

RÃ¼diger Schmidt-Grund

List of Publications by Year in descending order

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118
papers

2,950
citations

186265

28
h-index

189892

50
g-index

121
all docs

121
docs citations

121
times ranked

3559
citing authors

#	ARTICLE	IF	CITATIONS
1	Whispering gallery mode lasing in zinc oxide microwires. Applied Physics Letters, 2008, 92, 241102.	3.3	192
2	Dielectric functions (1 to 5 eV) of wurtzite $Mg_{x}Zn_{1-x}O$ ($x \approx 0.29$) thin films. Applied Physics Letters, 2003, 82, 2260-2262.	3.3	165
3	Raman tensor elements of $\hat{\Gamma}^2$ -Ga ₂ O ₃ . Scientific Reports, 2016, 6, 35964.	3.3	162
4	On the Optical Properties of Thin-Film Vanadium Dioxide from the Visible to the Far Infrared. Annalen Der Physik, 2019, 531, 1900188.	2.4	135
5	A Practical, Self-Catalytic, Atomic Layer Deposition of Silicon Dioxide. Angewandte Chemie - International Edition, 2008, 47, 6177-6179.	13.8	127
6	Epsilon-Near-Zero Substrate Engineering for Ultrathin-Film Perfect Absorbers. Physical Review Applied, 2017, 8, .	3.8	88
7	Metal-insulator transition in Co-doped ZnO: Magnetotransport properties. Physical Review B, 2006, 73, .	3.2	83
8	Dielectric tensor of monoclinic Ga ₂ O ₃ single crystals in the spectral range 0.5–8.5 eV. APL Materials, 2015, 3, 106106.	5.1	81
9	Whispering gallery modes in zinc oxide micro- and nanowires. Physica Status Solidi (B): Basic Research, 2010, 247, 1282-1293.	1.5	77
10	Lattice parameters and Raman-active phonon modes of $\hat{\Gamma}^2$ -(Al _x Ga _{1-x}) ₂ O ₃ . Journal of Applied Physics, 2015, 117, .	2.5	75
11	Raman active phonon modes of cubic In ₂ O ₃ . Physica Status Solidi - Rapid Research Letters, 2014, 8, 554-559.	2.4	73
12	Raman Tensor Formalism for Optically Anisotropic Crystals. Physical Review Letters, 2016, 116, 127401.	7.8	61
13	Lattice parameters and Raman-active phonon modes of (In _x Ga _{1-x}) ₂ O ₃ for $x \approx 0.4$. Journal of Applied Physics, 2014, 116, .	2.5	59
14	Refractive indices and band-gap properties of rocksalt $Mg_{x}Zn_{1-x}O$ ($0.68 \leq x \leq 1$). Journal of Applied Physics, 2006, 99, 123701.	2.5	55
15	Ballistic propagation of exciton-polariton condensates in a ZnO-based microcavity. New Journal of Physics, 2012, 14, 013037.	2.9	54
16	Dipole analysis of the dielectric function of color dispersive materials: Application to monoclinic Ga_2O_3 . Physical Review B, 2016, 94, .	3.2	54
17	Luminescence and surface properties of $Mg_{x}Zn_{1-x}O$ thin films grown by pulsed laser deposition. Journal of Applied Physics, 2007, 101, 083521.	2.5	49
18	Dielectric function in the spectral range (0.5–8.5)eV of an (Al _x) ₂ O ₃ . Journal of Applied Physics, 2015, 117, 165307.	2.5	48

