Anna Åukowiak

List of Publications by Year
in descending order

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160 papers	2,262 citations	201674 27 h-index	265206 42 g-index
166 all docs	166 docs citations	166 times ranked	2987 citing authors

#	Article	IF	Citations
1	Similarities and Differences between Silver Ions and Silver in Nanoforms as Antibacterial Agents. International Journal of Molecular Sciences, 2018, 19, 444.	4.1	307
2	White emission of lithium ytterbium tetraphosphate nanocrystals. Optics Express, 2011, 19, 14083.	3.4	85
3	Antimicrobial graphene family materials: Progress, advances, hopes and fears. Advances in Colloid and Interface Science, 2016, 236, 101-112.	14.7	78
4	Bioactive glass nanoparticles obtained through solâ€“gel chemistry. Chemical Communications, 2013, 49, 6620.	4.1	67
5	Anti-Stokes bright yellowish emission of NdAlO3 nanocrystals. Journal of Applied Physics, 2012, 111, .	2.5	61
6	Possible electrochemical origin of ferroelectricity in HfO2 thin films. Journal of Alloys and Compounds, 2020, 830, 153628.	5.5	57
7	Tb3+/Yb3+ codoped silicaâ€“hafnia glass and glassâ€“ceramic waveguides to improve the efficiency of photovoltaic solar cells. Optical Materials, 2016, 52, 62-68.	3.6	53
8	Synthesis and luminescence properties of Eu3+-doped LaAlO3 nanocrystals. Journal of Alloys and Compounds, 2006, 408-412, 828-830.	5.5	50
9	IR and Raman spectroscopy study of YAG nanoceramics. Chemical Physics Letters, 2010, 494, 279-283.	2.6	49
10	Optical properties of SiO2â€“TiO2 thin film waveguides obtained by the solâ€“gel method and their applications for sensing purposes. Optical Materials, 2005, 27, 1501-1505.	3.6	47
11	Sensing abilities of materials prepared by solâ€“gel technology. Journal of Sol-Gel Science and Technology, 2009, 50, 201-215.	2.4	45
12	Optical field enhanced nonlinear absorption and optical limiting properties of 1-D dielectric photonic crystal with ZnO defect. Optical Materials, 2015, 50, 229-233.	3.6	45
13	Bright upconversion emission of Nd3+ in LiLa1â^'xNdxP4O12 nanocrystalline powders. Optical Materials, 2011, 33, 1492-1494.	3.6	41
14	Synthesis, Structure, and Optical Properties of LiEu(PO₃)₄Nanoparticles. Inorganic Chemistry, 2011, 50, 1321-1330.	4.0	40
15	Tin-dioxide nanocrystals as Er 3+ luminescence sensitizers: Formation of glass-ceramic thin films and their characterization. Optical Materials, 2017, 63, 95-100.	3.6	40
16	Hydroxyapatites and Europium(III) Doped Hydroxyapatites as a Carrier of Silver Nanoparticles and Their Antimicrobial Activity. Journal of Biomedical Nanotechnology, 2012, 8, 605-612.	1.1	35
17	From flexible electronics to flexible photonics: A brief overview. Optical Materials, 2021, 115, 111011.	3.6	34
18	Optical properties of Nd3+-doped phosphate glasses. Optical Materials, 2020, 99, 109591.	3.6	33

