Patrik Scajev

List of Publications by Year
in descending order

58	804	471371 17	580701 25
papers	citations	h-index	g-index

59	59	59	920
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Fast and slow carrier recombination transients in highly excited 4Hâ€“ and 3Câ€“SiC crystals at room temperature. Journal of Applied Physics, 2010, 108, .	1.1	69
2	Diffusion Enhancement in Highly Excited MAPbI₃ Perovskite Layers with Additives. Journal of Physical Chemistry Letters, 2018, 9, 3167-3172.	2.1	46
3	Excitation-dependent carrier lifetime and diffusion length in bulk CdTe determined by time-resolved optical pump-probe techniques. Journal of Applied Physics, 2018, 123, .	1.1	35
4	Temperature- and excitation-dependent carrier diffusivity and recombination rate in 4H-SiC. Journal Physics D: Applied Physics, 2013, 46, 265304.	1.3	34
5	Two Regimes of Carrier Diffusion in Vapor-Deposited Lead-Halide Perovskites. Journal of Physical Chemistry C, 2017, 121, 21600-21609.	1.5	33
6	Nonequilibrium carrier dynamics in bulk HPHT diamond at twoâ€photon carrier generation. Physica Status Solidi (A) Applications and Materials Science, 2011, 208, 2067-2072.	0.8	32
7	A diffraction-based technique for determination of interband absorption coefficients in bulk 3C-, 4H- and 6H-SiC crystals. Journal Physics D: Applied Physics, 2011, 44, 365402.	1.3	29
8	Diffusion-limited nonradiative recombination at extended defects in hydride vapor phase epitaxy GaN layers. Applied Physics Letters, 2011, 98, 202105.	1.5	29
9	Radiative Efficiency and Chargeâ€Carrier Lifetimes and Diffusion Length in Polycrystalline CdSeTe Heterostructures. Physica Status Solidi - Rapid Research Letters, 2020, 14, 1900606.	1.2	26
10	A carrier density dependent diffusion coefficient, recombination rate and diffusion length in MAPbI₃ and MAPbBr₃ crystals measured under one- and two-photon excitations. Journal of Materials Chemistry C, 2020, 8, 10290-10301.	2.7	25
11	Anisotropy of free-carrier absorption and diffusivity in m-plane GaN. Applied Physics Letters, 2012, 100, .	1.5	23
12	Planar GeSn photodiode for high-detectivity photodetection at 1550â€‰nm. Applied Physics Letters, 2020, 117, .	1.5	21
13	Optical monitoring of nonequilibrium carrier diffusion in single crystalline CVD and HPHT diamonds under high optical excitation. Physica Status Solidi - Rapid Research Letters, 2011, 5, 193-195.	1.2	19
14	Carrier recombination and diffusivity in microcrystalline CVDâ€grown and singleâ€crystalline HPHT diamonds. Physica Status Solidi (A) Applications and Materials Science, 2012, 209, 1744-1749.	0.8	19
15	Comparative Studies of Carrier Dynamics in 3C-SiC Layers Grown on Si and 4H-SiC Substrates. Journal of Electronic Materials, 2011, 40, 394-399.	1.0	17
16	Injection and temperature dependent carrier recombination rate and diffusion length in freestanding <scp>CVD</scp> diamond. Physica Status Solidi (A) Applications and Materials Science, 2013, 210, 2016-2021.	0.8	17
17	Luminescence properties of LiGaO 2 crystal. Optical Materials, 2017, 69, 449-459.	1.7	17
18	Photoluminescence kinetics for monitoring photoinduced processes in perovskite solar cells. Solar Energy, 2020, 195, 114-120.	2.9	17

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19	Charge carrier trapping by dislocations in single crystal diamond. Journal of Applied Physics, 2020, 127, .	1.1	17
20	Light-induced reflectivity transients in black-Si nanoneedles. Solar Energy Materials and Solar Cells, 2016, 144, 221-227.	3.0	16
21	Bismuth oxysulfide film electrodes with giant incident photon-to-current conversion efficiency: the dynamics of properties with deposition time. Physical Chemistry Chemical Physics, 2018, 20, 20340-20346.	1.3	15
22	Morphological and optical property study of Li doped ZnO produced by microwave-assisted solvothermal synthesis. Materials Science in Semiconductor Processing, 2021, 135, 106069.	1.9	15
23	Features of free carrier and exciton recombination, diffusion, and photoluminescence in undoped and phosphorus-doped diamond layers. Diamond and Related Materials, 2015, 57, 9-16.	1.8	14
24	Photoconductive Switch with High Sub-Bandgap Responsivity in Nitrogen-Doped Diamond. IEEE Electron Device Letters, 2020, , 1-1.	2.2	13
25	Carrier dynamics and photoelectrical parameters in highly compensated sublimation grown 3C-SiC layers studied by time-resolved nonlinear optical techniques. Semiconductor Science and Technology, 2014, 29, 015004.	1.0	12
26	Application of a time-resolved four-wave mixing technique for the determination of thermal properties of 4Hâ€“SiC crystals. Journal Physics D: Applied Physics, 2009, 42, 055413.	1.3	11
27	Carrier recombination processes in Fe-doped GaN studied by optical pumpâ€“probe techniques. Journal of Applied Physics, 2020, 127, .	1.1	11
28	Direct-indirect GeSn band structure formation by laser Radiation: The enhancement of Sn solubility in Ge. Optics and Laser Technology, 2020, 128, 106200.	2.2	11
29	Exciton diffusion in bifluorene single crystals studied by light induced transient grating technique. Applied Physics Letters, 2018, 112, .	1.5	10
30	Extension of spectral sensitivity of GeSn IR photodiode after laser annealing. Applied Surface Science, 2021, 555, 149711.	3.1	10
31	Influence of boron on donorâ€“acceptor pair recombination in type IIa HPHT diamonds. Diamond and Related Materials, 2013, 36, 35-43.	1.8	9
32	Radiative and nonradiative recombination rates in cubic SiC. Journal of Luminescence, 2013, 134, 588-593.	1.5	8
33	Development of a microwave photoconductance measurement technique for the study of carrier dynamics in highly-excited 4H-SiC. Measurement Science and Technology, 2015, 26, 125014.	1.4	8
34	Excitation and temperature dependent exciton-carrier transport in CVD diamond: Diffusion coefficient, recombination lifetime and diffusion length. Physica B: Condensed Matter, 2017, 510, 92-98.	1.3	8
35	Carrier Recombination and Diffusion in Wet-Cast Tin Iodide Perovskite Layers Under High Intensity Photoexcitation. Journal of Physical Chemistry C, 2019, 123, 19275-19281.	1.5	8
36	Photo-electrical and transport properties of hydrothermal ZnO. Journal of Applied Physics, 2016, 119, .	1.1	7