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19	Strain distribution in bent ZnO microwires. Applied Physics Letters, 2011, 98, 031105.	3.3	46
20	UV-VUV spectroscopic ellipsometry of ternary Mg _x Zn _{1-x} O (0 ≤ x ≤ 0.53) thin films. Thin Solid Films, 2004, 455-456, 500-504.	1.8	43
21	Magnetoresistance and anomalous Hall effect in magnetic ZnO films. Journal of Applied Physics, 2007, 101, 063918.	2.5	43
22	Observation of strong exciton-photon coupling at temperatures up to 410 K. New Journal of Physics, 2009, 11, 073044.	2.9	42
23	Exciton-polariton formation at room temperature in a planar ZnO resonator structure. Applied Physics B: Lasers and Optics, 2008, 93, 331-337.	2.2	40
24	Improving the Optical Properties of Self-Catalyzed GaN Microrods toward Whispering Gallery Mode Lasing. ACS Photonics, 2014, 1, 990-997.	6.6	37
25	Voigt Exceptional Points in an Anisotropic ZnO-Based Planar Microcavity: Square-Root Topology, Polarization Vortices, and Circularity. Physical Review Letters, 2019, 123, 227401.	7.8	35
26	Optical Properties of ZnO and Related Compounds. Springer Series in Materials Science, 2008, , 79-124.	0.6	34
27	One- and two-dimensional cavity modes in ZnO microwires. New Journal of Physics, 2011, 13, 103021.	2.9	31
28	Inhibition and Enhancement of the Spontaneous Emission of Quantum Dots in Micropillar Cavities with Radial-Distributed Bragg Reflectors. ACS Nano, 2014, 8, 9970-9978.	14.6	30
29	Carrier density driven lasing dynamics in ZnO nanowires. Nanotechnology, 2016, 27, 225702.	2.6	28
30	Dielectric function in the NIR-VUV spectral range of (In _x Ga _{1-x}) ₂ O ₃ thin films. Journal of Applied Physics, 2014, 116, 053510.	2.5	27
31	Magnetoresistance effects in Zn _{0.90} Co _{0.10} O films. Journal of Applied Physics, 2006, 100, 013904.	2.5	26
32	Maxwell consideration of polaritonic quasi-particle Hamiltonians in multi-level systems. Applied Physics Letters, 2015, 107, .	3.3	25
33	Optically anisotropic media: New approaches to the dielectric function, singular axes, microcavity modes and Raman scattering intensities. Physica Status Solidi - Rapid Research Letters, 2017, 11, 1600295.	2.4	24
34	Oxide Thin Film Heterostructures on Large Area, with Flexible Doping, Low Dislocation Density, and Abrupt Interfaces: Grown by Pulsed Laser Deposition. Laser Chemistry, 2010, 2010, 1-27.	0.5	22
35	Comparative study of optical and magneto-optical properties of normal, disordered, and inverse spinel-type oxides. Physica Status Solidi (B): Basic Research, 2016, 253, 429-436.	1.5	22
36	Exceptional points in anisotropic planar microcavities. Physical Review A, 2017, 95, .	2.5	22

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37	Surface- and point-defect-related Raman scattering in wurtzite semiconductors excited above the band gap. <i>New Journal of Physics</i> , 2013, 15, 113048.	2.9	21
38	Ultrafast dynamics of hot charge carriers in an oxide semiconductor probed by femtosecond spectroscopic ellipsometry. <i>New Journal of Physics</i> , 2020, 22, 083066.	2.9	21
39	Plasma-enhanced chemical vapor deposition of SiO _x /SiN _x Bragg reflectors. <i>Thin Solid Films</i> , 2002, 416, 224-232.	1.8	20
40	Magnetoresistance in pulsed laser deposited 3d transition metal doped ZnO films. <i>Thin Solid Films</i> , 2006, 515, 2549-2554.	1.8	20
41	Demonstration of an ultraviolet ZnO-based optically pumped third order distributed feedback laser. <i>Applied Physics Letters</i> , 2007, 91, 111108.	3.3	20
42	Determination of the refractive index of single crystal bulk samples and micro-structures. <i>Thin Solid Films</i> , 2011, 519, 2777-2781.	1.8	20
43	Dynamical Tuning of Nanowire Lasing Spectra. <i>Nano Letters</i> , 2017, 17, 6637-6643.	9.1	19
44	Structural and optical properties of ZrO ₂ and Al ₂ O ₃ thin films and Bragg reflectors grown by pulsed laser deposition. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2008, 5, 1240-1243.	0.8	18
45	Vacuum ultraviolet dielectric function of ZnFe ₂ O ₄ thin films. <i>Journal of Applied Physics</i> , 2013, 113, .	2.5	18
46	Ultrafast dynamics of the dielectric functions of ZnO and BaTiO ₃ thin films after intense femtosecond laser excitation. <i>Journal of Applied Physics</i> , 2014, 115, 053508.	2.5	18
47	Impact of Defects on Magnetic Properties of Spinel Zinc Ferrite Thin Films. <i>Physica Status Solidi (B): Basic Research</i> , 2020, 257, 1900630.	1.5	18
48	Advances of pulsed laser deposition of ZnO thin films. <i>Annalen Der Physik</i> , 2004, 13, 59-60.	2.4	17
49	Two-dimensional confined photonic wire resonators – strong light-matter coupling. <i>Physica Status Solidi (B): Basic Research</i> , 2010, 247, 1351-1364.	1.5	17
50	Strain and Band-Gap Engineering in $\text{Ge}_x\text{Sn}_{1-x}$ Alloys via P_k	3.8	17
51	Investigation of the graphitization process of ion-beam irradiated diamond using ellipsometry, Raman spectroscopy and electrical transport measurements. <i>Carbon</i> , 2017, 121, 512-517.	10.3	16
52	Temperature dependence of the dielectric function of thin film CuI in the spectral range (0.6–8.3) eV. <i>Applied Physics Letters</i> , 2018, 113, 172102.	3.3	16
53	Temperature-dependence of the refractive index and the optical transitions at the fundamental band-gap of ZnO. <i>AIP Conference Proceedings</i> , 2007, , .	0.4	15
54	ZnO based planar and micropillar resonators. <i>Superlattices and Microstructures</i> , 2007, 41, 360-363.	3.1	15