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19	The effect of pumping power on fluorescence behavior of LiNdP4O12 nanocrystals. Optical Materials, 2011, 33, 1097-1101.	3.6	32
20	Nanoscale ferroelectricity in pseudo-cubic sol-gel derived barium titanate - bismuth ferrite (BaTiO3â€“) Tj ETQq0 0 0 rgBT /Overlock 10 T	5.5	32
21	Tuning luminescence properties of Eu3+ doped CaAl2O4 nanophosphores with Na+ co-doping. Journal of Luminescence, 2013, 133, 102-109.	3.1	31
22	Metal oxide one dimensional photonic crystals made by RF sputtering and spin coating. Ceramics International, 2015, 41, 8655-8659.	4.8	30
23	Comparative studies on structural and luminescent properties of Eu3+:MgAl2O4 and Eu3+/Na+:MgAl2O4 nanopowders and nanoceramics. Optical Materials, 2012, 35, 130-135.	3.6	29
24	Photonic Crystal Stimuli-Responsive Chromatic Sensors: A Short Review. Micromachines, 2020, 11, 290.	2.9	29
25	Silver doping of silica-hafnia waveguides containing Tb 3+ /Yb 3+ rare earths for downconversion in PV solar cells. Optical Materials, 2016, 60, 264-269.	3.6	28
26	Gold nanoparticles 1D array as mechanochromic strain sensor. Materials Chemistry and Physics, 2017, 192, 94-99.	4.0	28
27	Synthesis and luminescence properties of LiLa1â^'xNdxP4O12 nanocrystals. Optical Materials, 2010, 33, 131-135.	3.6	27
28	Coherent emission from fully Er3+ doped monolithic 1-D dielectric microcavity fabricated by rf-sputtering. Optical Materials, 2019, 87, 107-111.	3.6	27
29	Patterns of Oral Microbiota in Patients with Apical Periodontitis. Journal of Clinical Medicine, 2021, 10, 2707.	2.4	26
30	New photosensitive nanometric graphite oxide composites as antimicrobial material with prolonged action. Journal of Inorganic Biochemistry, 2016, 159, 142-148.	3.5	25
31	Synthesis, structure and spectroscopic properties of luminescent GdVO4:Dy3+ and DyVO4 particles. Optical Materials, 2018, 76, 308-316.	3.6	25
32	Structural and spectroscopic properties of Eu3+-activated nanocrystalline tetraphosphates loaded in silicaâ€“hafnia thin film. Journal of Non-Crystalline Solids, 2014, 401, 32-35.	3.1	24
33	Photoluminescence and lasing in whispering gallery mode glass microspherical resonators. Journal of Luminescence, 2016, 170, 755-760.	3.1	24
34	Upconversion Luminescence of Silicaâ€“Calcia Nanoparticles Co-doped with Tm3+ and Yb3+ Ions. Materials, 2021, 14, 937.	2.9	23
35	Hybrid 1-D dielectric microcavity: Fabrication and spectroscopic assessment of glass-based sub-wavelength structures. Ceramics International, 2015, 41, 7429-7433.	4.8	22
36	SiO2-SnO2:Er3+ Glass-Ceramic Monoliths. Applied Sciences (Switzerland), 2018, 8, 1335.	2.5	22

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37	Evolution of the crystal structure and magnetic properties of Sm-doped BiFeO3 ceramics across the phase boundary region. Ceramics International, 2021, 47, 5399-5406.	4.8	21
38	Erbium-Doped Tin-Silicate Solâ€“Gel-Derived Glass-Ceramic Thin Films: Effect of Environment Segregation on the Er³⁺ Emission. Science of Advanced Materials, 2015, 7, 301-308.	0.7	19
39	Spectroscopic properties of Yb3+-doped Y3Al5O12 nano-ceramics obtained under different sintering pressures. Radiation Measurements, 2010, 45, 304-306.	1.4	18
40	Solâ€“Gel-Derived Glass-Ceramic Photorefractive Films for Photonic Structures. Crystals, 2017, 7, 61.	2.2	18
41	The fâ€“f Emission of Pr³⁺ Ion as an Optical Probe for the Structural Properties of YAG Nanoceramics. Journal of Nanoscience and Nanotechnology, 2009, 9, 6315-6319.	0.9	17
42	Rare earth elements and urban mines: Critical strategies for sustainable development. Ceramics International, 2020, 46, 26247-26250.	4.8	17
43	Assessment of SnO2-nanocrystal-based luminescent glass-ceramic waveguides for integrated photonics. Ceramics International, 2021, 47, 5534-5541.	4.8	17
44	Synthesis, structure and luminescence properties of KEu0.01Gd0.19Yb0.8(WO4)2 powder. Journal of Rare Earths, 2009, 27, 564-568.	4.8	16
45	Synthesis and Optical Properties of Eu³⁺Ion Doped Nanocrystalline Hydroxyapatites. Spectroscopy Letters, 2010, 43, 333-342.	1.0	16
46	Structural and luminescence study of Ce3+ and Tb3+ doped Ca3Sc2Si3O12 garnets obtained by freeze-drying synthesis method. Optical Materials, 2015, 46, 109-114.	3.6	16
47	A Facile Synthesis and Characterization of Highly Crystalline Submicro-Sized BiFeO3. Materials, 2020, 13, 3035.	2.9	16
48	Solâ€“gel-derived photonic structures handling erbium ions luminescence. Optical and Quantum Electronics, 2015, 47, 117-124.	3.3	15
49	Spherical nanoparticles of europium-doped silicaâ€“calcia glass and glass-ceramic: Spectroscopic characterization. Journal of Molecular Structure, 2018, 1166, 48-53.	3.6	15
50	Blue to NIR down-conversion in Tm3+/Yb3+-codoped fluorozirconate glasses compared to Pr3+/Yb3+ ion-pair. Journal of Luminescence, 2018, 193, 22-28.	3.1	14
51	2D Optical Gratings Based on Hexagonal Voids on Transparent Elastomeric Substrate. Micromachines, 2018, 9, 345.	2.9	14
52	Consequences Of Long-Term Bacteriaâ€™s Exposure To Silver Nanoformulations With Different PhysicoChemical Properties . International Journal of Nanomedicine, 2020, Volume 15, 199-213.	6.7	14
53	Impact of grain size, Pr3+ concentration and host composition on non-contact temperature sensing abilities of polyphosphate nano-Âand microcrystals. Journal of Rare Earths, 2019, 37, 812-818.	4.8	13
54	Rare-earth activated SnO2 photoluminescent thin films on flexible glass: Synthesis, deposition and characterization. Optical Materials, 2022, 124, 111978.	3.6	13

