Polina A Ryabochkina

List of Publications by Year
in descending order

114	952	516561 16	642610 23
papers	citations	h-index	g-index

116	116	116	630
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Calcium niobium gallium and calcium lithium niobium gallium garnets doped with rare earth ionsâ€“â€“effective laser media. Optical Materials, 2002, 20, 197-209.	1.7	90
2	Structure and conductivity of yttria and scandiaâ€doped zirconia crystals grown by skull melting. Journal of the American Ceramic Society, 2017, 100, 5536-5547.	1.9	37
3	Two-micron lasing on diode-pumped Y₂O₃: Tm ceramics. Quantum Electronics, 2016, 46, 597-600.	0.3	29
4	Investigation of the mechanisms of upconversion luminescence in Ho3+ doped CaF2 crystals and ceramics upon excitation of 5I7 level. Journal of Luminescence, 2015, 167, 120-125.	1.5	28
5	Hypersensitive transitions of Tm3+, Ho3+ and Dy3+ rare-earth ions in garnet crystals. Journal of Luminescence, 2012, 132, 1900-1905.	1.5	27
6	Investigation of endovenous laser ablation of varicose veins in vitro using 1.885-Î¼m laser radiation. Lasers in Medical Science, 2016, 31, 503-510.	1.0	27
7	Visualiser of two-micron laser radiation based on Ho:CaF2crystals. Quantum Electronics, 2014, 44, 602-605.	0.3	24
8	Spectroscopic, luminescent and laser properties of nanostructured CaF2:Tm materials. Optical Materials, 2013, 35, 1859-1864.	1.7	23
9	Intensity of the f-f transitions of Nd3+, Er3+, and Tm3+ rare-earth ions in calcium niobium gallium garnet crystals. Physics of the Solid State, 2008, 50, 1611-1618.	0.2	22
10	Nanostructured Tmâ€‰:â€‰CaF₂ceramics: potential gain media for two micron lasers. Quantum Electronics, 2011, 41, 193-197.	0.3	21
11	Features of the local structure and transport properties of ZrO2-Y2O3-Eu2O3 solid solutions. Journal of Alloys and Compounds, 2019, 770, 320-326.	2.8	19
12	The impact of structural changes in ZrO2-Y2O3 solid solution crystals grown by directional crystallization of the melt on their transport characteristics. Materials Letters, 2017, 205, 186-189.	1.3	18
13	Upconversion luminescence of Ca_{1â^’x}Ho_xF_{2+x}and Sr_{0.98â^’x}Er_{0.02}Ho_xF_{2.02+x}powders upon excitation by an infrared laser. Laser Physics Letters, 2017, 14, 076003.	0.6	18
14	Infrared-to-visible upconversion luminescence in SrF₂:Er powders upon excitation of the ⁴I_{13/2} level. Optical Materials Express, 2018, 8, 1863.	1.6	17
15	Intensities of hypersensitive transitions in garnet crystals doped with Er3+ ions. Optics and Spectroscopy (English Translation of Optika I Spektroskopiya), 2011, 110, 910-916.	0.2	16
16	Structural, spectral-luminescent, and lasing properties of nanostructured Tm : CaF₂ceramics. Quantum Electronics, 2012, 42, 853-857.	0.3	16
17	Preparation and properties of methylcellulose/nanocellulose/Ð¡Ð°F 2 :ÐÐ¾ polymer-inorganic composite films for two-micron radiation visualizers. Journal of Fluorine Chemistry, 2017, 202, 9-18.	0.9	16
18	Spectroscopy of optical centers of Eu3+ ions in partially stabilized and stabilized zirconium crystals. Optics and Spectroscopy (English Translation of Optika I Spektroskopiya), 2017, 122, 580-587.	0.2	16