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55	Electronic transitions and dielectric function tensor of a YMnO_3 single crystal in the NIR-VUV spectral range. RSC Advances, 2014, 4, 33549-33554.	3.6	15
56	Temperature dependence of the dielectric tensor of monoclinic Ga_2O_3 single crystals in the spectral range 1.0–8.5 eV. Applied Physics Letters, 2017, 111, .	3.3	15
57	Spatiotemporal Evolution of Coherent Polariton Modes in ZnO Microwire Cavities at Room Temperature. Nano Letters, 2018, 18, 6820-6825.	9.1	15
58	Cavity-photon dispersion in one-dimensional confined microresonators with an optically anisotropic cavity material. Physical Review B, 2011, 83, .	3.2	14
59	Doping efficiency and limits in $(\text{Mg,Zn})\text{O}:\text{Al,Ga}$ thin films with two-dimensional lateral composition spread. Physica Status Solidi (A) Applications and Materials Science, 2015, 212, 2850-2855.	1.8	14
60	Parametric relaxation in whispering gallery mode exciton-polariton condensates. Physical Review B, 2015, 91, .	3.2	14
61	Ellipsometric investigation of ZnFe_2O_4 thin films in relation to magnetic properties. Applied Physics Letters, 2016, 108, .	3.3	14
62	Lasing in cuprous iodide microwires. Applied Physics Letters, 2017, 111, .	3.3	14
63	Transient dielectric functions of Ge, Si, and InP from femtosecond pump-probe ellipsometry. Applied Physics Letters, 2019, 115, .	3.3	14
64	Broadband femtosecond spectroscopic ellipsometry. Review of Scientific Instruments, 2021, 92, 033104.	1.3	14
65	Phonon-assisted lasing in ZnO microwires at room temperature. Applied Physics Letters, 2014, 105, .	3.3	12
66	Hydrogen influence on the electrical and optical properties of ZnO thin films grown under different atmospheres. Thin Solid Films, 2014, 556, 18-22.	1.8	12
67	Absorptive lasing mode suppression in ZnO nano- and microcavities. Applied Physics Letters, 2016, 109, .	3.3	12
68	The $(\text{Mg,Zn})\text{O}$ Alloy. , 2012, , 257-319.		12
69	Temperature dependence of the dielectric function in the spectral range (0.5–8.5) eV of an In_2O_3 thin film. Applied Physics Letters, 2014, 105, .	3.3	11
70	Cavity polariton condensate in a disordered environment. Physical Review B, 2016, 93, .	3.2	11
71	Strong exciton-photon coupling in ZnO based resonators. Journal of Vacuum Science & Technology B, 2009, 27, 1726.	1.3	10
72	Optical properties of $\text{BaTiO}_3/\text{ZnO}$ heterostructures under the effect of an applied bias. Thin Solid Films, 2011, 519, 2933-2935.	1.8	10