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55	SiO 2 -P 2 O 5 -HfO 2 -Al 2 O 3 -Na 2 O glasses activated by Er 3+ ions: From bulk sample to planar waveguide fabricated by rf-sputtering. Optical Materials, 2017, 63, 153-157.	3.6	12
56	Luminescence and structural analysis of Ce³⁺ and Er³⁺ doped and Ce³⁺â€“Er³⁺ codoped Ca₃Sc₂Si₃O₁₂ garnets: influence of the doping concentration in the energy transfer processes. RSC Advances, 2016, 6, 15054-15061.	3.6	11
57	Novel Carbon-Cage-Based Ultralow-k Materials: Modeling and First Experiments. IEEE Transactions on Semiconductor Manufacturing, 2008, 21, 646-660.	1.7	10
58	Structural and optical investigation of nanocrystalline lithium lanthanum praseodymium tetraphosphate powders. Journal of Alloys and Compounds, 2016, 687, 733-740.	5.5	10
59	Time-resolved photoluminescence studies in Eu-doped SiO 2 â€“ HfO 2 â€“ ZnO glass-ceramic waveguides. Ceramics International, 2017, 43, 1145-1149.	4.8	10
60	Determination of reverse cross-relaxation process constant in Tm-doped glass by ^3H_4 fluorescence decay tail fitting. Optical Materials Express, 2017, 7, 3760.	3.0	10
61	Photonic band edge assisted spontaneous emission enhancement from all Er3+ 1-D photonic band gap structure. Optical Materials, 2018, 80, 106-109.	3.6	10
62	Ferromagnetic-like behavior of Bi0.9La0.1FeO3â€“KBr nanocomposites. Scientific Reports, 2019, 9, 10417.	3.3	10
63	Novel synthetic approach to the preparation of single-phase BixLa1â^'xMnO3+Î´ solid solutions. Journal of Sol-Gel Science and Technology, 2020, 93, 650-656.	2.4	10
64	Morphotropic phase boundary in Sm-substituted BiFeO3 ceramics: Local vs microscopic approaches. Journal of Alloys and Compounds, 2021, 875, 159994.	5.5	10
65	Thermo optical coefficient of tin-oxide films measured by ellipsometry. Journal of Applied Physics, 2015, 118, .	2.5	9
66	Structural and Functional Properties of Fluorinated Silica Hybrid Barrier Layers on Flexible Polymeric Foil. Coatings, 2021, 11, 573.	2.6	9
67	DFT study of electron absorption and emission spectra of pyramidal LnPc(OAc) complexes of some lanthanide ions in the solid state. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2018, 196, 202-208.	3.9	8
68	Quasi-hemispherical voids micropatterned PDMS as strain sensor. Optical Materials, 2018, 86, 408-413.	3.6	8
69	Modification of insulin amyloid aggregation by Zr phthalocyanines functionalized with dehydroacetic acid derivatives. PLoS ONE, 2021, 16, e0243904.	2.5	8
70	Nanocrystalline lanthanide tetraphosphates: Energy transfer processes in samples co-doped with Pr 3+ /Yb 3+ and Tm 3+ /Yb 3+. Optical Materials, 2017, 74, 159-165.	3.6	7
71	Optical, Dielectric and Magnetic Properties of La1â^'xNdxFeO3 Powders and Ceramics. Ceramics, 2019, 2, 1-12.	2.6	7
72	Design, fabrication and assessment of an optomechanical sensor for pressure and vibration detection using flexible glass multilayers. Optical Materials, 2021, 115, 111023.	3.6	7