#	Article	IF	Citations
19	Melt growth, structure and properties of (ZrO2)1â˜'(Sc2O3) solid solution crystals (x=0.035â˜'0.11). Journal of Crystal Growth, 2016, 443, 54-61.	0.7	15
20	Phase composition, structure and properties of (ZrO2)1â˜'â˜'(Sc2O3) (Y2O3) solid solution crystals (x=0.08â€"0.11; y=0.01â€"0.02) grown by directional crystallization of the melt. Journal of Crystal Growth, 2017, 457, 122-127.	0.7	15
21	Anisotropy of the mechanical properties and features of the tetragonal to monoclinic transition in partially stabilized zirconia crystals. Journal of Alloys and Compounds, 2019, 792, 1255-1260.	2.8	14
22	Growth, refined structural and spectroscopic characteristics of Tm3+-doped NaGd(WO4)2 single crystals. Journal of Crystal Growth, 2009, 311, 4171-4178.	0.7	13
23	Tunable quasi-cw two-micron lasing in diode-pumped crystals of mixed Tm³⁺-doped sodium â€" lanthanum â€" gadolinium molybdates and tungstates. Quantum Electronics, 2010, 40, 847-850.	0.3	13
24	Broadband white radiation in Yb3+- and Er3+-doped nanocrystalline powders of yttrium orthophosphates irradiated by 972-nm laser radiation. JETP Letters, 2016, 103, 302-308.	0.4	13
25	Upconversion Luminescence of Fluoride Phosphors SrF2:Er,Yb under Laser Excitation at 1.5 Î¼m. Optics and Spectroscopy (English Translation of Optika I Spektroskopiya), 2018, 125, 537-542.	0.2	13
26	Structure and transport properties of zirconia crystals co-doped by scandia, ceria and yttria. Journal of Materiomics, 2019, 5, 273-279.	2.8	13
27	Broadband emission from Er-contained yttrium orthophosphate and orthovanadate nanopowders excited by near infrared radiation. Journal of Luminescence, 2019, 205, 560-567.	1.5	13
28	Mechanical characteristics, structure, and phase stability of tetragonal crystals of ZrO2â€"Y2O3 solid solutions doped with cerium and neodymium oxides. Journal of Physics and Chemistry of Solids, 2021, 150, 109808.	1.9	13
29	Calcium â€" niobium â€" gallium and calcium â€" lithium â€" niobium â€" gallium garnet crystals as active media for diode-pumped lasers. Quantum Electronics, 2001, 31, 531-533.	0.3	11
30	Intensity parameters for Er3+ ions in calcium-niobium-gallium garnet crystals. Optics and Spectroscopy (English Translation of Optika I Spektroskopiya), 2007, 102, 722-727.	0.2	11
31	Synthesis, spectroscopic and luminescent properties of nanosized powders of yttrium phosphates doped with Er3+ ions. Journal of Nanoparticle Research, 2014, 16, 1.	0.8	11
32	Optimization of endovenous laser coagulation: in vivo experiments. Lasers in Medical Science, 2020, 35, 867-875.	1.0	11
33	Nanostructured crystals of partially yttria-stabilized and Nd3+ doped zirconia: Structure and luminescent properties. Journal of Alloys and Compounds, 2015, 621, 295-300.	2.8	10
34	Mechanisms and absolute quantum yield of upconversion luminescence of fluoride phosphors. Chinese Optics Letters, 2018, 16, 091901.	1.3	10
35	Absorption and luminescence characteristics of5I7â†"5I8transitions of the holmium ion in Ho3+-doped aluminosilicate preforms and fibres. Quantum Electronics, 2015, 45, 102-104.	0.3	9
36	Diode-pumped LiY_{0.3}Lu_{0.7}F₄:Pr and LiYF₄:Pr red lasers. Laser Physics Letters, 2016, 13, 125801.	0.6	9