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73	Excitonâ€ polaritons in a ZnO-based microcavity: polarization dependence and nonlinear occupation. <i>New Journal of Physics</i> , 2011, 13, 033014.	2.9	10
74	Electronic excitations and structure of Li ₂ IrO ₃ thin films grown on ZrO ₂ :Y (001) substrates. <i>Journal of Applied Physics</i> , 2015, 117, 025304.	2.5	10
75	Optical properties of epitaxial Na _{0.5} Bi _{0.5} TiO ₃ lead-free piezoelectric thin films: Ellipsometric and theoretical studies. <i>Applied Surface Science</i> , 2017, 421, 367-372.	6.1	10
76	Femtosecond-time-resolved imaging of the dielectric function of ZnO in the visible to near-IR spectral range. <i>Applied Physics Letters</i> , 2019, 115, .	3.3	10
77	An extended Drude model for the in-situ spectroscopic ellipsometry analysis of ZnO thin layers and surface modifications. <i>Thin Solid Films</i> , 2014, 571, 437-441.	1.8	9
78	Band gap renormalization in n-type GeSn alloys made by ion implantation and flash lamp annealing. <i>Journal of Applied Physics</i> , 2019, 125, .	2.5	9
79	Observation of strong light-matter coupling by spectroscopic ellipsometry. <i>Superlattices and Microstructures</i> , 2010, 47, 19-23.	3.1	8
80	Control of magnetic properties in spinel ZnFe ₂ O ₄ thin films through intrinsic defect manipulation. <i>Journal of Applied Physics</i> , 2020, 128, .	2.5	8
81	Transient birefringence and dichroism in ZnO studied with fs-time-resolved spectroscopic ellipsometry. <i>Physical Review Research</i> , 2021, 3, .	3.6	8
82	Vacuum Ultraviolet Dielectric Function and Band Structure of ZnO. <i>Journal of the Korean Physical Society</i> , 2008, 53, 88-93.	0.7	8
83	Synthesis and physical properties of cylindrite micro tubes and lamellae. <i>Physica Status Solidi (B): Basic Research</i> , 2010, 247, 1335-1350.	1.5	7
84	Band-to-band transitions and optical properties of Mg _x Zn _{1-x} O (0 ≤ x ≤ 1) films. <i>AIP Conference Proceedings</i> , 2005, , .	0.4	6
85	Cathodoluminescence of large-area PLD grown ZnO thin films measured in transmission and reflection. <i>Applied Physics A: Materials Science and Processing</i> , 2007, 88, 89-93.	2.3	6
86	Optical characterization of zinc oxide microlasers and microwire core-shell heterostructures. <i>Journal of Vacuum Science & Technology B</i> , 2009, 27, 1780.	1.3	6
87	Tunable and switchable lasing in a ZnO microwire cavity at room temperature. <i>Journal Physics D: Applied Physics</i> , 2018, 51, 425305.	2.8	6
88	Coherent Polariton Modes and Lasing in ZnO Nanoâ€ and Microwires. <i>Physica Status Solidi (B): Basic Research</i> , 2019, 256, 1800462.	1.5	5
89	PLD Growth of High Reflective All-Oxide Bragg Reflectors for ZnO Resonators. <i>AIP Conference Proceedings</i> , 2010, , .	0.4	4
90	Redshift of large wave vector LO phonon modes in wurtzite semiconductors due to the presence of free charge carriers. <i>Journal of Raman Spectroscopy</i> , 2015, 46, 167-170.	2.5	4

