

# František Trojánek

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/8222129/publications.pdf>

Version: 2024-02-01

106  
papers

1,728  
citations

304743

22  
h-index

330143

37  
g-index

110  
all docs

110  
docs citations

110  
times ranked

2036  
citing authors

#	ARTICLE	IF	CITATIONS
1	Experimental observation of the optical spin transfer torque. <i>Nature Physics</i> , 2012, 8, 411-415.	16.7	119
2	Optical determination of the Néel vector in a CuMnAs thin-film antiferromagnet. <i>Nature Photonics</i> , 2017, 11, 91-96.	31.4	103
3	The essential role of carefully optimized synthesis for elucidating intrinsic material properties of (Ga,Mn)As. <i>Nature Communications</i> , 2013, 4, 1422.	12.8	82
4	Picosecond and millisecond dynamics of photoexcited carriers in porous silicon. <i>Physical Review B</i> , 1996, 54, 7929-7936.	3.2	65
5	Picosecond photoluminescence and transient absorption in silicon nanocrystals. <i>Physical Review B</i> , 2005, 72, .	3.2	62
6	Nanocrystalline titanium dioxide films: Influence of ambient conditions on surface- and volume-related photoluminescence. <i>Journal of Applied Physics</i> , 2010, 108, .	2.5	59
7	Ultrafast photoluminescence in silicon nanocrystals studied by femtosecond up-conversion technique. <i>Journal of Applied Physics</i> , 2006, 99, 116108.	2.5	51
8	Experimental observation of the optical spin-orbit torque. <i>Nature Photonics</i> , 2013, 7, 492-498.	31.4	50
9	Light-induced magnetization precession in GaMnAs. <i>Applied Physics Letters</i> , 2008, 92, .	3.3	49
10	Ammonia-free method for preparation of CdS nanocrystalline films by chemical bath deposition technique. <i>Thin Solid Films</i> , 2002, 403-404, 9-12.	1.8	48
11	Absence of quantum confinement effects in the photoluminescence of Si <sub>3</sub> N <sub>4</sub> -embedded Si nanocrystals. <i>Journal of Applied Physics</i> , 2014, 115, .	2.5	44
12	Tailoring of nanocrystal sizes in CdSe films prepared by chemical deposition. <i>Journal of Crystal Growth</i> , 2000, 209, 695-700.	1.5	40
13	Transmission study of picosecond photocarrier dynamics in free-standing porous silicon. <i>Solid State Communications</i> , 1994, 89, 709-712.	1.9	35
14	Femtosecond luminescence spectroscopy of core states in silicon nanocrystals. <i>Optics Express</i> , 2010, 18, 25241.	3.4	35
15	Light-controlled growth of CdSe nanocrystalline films prepared by chemical deposition. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2000, 69-70, 500-504.	3.5	34
16	Nonlinear optical properties of nanocrystalline diamond. <i>Optics Express</i> , 2010, 18, 1349.	3.4	34
17	Direct measurement of the three-dimensional magnetization vector trajectory in GaMnAs by a magneto-optical pump-and-probe method. <i>Applied Physics Letters</i> , 2012, 100, .	3.3	31
18	Photodarkening effect on absorption nonlinearity in CdS <sub>x</sub> Se <sub>1-x</sub> -doped glass. <i>Journal of the Optical Society of America B: Optical Physics</i> , 1993, 10, 1890.	2.1	30