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37	Features of the interaction of near-infrared laser radiation with Yb-doped dielectric nanoparticles. JETP Letters, 2016, 103, 743-751.	0.4	9
38	Phase composition and local structure of scandia and yttria stabilized zirconia solid solution. Journal of Luminescence, 2020, 222, 117170.	1.5	9
39	Exploring the potential of Pr3+:LiY0.3Lu0.7F4 mixed crystal for diode-pumped watt-level continuous-wave lasers in the visible region. Optics and Laser Technology, 2022, 151, 108023.	2.2	9
40	Spectroscopic properties of erbium-doped yttria-stabilised zirconia crystals. Quantum Electronics, 2014, 44, 135-137.	0.3	8
41	Tunable 2-mm lasing in calcium â€“ niobium â€“ gallium garnet crystals doped with Ho3+ ions. Quantum Electronics, 2017, 47, 607-609.	0.3	8
42	Synthesis and spectral-luminescent properties of La1-xPrxGa0.5Sb1.5O6 solid solutions. Ceramics International, 2019, 45, 16886-16892.	2.3	8
43	Interaction of Tm3+ions in calcium-niobium-gallium and yttrium-aluminum garnet laser crystals. Quantum Electronics, 1993, 23, 958-961.	0.3	7
44	Interaction of Er³⁺ions in Er-doped calcium â€” niobium â€” gallium garnet crystals. Quantum Electronics, 2010, 40, 377-380.	0.3	7
45	Two-micron lasing in NaLa1/2Gd1/2(WO4)2crystalsdoped with Tm3+ions. Quantum Electronics, 2010, 40, 101-102.	0.3	7
46	Spectral, luminescent, and lasing properties of ZrO2â€”Y2O3â€”Tm2O3crystals. Quantum Electronics, 2012, 42, 580-582.	0.3	7
47	Spectroscopic characteristics of the Nd3+ ions in garnet crystals. Journal of Luminescence, 2012, 132, 240-243.	1.5	7
48	Spectroscopic properties of Nd3+ doped NaLa0.5Gd0.5(WO4)2 crystals. Journal of Luminescence, 2013, 138, 32-38.	1.5	7
49	Lasing characteristics of ZrO₂â€“Y₂O₃â€“Ho₂O₃crystal. Quantum Electronics, 2013, 43, 838-840.	0.3	7
50	CW andQ-switched 2Âµm solid-state laser on ZrO₂â€“Y₂O₃â€“Ho₂O₃crystals pumped by a Tm fiber laser. Laser Physics, 2018, 28, 035803.	0.6	7
51	Ionic conductivity, phase composition, and local defect structure of ZrO2-Gd2O3system solid solution crystals. Journal of Solid State Electrochemistry, 2019, 23, 2619-2626.	1.2	7
52	Upconversion luminescence of CaF2-SrF2-ErF3 single crystals upon 1.5 Î¼m laser excitation. Journal of Physics: Conference Series, 2019, 1410, 012086.	0.3	7
53	Thermal Conductivity of Cubic ZrO2 Single Crystals Stabilized with Yttrium Oxide. Physics of the Solid State, 2020, 62, 235-239.	0.2	7
54	Structural features and distribution coefficients of Pr 3+ , Y 3+ and Lu 3+ ions in LiY 1â^'x Lu x F 4 mixture crystals. Journal of Alloys and Compounds, 2017, 720, 1-7.	2.8	6

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55	Mechanical properties and transformation hardening mechanism in yttria, ceria, neodymia and ytterbia co-doped zirconia based solid solutions. Materials Chemistry and Physics, 2019, 232, 28-33.	2.0	6
56	Blackbody emission from CaF2and ZrO2nanosized dielectric particles doped with Er3+ions. RSC Advances, 2020, 10, 26288-26297.	1.7	6
57	Structure and phase transformations in scandia, yttria, ytterbia and ceria-doped zirconia-based solid solutions during directional melt crystallization. Journal of Alloys and Compounds, 2020, 844, 156040.	2.8	6
