
105	Multivalence-band calculation of the excitonic dielectric function for hexagonal GaN. Journal of Physics Condensed Matter, 2013, 25, 175801.	0.7	1
106	Optical spectroscopy of photovoltaic systems based on low-bandgap polymers. Thin Solid Films, 2014, 560, 77-81.	0.8	1
107	Near-field-assisted localization: effect of size and filling factor of randomly distributed zinc oxide nanoneedles on multiple scattering and localization of light. Applied Physics B: Lasers and Optics, 2016, 122, 1.	1.1	1
108	Coherence of excitonic secondary emission quantified by time resolved speckle analysis. , 0, , .		0

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109	Near-field imaging and spectroscopy of localized and delocalized excitons in semiconductor nanostructures. , 0, , .		0
110	Random-matrix model of resonant Rayleigh scattering in systems with exciton fine-structure splitting. Physica Status Solidi (B): Basic Research, 2004, 241, 2065-2078.	0.7	0
111	Surface plasmon polaritons on arrays of nanostructures with three-fold symmetry. , 2009, , .		0
112	Ultrafast optical nonlinearities in hybrid metal-J-aggregate nanostructures. , 2009, , .		0
113	Surface plasmon polariton " exciton interaction in metal-semiconductor and metal-dye nanostructures. Journal of Physics: Conference Series, 2010, 210, 012001.	0.3	0
114	Ultrafast manipulation of the Rabi splitting in metal-molecular aggregate hybrid nanostructures. Physica Status Solidi C: Current Topics in Solid State Physics, 2011, 8, 1113-1116.	0.8	0
115	Ultrafast manipulation of the large Rabi splitting in metal-J-aggregate hybrid nanostructures. , 2011, , .		0
116	Ultrafast dynamics of localized light modes. Annalen Der Physik, 2013, 525, 199-204.	0.9	0
117	Simulation, Parameter Estimation and Optimization of an Industrial-Scale Evaporation System. Advances in Intelligent Systems and Computing, 2013, , 71-84.	0.5	0
118	Optical properties of trions in semiconductor nanostructures. Springer Proceedings in Physics, 2001, , 525-526.	0.1	0
119	Randomness in Optical Spectra of Semiconductor Nanostructures. , 2002, , 241-257.		0
120	CALCULATION AND INTERPRETATION OF SURFACE-PLASMON-POLARITON FEATURES IN THE REFLECTIVITY OF METALLIC NANOWIRE ARRAYS. , 2008, , .		0
121	Ultrafast Optical Dynamics of a Nonlinearly Coupled Au Plasmon-ZnO Exciton Nanostructure. , 2020, , .		0