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37	Carrier dynamics in highly excited TlInS₂: evidence of 2D electronâ€“hole charge separation at parallel layers. Physical Chemistry Chemical Physics, 2019, 21, 2102-2114.	1.3	7
38	Anisotropy of Thermal Diffusivity in Lead Halide Perovskite Layers Revealed by Thermal Grating Technique. Journal of Physical Chemistry C, 2019, 123, 14914-14920.	1.5	7
39	Temperature dependent carrier lifetime, diffusion coefficient, and diffusion length in Ge0.95Sn0.05 epilayer. Journal of Applied Physics, 2020, 128, .	1.1	7
40	Carrier Diffusivity in Highly Excited Bulk SiC, GaN, and Diamond Crystals by Optical Probes. Materials Science Forum, 0, 717-720, 309-312.	0.3	6
41	Excitationâ€dependent carrier dynamics in Alâ€rich AlGaN layers and multiple quantum wells. Physica Status Solidi (B): Basic Research, 2015, 252, 1043-1049.	0.7	6
42	Energy transfer in (PEA)₂FA_{nâ^'1}Pb_nBr_{3n+1} quasi-2D perovskites. Journal of Materials Chemistry C, 2021, 9, 4782-4791.	2.7	6
43	Hierarchical Carbon Nanocone-Silica Metamaterials: Implications for White Light Photoluminescence. ACS Applied Nano Materials, 2022, 5, 4787-4800.	2.4	6
44	Nonequilibrium Carrier Recombination in Highly Excited Bulk SiC Crystals. Materials Science Forum, 2010, 645-648, 215-218.	0.3	5
45	Application of excite-probe techniques for determination of surface, bulk and nonlinear recombination rates in cubic SiC. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2014, 185, 37-44.	1.7	5
46	Crystal stacking: A route to control photoelectrochemical behavior of BiOBr films. Electrochimica Acta, 2018, 290, 63-71.	2.6	5
47	Crystal Structure Ideality Impact on Bimolecular, Auger, and Diffusion Coefficients in Mixed-Cation Cs_xMA_{1â€“x}PbBr₃ and Cs_xFA_{1â€“x}PbBr₃ Perovskites. Journal of Physical Chemistry C, 2019, 123, 23838-23844.	1.5	5
48	Carrier dynamics under two- and single-photon excitation in bulk GaN. Physica Status Solidi (B): Basic Research, 2012, 249, 503-506.	0.7	4
49	Crystallite size dependent carrier recombination rate and thermal diffusivity in undoped and boron doped <scp>CVD</scp> diamond layers. Physica Status Solidi (A) Applications and Materials Science, 2013, 210, 2022-2027.	0.8	4
50	Impact of intrinsic defects on excitation dependent carrier lifetime in thick 4H-SiC studied by complementing microwave photoconductivity, free-carrier absorption and time-resolved photoluminescence techniques. Journal of Luminescence, 2019, 212, 92-98.	1.5	3
51	Carrier recombination and diffusion in high-purity diamond after electron irradiation and annealing. Applied Physics Letters, 2020, 117, 242103.	1.5	3
52	Temperature and spatial dependence of carrier lifetime and luminescence intensity in Ge0.95Sn0.05 layer. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2021, 270, 115204.	1.7	3
53	Highly efficient nanocrystalline Cs_xMA_{1â^'x}PbBr_x perovskite layers for white light generation. Nanotechnology, 2019, 30, 345702.	1.3	2
54	Determination of carrier lifetime in thermally evaporated In2S3 thin films by light induced transient grating technique. Applied Physics A: Materials Science and Processing, 2020, 126, 1.	1.1	2

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55	On Applicability of Time-Resolved Optical Techniques for Characterization of Differently Grown 3C-SiC Crystals and Heterostructures. Materials Science Forum, 2012, 711, 159-163.	0.3	1
56	Nonlinear Optical Techniques for Characterization of Wide Bandgap Semiconductor Electronic Properties: III-nitrides, SiC, and Diamonds. Materials Research Society Symposia Proceedings, 2012, 1396, .	0.1	1
57	Carrier recombination parameters in diamond after surface boron implantation and annealing. Journal of Applied Physics, 2020, 127, .	1.1	1
58	Photoluminescence efficiency of Al-rich AlGaN heterostructures in a wide range of photoexcitation densities over temperatures up to 550 K. Physical Review B, 2020, 102, .	1.1	1