58	Cw andQ-switched Nd:NaLa(MoO₄)₂laser noncritical to the temperature drift of the diode pump laser wavelength. Quantum Electronics, 2010, 40, 475-478.	0.3	5
59	Structure and spectral-luminescence properties of yttrium-stabilized zirconia crystals activated with Tm3+ ions. Optics and Spectroscopy (English Translation of Optika I Spektroskopiya), 2012, 112, 594-600.	0.2	5
60	Structure, phase composition, and spectral-luminescent properties of ZrO2-Y2O3-Er2O3 crystals. Physics of the Solid State, 2015, 57, 1579-1587.	0.2	5
61	Tunable 2Âμm ZrO₂â€“Y₂O₃â€“Ho₂O₃solid-state laser. Laser Physics Letters, 2017, 14, 055807.	0.6	5
62	Synthesis and Luminescent Properties of Nanocrystalline (1 â€“ Ñ…)ZrO2â€“Ñ…Er2O3 (Ñ… = 0.015â€“0.5) Solid Solutions. Russian Journal of Inorganic Chemistry, 2020, 65, 1298-1303.	0.3	5
63	Synthesis and photoluminescence properties of novel LaGa0.5Sb1.5O6: Eu3+, Dy3+, Tb3+ and BiGeSbO6: Eu3+, Dy3+, Tb3+ phosphors. Journal of Alloys and Compounds, 2021, 886, 161175.	2.8	5
64	Lasing and spectroscopic properties of calcium-niobium-gallium garnet crystals doped with Tm3+ions. Quantum Electronics, 1993, 23, 309-311.	0.3	4
65	Growth, optical parameters, and spectroscopic properties of crystals of disordered scheelite-like molybdates NaLa x Gd1 â˜ x (MoO4)2 (x = 0â€“1) activated by Tm3+ ions. Optics and Spectroscopy (English) Tj ETQq1 1 0.784314 r		4
66	Phase composition and spectral-luminescent properties of yttrium partially stabilized zirconia crystals doped with Nd2O3 and CeO2. Optics and Spectroscopy (English Translation of Optika I) Tj ETQq0 0 0 rgBT /Overlock	0.2	4
67	Specific Features of the Local Structure and Transport Properties of ZrO2â€“Sc2O3â€“Y2O3 and ZrO2â€“Sc2O3â€“Yb2O3 Crystals. Optics and Spectroscopy (English Translation of Optika I) Tj ETQq1 1 0.784314 rgBT /Overlock	0.2	4
68	Effect of heat treatment on the structure and mechanical properties of partially gadolinia-stabilized zirconia crystals. Journal of Asian Ceramic Societies, 2021, 9, 559-569.	1.0	4
69	Influence of saturable absorber parameters on the operation regimes of a dumbbell-shaped thulium fibre laser. Quantum Electronics, 2021, 51, 518-524.	0.3	4
70	Morphological changes of veins and perivenous tissues during endovenous laser coagulation using 2-Î¼m laser radiation and various types of optical fibers. Journal of Vascular Surgery: Venous and Lymphatic Disorders, 2022, 10, 749-757.	0.9	4
71	Spectral and laser properties of Tm-doped calcium-niobium-gallium garnets. , 2007, , .		3
72	Cooperative processes in Cs2NaYbF6 elpasolite crystals. Journal of Luminescence, 2014, 153, 125-129.	1.5	3

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73	Spectroscopy of optical centers of Eu3+ ions in ZrO2-Gd2O3-Eu2O3 crystals. Journal of Luminescence, 2018, 200, 66-73.	1.5	3
74	Structural characteristics of melt-grown (ZrO2)0.99-(Sc2O3) (Yb2O3)0.01 solid solution crystals and their effect on ionic conductivity. Journal of Crystal Growth, 2020, 547, 125808.	0.7	3
75	Nonradiative energy transfer of electronic excitation between Tm3+ ions in Y2O3:Tm laser ceramics. Optical Materials, 2020, 101, 109762.	1.7	3
76	Spatial anomalies in spectral-kinetic properties of Pr3+ - Doped LiY1-xLuxF4 mixed crystals. Journal of Luminescence, 2020, 222, 117172.	1.5	3