#	ARTICLE	IF	CITATIONS
19	Ultrafast stimulated emission due to quasidirect transitions in silicon nanocrystals. <i>Physical Review B</i> , 2011, 84, .	3.2	28
20	Carrier dynamics in InAs/AlAs quantum dots: lack in carrier transfer from wetting layer to quantum dots. <i>Nanotechnology</i> , 2010, 21, 155703.	2.6	25
21	Photoluminescence of nanocrystalline titanium dioxide films loaded with silver nanoparticles. <i>Journal of Applied Physics</i> , 2011, 109, .	2.5	24
22	Inertial displacement of a domain wall excited by ultra-short circularly polarized laser pulses. <i>Nature Communications</i> , 2017, 8, 15226.	12.8	22
23	Two- and three-photon absorption in chemical vapor deposition diamond. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2012, 29, 1141.	2.1	21
24	Large prolongation of free-exciton photoluminescence decay in diamond by two-photon excitation. <i>Optics Letters</i> , 2012, 37, 2049.	3.3	21
25	Optical study of carrier diffusion and recombination in <sc>CVD</sc> diamond. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2013, 210, 2008-2015.	1.8	20
26	Anisotropy and polarization dependence of multiphoton charge carrier generation rate in diamond. <i>Physical Review B</i> , 2019, 99, .	3.2	20
27	Dominant role of surface states in photoexcited carrier dynamics in CdSe nanocrystalline films prepared by chemical deposition. <i>Applied Physics Letters</i> , 2000, 77, 2352-2354.	3.3	19
28	Picosecond dynamics of photoexcited carriers in free-standing porous silicon. <i>Thin Solid Films</i> , 1995, 255, 77-79.	1.8	18
29	Dynamics of electronâ€“hole liquid condensation in CVD diamond studied by femtosecond pump and probe spectroscopy. <i>Diamond and Related Materials</i> , 2013, 34, 13-18.	3.9	18
30	Temperature and density dependence of exciton dynamics in Ila diamond: Experimental and theoretical study. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2014, 211, 2244-2250.	1.8	18
31	Investigation of magneto-structural phase transition in FeRh by reflectivity and transmittance measurements in visible and near-infrared spectral region. <i>New Journal of Physics</i> , 2016, 18, 083017.	2.9	18
32	Substantial enhancement of photoluminescence in CdSe nanocrystals by femtosecond pulse illumination. <i>Thin Solid Films</i> , 2004, 453-454, 300-303.	1.8	17
33	Coherent phonon dynamics in micro- and nanocrystalline diamond. <i>Optics Express</i> , 2013, 21, 31521.	3.4	17
34	Hot-carrier transport in diamond controlled by femtosecond laser pulses. <i>New Journal of Physics</i> , 2015, 17, 053027.	2.9	16
35	Chemical bath deposition of CdSe and CdS nanocrystalline films: tailoring of morphology, optical properties and carrier dynamics. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2008, 205, 2324-2329.	1.8	14
36	Ammonia effect on surface-mediated carrier dynamics in CdSe nanocrystals. <i>Thin Solid Films</i> , 2006, 503, 64-68.	1.8	13

#	ARTICLE	IF	CITATIONS
37	Photoexcited charge carrier dynamics in silicon nanocrystal/SiO <sub>2</sub> superlattices. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2014, 56, 177-182.	2.7	13
38	Long-range and high-speed electronic spin-transport at a GaAs/AlGaAs semiconductor interface. <i>Scientific Reports</i> , 2016, 6, 22901.	3.3	13
39	Interplay of bimolecular and Auger recombination in photoexcited carrier dynamics in silicon nanocrystal/silicon dioxide superlattices. <i>Scientific Reports</i> , 2018, 8, 1703.	3.3	13
40	Ultrafast carrier dynamics in undoped microcrystalline silicon. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2000, 69-70, 238-242.	3.5	12
41	Investigation of nonlinear properties of CdS-doped glasses. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2005, 27, 38-44.	2.7	12
42	Ultrafast photoluminescence of nanocrystalline diamond films. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2008, 205, 2154-2157.	1.8	12
43	Photoluminescence dynamics and quantum yield of intrinsically conductive ZnO from atomic layer deposition. <i>Journal of Luminescence</i> , 2018, 201, 85-89.	3.1	12
44	Effect of photodarkening on dynamics of visible and infrared photoluminescence in Cd <sub>x</sub> Se <sub>1-x</sub> -doped glass. <i>Physical Review B</i> , 1995, 52, R8605-R8608.	3.2	11
45	Femtosecond photoluminescence spectroscopy of silicon nanocrystals. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2006, 3, 3873-3876.	0.8	11
46	Ultrafast dynamics of photoexcited charge carriers in nanocrystalline diamond. <i>Applied Physics Letters</i> , 2008, 93, 083102.	3.3	11
47	Comparison of micromagnetic parameters of the ferromagnetic semiconductors (Ga,Mn)(As,P) and (Ga,Mn)As. <i>Physical Review B</i> , 2014, 90, .	3.2	11
48	Comparison of space weathering spectral changes induced by solar wind and micrometeoroid impacts using ion- and femtosecond-laser-irradiated olivine and pyroxene. <i>Astronomy and Astrophysics</i> , 2021, 654, A143.	5.1	11
49	Ultrafast Optical Nonlinearities in CdS Nanocrystalline Thin Films Prepared by Chemical Bath Deposition. <i>Physica Status Solidi (B): Basic Research</i> , 2001, 224, 481-485.	1.5	10
50	Carrier diffusion in microcrystalline silicon studied by the picosecond laser induced grating technique. <i>Applied Physics Letters</i> , 2001, 79, 626-628.	3.3	10
51	Multicolour photochromic behaviour of silver nanoparticles in titanium dioxide matrix. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2008, 5, 3496-3498.	0.8	10
52	Dynamics of photoexcited carriers in CVD diamond studied by mid-infrared femtosecond spectroscopy. <i>Diamond and Related Materials</i> , 2017, 71, 13-19.	3.9	10
53	Optical non-linearity and hysteresis in porous silicon. <i>Thin Solid Films</i> , 1996, 276, 84-87.	1.8	9
54	Porous silicon grains in SiO <sub>2</sub> matrix: Ultrafast photoluminescence and optical gain. <i>Journal of Non-Crystalline Solids</i> , 2006, 352, 3041-3046.	3.1	9