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91	Temperature dependent self-compensation in Al- and Ga-doped Mg _{0.05} Zn _{0.95} O thin films grown by pulsed laser deposition. Journal of Applied Physics, 2016, 120, .	2.5	4
92	Cylindric resonators with coaxial Bragg reflectors. , 2005, , .		3
93	a-Si/SiO _x Bragg-reflectors on micro-structured InP. Thin Solid Films, 2005, 483, 257-260.	1.8	3
94	Coexistence of strong and weak coupling in ZnO nanowire cavities. EPJ Applied Physics, 2016, 74, 30502.	0.7	3
95	Hybrid GA-gradient method for thin films ellipsometric data evaluation. Journal of Computational Science, 2020, 47, 101201.	2.9	3
96	Properties of (InGa)As/GaAs QW (Î» = 1.2 Åµm) facet-coated edge emitting diode laser. Laser Physics, 2006, 16, 441-446.	1.2	2
97	Investigation of the free charge carrier properties at the ZnOâ€sapphire interface in aâ€plane ZnO films studied by generalized infrared ellipsometry. Physica Status Solidi C: Current Topics in Solid State Physics, 2008, 5, 1350-1353.	0.8	2
98	ZnO nano-pillar Resonators with Coaxial Bragg-Reflectors. Materials Research Society Symposia Proceedings, 2009, 1178, 13.	0.1	2
99	Charge carrier dynamics of ZnO and ZnO-BaTiO ₃ thin films. Journal of Physics: Conference Series, 2010, 210, 012048.	0.4	2
100	Temperature dependent dielectric function in the near-infrared to vacuum-ultraviolet ultraviolet spectral range of alumina and yttria stabilized zirconia thin films. Journal of Applied Physics, 2013, 114, 223509.	2.5	2
101	Influence of the excitation conditions on the emission behavior of carbon nanodot-based planar microcavities. Physical Review Research, 2020, 2, .	3.6	2
102	Coherent acoustic phonon oscillations and transient critical point parameters of Ge from femtosecond pumpâ€probe ellipsometry. Physica Status Solidi - Rapid Research Letters, 0, , .	2.4	2
103	RBS studies on coated micro-dimensional glass fibers used as micro-resonators. Nuclear Instruments & Methods in Physics Research B, 2006, 249, 387-389.	1.4	1
104	ZnO micro-pillar resonators with coaxial Bragg reflectors. AIP Conference Proceedings, 2007, , .	0.4	1
105	Polarization behavior of the exciton-polariton emission of ZnO-based microresonators. Materials Research Society Symposia Proceedings, 2009, 1208, 1.	0.1	1
106	Exciton-polaritons in ZnO microcavity resonators. AIP Conference Proceedings, 2010, , .	0.4	1
107	Exceptional points in anisotropic photonic structures: from non-Hermitian physics to possible device applications. Proceedings of SPIE, 2017, , .	0.8	1
108	Intensity of Optical Absorption Close to the Band Edge in Strained ZnO Films. Journal of the Korean Physical Society, 2008, 53, 123-126.	0.7	1

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109	Polarization-dependent optical transitions at the fundamental band gap and higher critical points of wurtzite ZnO. , 0, , .		0
110	Valence Band Structure of ZnO and Mg _x Zn _{1-x} O. Materials Research Society Symposia Proceedings, 2007, 1035, 1.	0.1	0
111	Characterization of an optically pumped ZnO-based 3rd order distributed feedback laser. , 2008, , .		0
112	Occupation behaviour of the lower exciton-polariton branch in ZnO-based microresonators. , 2011, , .		0
113	Structural properties of BaTiO ₃ /ZnO heterostructures and interfaces. AIP Conference Proceedings, 2011, , .	0.4	0
114	Tuning of the Physical Properties in Mixed Valence Inorganic Solids by Oriented Cationic and Anionic Substitutions. Zeitschrift Fur Anorganische Und Allgemeine Chemie, 2012, 638, 1640-1640.	1.2	0
115	Coherent Polariton States in ZnO Nano- and Microstructures. , 2018, , .		0
116	Exceptional Points in the Dispersion of Optically Anisotropic Planar Microcavities. , 2018, , .		0
117	Analysis of temperature-dependent and time-resolved ellipsometry spectra of Ge. , 2021, , .		0
118	Molybdenum silicide in infrared emitting devices. , 2020, , .		0