77	Comparative study of luminescent properties of Bi1-xPrxGeSbO6 and La1-xPrxGa0.5Sb1Â·5O6 (x = 0â€“0.5) solid solutions with rosiaite structures. Journal of Luminescence, 2021, 232, 117869.	1.5	3
78	Vein wall changes after 1910 nm laser coagulation with bare-fiber and radial fiber. Flebologiya, 2021, 15, 154.	0.2	3
79	Optimization of the endovenous laser coagulation using two-micron laser radiation. , 2020, , .		3
80	Lasing on the⁴I_{13/2}â†’⁴I_{15/2}transition of Er³⁺ions in ZrO₂â€“ Y₂O₃â€“ Er₂O₃crystals under resonant diode pumping into the⁴I_{13/2}level. Quantum Electronics, 2016, 46, 451-452.	0.3	2
81	Anisotropy of mechanical properties and hardening mechanism in ZrO 2 â€“Y 2 O 3 solid solution crystals. Modern Electronic Materials, 2017, 3, 142-147.	0.2	2
82	Comparison of Structural and Transport Properties of Zirconia Single-Crystals Stabilized by Yttria and Gadolinia. ECS Transactions, 2019, 91, 1173-1183.	0.3	2
83	Comparison of mechanical properties of zirconia crystals partially stabilized with yttria and gadolinia. Journal of Physics: Conference Series, 2019, 1347, 012059.	0.3	2
84	Influence of growth and heat treatment conditions on lasing properties of ZrO2-Y2O3-Ho2O3 crystals. Optical Materials, 2020, 99, 109611.	1.7	2
85	Mechanisms of Upconversion Luminescence in BaF2â€“HoF3 Crystals under Excitation to the 5I5 Level of Ho3+ Ions. Inorganic Materials, 2020, 56, 1033-1038.	0.2	2
86	Characteristics of Upconversion Luminescence of CaF2:Er Powders Excited by 1.5-Âµm Laser Radiation. Optics and Spectroscopy (English Translation of Optika I Spektroskopiya), 2020, 128, 200-206.	0.2	2
87	Effect of the ionic radius of stabilizing oxide cation on the local structure and transport properties of zirconia based solid solutions. Journal of Alloys and Compounds, 2021, 870, 159396.	2.8	2
88	Effect of Heat Treatment on the Thermal Conductivity of Single Crystals of ZrO2-Based Solid Solutions Stabilized with Scandium and Yttrium Oxides. Physics of the Solid State, 2020, 62, 2357-2364.	0.2	2
89	Structure and transport characteristics of single crystals of zirconia stabilized by scandia and co-doped with terbium oxide. Solid State Ionics, 2022, 375, 115836.	1.3	2
90	Single crystal solid state electrolytes based on yttria, ytterbia and gadolinia doped zirconia. Materials Chemistry and Physics, 2022, 277, 125499.	2.0	2

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91	Modelling the population processes of the energy levels of Tm^3+ ions in yttrium-aluminum garnet and calcium-niobium-gallium garnet crystals doped with Tm^3+ ions under steady-state pumping. Journal of Optical Technology (A Translation of Opticheskii Zhurnal), 2006, 73, 51.	0.2	1
92	The study of spectroscopic and luminescence properties of disordered laser crystals calcium niobium gallium garnet doped with Er3+. , 2008, , .		1
93	Structure, phase composition, and spectral luminescence properties of partially stabilized zirconium dioxide crystals doped with Yb3+ ions. Physics of the Solid State, 2016, 58, 1308-1313.	0.2	1
94	Tunable upconversion luminescence of SrF₂: Er,Tm phosphors. Journal of Physics: Conference Series, 2019, 1410, 012121.	0.3	1