#	ARTICLE	IF	CITATIONS
55	Subgap photoluminescence spectroscopy of nanocrystalline diamond films. <i>Diamond and Related Materials</i> , 2009, 18, 776-778.	3.9	9
56	Control of condensation and evaporation of electron-hole liquid in diamond by femtosecond laser pulses. <i>Physica Status Solidi - Rapid Research Letters</i> , 2013, 7, 278-281.	2.4	9
57	Coherent phonon dynamics in diamond detected via multiphoton absorption. <i>Applied Physics Letters</i> , 2019, 115, .	3.3	9
58	Single-step light-assisted patterning of photonic properties of chemical-bath-deposited CdSe nanocrystalline films. <i>Thin Solid Films</i> , 2005, 480-481, 457-461.	1.8	8
59	Optical harmonic generation in nanocrystalline diamond. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2012, 44, 1300-1303.	2.7	8
60	Experimental observation of anharmonic effects in coherent phonon dynamics in diamond. <i>Diamond and Related Materials</i> , 2018, 90, 202-206.	3.9	8
61	Superlinear photoluminescence in silicon nanocrystals: The role of excitation wavelength. <i>Journal of Luminescence</i> , 2006, 121, 263-266.	3.1	7
62	Ultrafast photoluminescence dynamics of blue-emitting silicon nanostructures. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2011, 8, 979-984.	0.8	7
63	Influence of boron doping and hydrogen passivation on recombination of photoexcited charge carriers in silicon nanocrystal/SiC multilayers. <i>Journal of Applied Physics</i> , 2013, 114, .	2.5	7
64	Quantum behavior of terahertz photoconductivity in silicon nanocrystals networks. <i>Physical Review B</i> , 2017, 95, .	3.2	7
65	Absence of free carriers in silicon nanocrystals grown from phosphorus- and boron-doped silicon-rich oxide and oxynitride. <i>Beilstein Journal of Nanotechnology</i> , 2018, 9, 1501-1511.	2.8	7
66	Generation of few-cycle laser pulses at 2 $\mu$ m with passively stabilized carrier-envelope phase characterized by f-3f interferometry. <i>Optics and Laser Technology</i> , 2021, 144, 107394.	4.6	7
67	Negative and positive nonlinear absorption in CdS-doped glasses. <i>Journal of Materials Science Letters</i> , 2001, 20, 343-345.	0.5	6
68	Modification of carrier dynamics in CdSe nanocrystals by excess Cd in deposition bath. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2007, 36, 205-210.	2.7	6
69	Light-assisted adsorption processes in nanocrystalline diamond membranes studied by femtosecond laser spectroscopy. <i>Diamond and Related Materials</i> , 2010, 19, 918-922.	3.9	6
70	Laser-Induced Precession of Magnetization in GaMnAs. <i>IEEE Transactions on Magnetics</i> , 2008, 44, 2674-2677.	2.1	5
71	Ultrafast photoluminescence spectroscopy of H- and O-terminated nanocrystalline diamond films. <i>Diamond and Related Materials</i> , 2011, 20, 1155-1159.	3.9	5
72	Experimental observation of spin-dependent electron many-body effects in CdTe. <i>Journal of Applied Physics</i> , 2014, 116, 053913.	2.5	5