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73	Influence of fluoroalkyl chains on structural, morphological, and optical properties of silica-based coatings on flexible substrate. Optical Materials, 2021, 121, 111524.	3.6	7
74	Eu3+ as a Powerful Structural and Spectroscopic Tool for Glass Photonics. Materials, 2022, 15, 1847.	2.9	7
75	Application of a titania thin film for the discrimination between diesel fuel and heating oil. Thin Solid Films, 2007, 515, 7005-7010.	1.8	6
76	Light-Activated Zirconium(IV) Phthalocyanine Derivatives Linked to Graphite Oxide Flakes and Discussion on Their Antibacterial Activity. Applied Sciences (Switzerland), 2019, 9, 4447.	2.5	6
77	Synthesis, Spectroscopic Characterization and Photoactivity of Zr(IV) Phthalocyanines Functionalized with Aminobenzoic Acids and Their GO-Based Composites. Journal of Carbon Research, 2020, 6, 1.	2.7	6
78	Solvothermally-derived nanoglass as a highly bioactive material. Nanoscale, 2022, 14, 5514-5528.	5.6	6
79	Influence of phosphorous precursors on spectroscopic properties of Er3+-activated SiO2-HfO2-P2O5planar waveguides. Journal of Physics: Conference Series, 2014, 566, 012018.	0.4	5
80	Glass-based 1-D dielectric microcavities. Optical Materials, 2016, 61, 11-14.	3.6	5
81	The influence of temperature, pressure and Ag doping on the physical properties of TiO₂nanoceramics. Nanoscale, 2016, 8, 19703-19713.	5.6	5
82	Structural, optical and phonon properties of formate-based MOF phosphors with ethylammonium cations. Physical Chemistry Chemical Physics, 2017, 19, 22733-22742.	2.8	5
83	Temperature behavior of graphene conductance induced by piezoelectric effect in a ferroelectric substrate. Journal of Applied Physics, 2018, 124, 084103.	2.5	5
84	Glass ceramics for frequency conversion. , 2020, , 391-414.		5
85	Oxygen barrier enhancement of polymeric foil by sol-gel-derived hybrid silica layers. Polymer, 2020, 195, 122437.	3.8	5
86	(INVITED)A review on rare-earth activated SnO2-based photonic structures: Synthesis, fabrication and photoluminescence properties. Optical Materials: X, 2022, 13, 100140.	0.8	5
87	Sol-gel-derived transparent glass-ceramics for photonics. Optical Materials, 2022, 130, 112577.	3.6	5
88	Photonic glass-ceramics: consolidated outcomes and prospects. , 2015, , .		4
89	Low-Threshold Coherent Emission at 1.5 Âµm from Fully Er3+ Doped Monolithic 1D Dielectric Microcavity Fabricated Using Radio Frequency Sputtering. Ceramics, 2019, 2, 74-85.	2.6	4
90	Composites based on graphite oxide and zirconium phthalocyanines with aromatic amino acids as photoactive materials. Chemical Papers, 2021, 75, 5421-5433.	2.2	4