95	Effect of the Phase Composition and Local Crystal Structure on the Transport Properties of the ZrO2â€“Y2O3 and ZrO2â€“Gd2O3 Solid Solutions. Russian Microelectronics, 2019, 48, 523-530.	0.1	1
96	Effect of recovery time of nonlinear absorber saturated losses on the soliton pulse structure in a fibre laser with different cavity lengths. Quantum Electronics, 2019, 49, 819-823.	0.3	1
97	Melt grown ZrO2 single crystals partially stabilized with Gd2O3: Phase composition and indentation induced transformations. Journal of Crystal Growth, 2020, 535, 125546.	0.7	1
98	Phase Stability and Transport Properties of (ZrO2)0.91â^'x(Sc2O3)0.09(Yb2O3)x Crystals (x = 0â€“0.01). Crystals, 2021, 11, 83.	1.0	1
99	Influence of phase composition and local crystal structure on the transport properties of ZrO2â^'Y2O3 and ZrO2â^'Gd2O3 solid solutions. Izvestiya Vysshikh Uchebnykh Zavedenii Materialy Elektronnoi Tekhniki = Materials of Electronics Engineering, 2019, 21, 156-165.	0.1	1
100	Influence of saturable absorber saturation power, modulation depth and relaxation time on pulse parameters of a soliton fibre laser. Quantum Electronics, 2020, 50, 419-424.	0.3	1
101	Dual-wavelength Soliton Dumbbell-shaped Thulium-doped Fiber Laser. , 2020, , .		1
102	<title>The study of processes of nonradiative energy transfer between ions Yb<formula>^{<roman>3+ </roman>}</formula>and Tm<formula>^{<roman>3+</roman>}</formula> in alumosilicate fibers</title>. , 2007, , .		0
103	Optical, spectroscopic and luminescent properties of Tm³⁺-doped NaLaGd(MoO<inf>4</inf>)<inf>2</inf> and NaLa(MoO<inf>4</inf>)<inf>2</inf> crystals. , 2009, , .		0
104	Structure and spectral-luminescent properties of nanostructured CaF<inf>2</inf>-TmF<inf>3</inf> ceramics a potential active medium for 2 µm lasers. , 2011, , .		0
105	Spectroscopic, luminescent and laser properties of Tm³⁺-doped mixed NaLaGd tungstates and molibdates. , 2011, , .		0
106	Spectroscopic studies of a tetragonalâ€“monoclinic phase transition in ZrO2â€“Y2O3â€“CeO2â€“Nd2O3 crystals. Physics of the Solid State, 2015, 57, 1984-1990.	0.2	0
107	Effect of initial precursor concentration on the spectral-luminescent characteristics and cytotoxicity of carbon nanoparticles. Biomedical Physics and Engineering Express, 2019, 5, 025017.	0.6	0
108	Development of efficient polymer films with upconversion particles. Journal of Physics: Conference Series, 2019, 1410, 012154.	0.3	0

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109	Lasing characteristics of ZrO2 â€“ Y2O3 â€“ Ho2O3 crystals pumped by a Tm : LiYF4 laser. Quantum Electronics, 2020, 50, 727-729.	0.3	0
110	Q-switched lasing in ZrO2 â€“ Y2O3 â€“ Ho2O3 crystals. Quantum Electronics, 2021, 51, 586-592.	0.3	0
111	Ce,Pr:LiY_{1-x}Lu_xF₄ mixed crystals as perspective active media for UV lasing. , 2018, , .		0
112	Vein Wall Changes After Laser Coagulation with Different Parameters. Flebologiya, 2019, 13, 190.	0.2	0
113	The soliton mode-lock fiber laser pulse energy dependence from saturable absorber parameters. , 2020, , .		0
114	Comparison of the results of endovenous laser coagulation (EVLC) using 2-Î¼m radiation and various types of fiber. , 2020, , .		0