#	ARTICLE	IF	CITATIONS
73	Influence of air annealing on the luminescence dynamics of HPHT nanodiamonds. <i>Diamond and Related Materials</i> , 2016, 68, 62-65.	3.9	5
74	Picosecond dynamics of photoexcited carriers in interacting silicon nanocrystals. <i>Applied Surface Science</i> , 2016, 377, 238-243.	6.1	5
75	Observation of ultrafast impact ionization in diamond driven by mid-infrared femtosecond pulses. <i>Journal of Applied Physics</i> , 2020, 128, 015701.	2.5	5
76	Multiphoton-excited exciton molecules in diamond. <i>Journal of Luminescence</i> , 2021, 231, 117774.	3.1	5
77	Luminescence and nonlinear optical properties of porous silicon. <i>Journal of Luminescence</i> , 1994, 60-61, 441-444.	3.1	4
78	Photoluminescence dynamics of porous silicon: picoseconds to milliseconds. <i>Thin Solid Films</i> , 1996, 276, 58-60.	1.8	4
79	Time-resolved photoluminescence in porous silicon. <i>Journal of Luminescence</i> , 1997, 72-74, 347-349.	3.1	4
80	Ultrafast photoluminescence spectroscopy of InAs/GaAs quantum dots. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2009, 6, 853-856.	0.8	4
81	Multicolour Photochromic Response of Ag-TiO <sub>2</sub> /SiO <sub>2</sub> Nanocomposite – Role of Light Illumination. <i>Journal of Nanoscience and Nanotechnology</i> , 2010, 10, 2630-2634.	0.9	4
82	Hot-phonon-induced indirect absorption in silicon nanocrystals. <i>Journal of Applied Physics</i> , 2013, 114, 173103.	2.5	4
83	Simple technique for the compression of nanojoule pulses from few-cycle laser oscillator to 17-cycle duration via nonlinear spectral broadening in diamond. <i>Optics Letters</i> , 2018, 43, 3654.	3.3	4
84	Pathways of carrier recombination in Si/SiO <sub>2</sub> nanocrystal superlattices. <i>Journal of Applied Physics</i> , 2019, 126, 163101.	2.5	4
85	Effect of photodarkening on picosecond photoluminescence in CdS <sub>2</sub> -doped glasses. <i>Journal of Luminescence</i> , 1997, 72-74, 375-376.	3.1	3
86	Ultrafast carrier dynamics in CdSe nanocrystalline films on crystalline silicon substrate. <i>Thin Solid Films</i> , 2002, 403-404, 462-466.	1.8	3
87	Ultrafast carrier dynamics in CdS-doped glasses. <i>Journal of Luminescence</i> , 2003, 102-103, 138-143.	3.1	3
88	Investigation of exchange coupled bilayer Fe/CuMnAs by pump-probe experiment. <i>Physica Status Solidi - Rapid Research Letters</i> , 2017, 11, 1600441.	2.4	3
89	Fast Optical Control of Spin in Semiconductor Interfacial Structures. <i>Physical Review Applied</i> , 2017, 8, .	3.8	3
90	Ultrafast carrier dynamics in wide gap hydrogenated amorphous silicon. <i>Journal of Luminescence</i> , 1998, 80, 435-438.	3.1	2

#	ARTICLE	IF	CITATIONS
91	Ultrafast laser spectroscopy of semiconductor nanocrystals. International Journal of Nanotechnology, 2012, 9, 632.	0.2	2
92	Probing of Spin Wave Resonances in (Ga,Mn)As by Time-Resolved Magneto-Optical Technique. IEEE Transactions on Magnetics, 2014, 50, 1-4.	2.1	2
93	Voigt effect-based wide-field magneto-optical microscope integrated in a pump-probe experimental setup. Review of Scientific Instruments, 2018, 89, 073703.	1.3	2
94	Sub-picosecond electron dynamics in polycrystalline diamond films. Diamond and Related Materials, 2020, 108, 107935.	3.9	2
95	Novel Materials for Second Harmonic Generation - Salts of L-Valine and Selenic Acid. Materials Research Society Symposia Proceedings, 2002, 725, 1.	0.1	1
96	Infrared picosecond absorption spectroscopy of microcrystalline silicon: separation between carrier recombination in crystalline and amorphous fractions. Applied Physics A: Materials Science and Processing, 2002, 74, 253-256.	2.3	1
97	Spectral and dynamical study of nonlinear luminescence from silicon nanocrystals excited by ultrashort pulses. Physica E: Low-Dimensional Systems and Nanostructures, 2009, 41, 959-962.	2.7	1
98	Picosecond dynamics of photoexcited carriers in silicon nanocrystal/Si <sub>3</sub> N <sub>4</sub> superlattices: Presence of KO centers. Journal of Applied Physics, 2015, 117, 093101.	2.5	1
99	Enhancement of the spin Hall voltage in a reverse-biased planar p-n junction. Physical Review B, 2016, 94, .	3.2	1
100	Nonlinear spectroscopy and applications: time-resolved nonlinear spectroscopy of silicon nanocrystals. , 2007, , .		0
101	Effect of temperature and excitation intensity on photoexcited charge carrier dynamics in Si-NCs/SiO <sub>2</sub> superlattices. Proceedings of SPIE, 2013, , .	0.8	0
102	Type-I InAs quantum dots covered by GaAsSb strain reducing layer. Proceedings of SPIE, 2014, , .	0.8	0
103	Transverse Kerr effect in magnetic (Ga, Mn)As-based semiconductors and its applicability in waveguide isolators. Journal of Applied Physics, 2017, 122, 023104.	2.5	0
104	Valley-dependent Bloch-Siegert shift in monolayer WSe <sub>2</sub> : transition to the strong-field regime. , 2021, , .		0
105	Colloidal Solution of Organically Capped Si Nanocrystals in Xylene: Efficient Photoluminescence in the Yellow Region. , 2008, , .		0
106	Light-Induced Precession of Magnetization in Ferromagnetic Semiconductor (Ga,Mn)As. Acta Physica Polonica A, 2010, 118, 1065-1066.	0.5	0