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91	Tm3+:KY(WO4)2 single crystals: Controlled growth and spectroscopic assessment. Optical Materials, 2021, 120, 111451.	3.6	4
92	SiO2-SnO2 transparent glass-ceramics activated by rare earth ions. , 2019, , .		4
93	Influence of gamma radiation on neodymium bisphthalocyanine. Optical Materials, 2004, 26, 163-166.	3.6	3
94	Glass-ceramics for photonics: Advances and perspectives. , 2014, , .		3
95	SiO2-SnO2:Er3+ planar waveguides: Highly photorefractive glass-ceramics. Optical Materials: X, 2020, 7, 100056.	0.8	3
96	Active Sol-Gel Materials, Fluorescence Spectra, and Lifetimes. , 2016, , 1-43.		3
97	Flexible photonics: RF-sputtering fabrication of glass-based systems operating under mechanical deformation conditions. , 2020, , .		3
98	SiO2 - TiO2 Thin Film for Integrated Optics Fabricated by the Sol-Gel Technique. , 2006, , .		2
99	Active Sol-Gel Materials. NATO Science for Peace and Security Series C: Environmental Security, 2008, , 125-137.	0.2	2
100	Optical pH detector based on LTCC and sol-gel technologies. Materials Science-Poland, 2013, 31, 115-121.	1.0	2
101	Rare-earth doped optical fibers with nano-phase glass-ceramic structures. , 2016, , .		2
102	Glass and glass-ceramic photonic systems. , 2017, , .		2
103	Analytical modelling of Tm-doped tellurite glass including cross-relaxation process. Optical Materials, 2019, 87, 29-34.	3.6	2
104	The Impact of Graphite Oxide Nanocomposites on the Antibacterial Activity of Serum. International Journal of Molecular Sciences, 2021, 22, 7386.	4.1	2
105	The bright white emission of Âµ-diamonds. , 2018, , .		2
106	Photonic glass ceramics based on SnO2 nanocrystals: advances and perspectives. , 2020, , .		2
107	Sol-gel-based optical waveguides on LTCC substrates. , 2008, , .		1
108	Glass-based confined structures fabricated by sol-gel and radio frequency sputtering. Optical Engineering, 2014, 53, 071804.	1.0	1

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109	Glass-ceramics for photonics: Laser material processing. , 2015, , .		1
110	Phosphate-based glasses and nanostructures. , 2016, , .		1
111	Dielectric multilayer structures fabricated by rf-sputtering. , 2017, , .		1
112	RF-Sputtering Technique for Fabrication of Dielectric Multilayer Structures with Low-Threshold Coherent Emission at 1.5 Î¼m. , 2019, , .		1
113	SiO2-SnO2 Photonic Glass-Ceramics. , 2019, , .		1
114	Modification of the Nearâ€Infrared Spontaneous Emission in Er³⁺â€Activated Inverse Silica Opals. Physica Status Solidi (B): Basic Research, 2020, 257, 1900476.	1.5	1
115	Flexible Photonics: Where Are We Now?. , 2020, , .		1
116	Increased Lowâ€Temperature Magnetization and Spinâ€Reorientational Transition in the Polar Phase of (Ca, Mn)â€Doped Bismuth Ferrites. Physica Status Solidi (B): Basic Research, 2020, 257, 2000121.	1.5	1
117	Flexible photonics: transform rigid materials into mechanically flexible and optically functional systems. , 2021, , .		1
118	Perspectives of using photodynamic therapy as antimicrobial therapy in endodontics. Reviews in Medical Microbiology, 2021, Publish Ahead of Print, .	0.9	1
119	Composite based on graphite oxide, metallic silver and zirconium phthalocyanine coordinated by out-of-plane argininate ligands as photoactive antibacterial additive to endodontic cement. Journal of Photochemistry and Photobiology A: Chemistry, 2021, 418, 113432.	3.9	1
120	Luminescent solâ€“gel-derived micro and nanoparticles. , 2018, , .		1
121	SiO2-SnO2:Er3+ transparent glass-ceramics: fabrication and photonic assessment. , 2018, , .		1
122	Synthesis, structure and spectroscopic assessment of luminescent GdVO4:Dy3+ and DyVO4 nanoparticles. , 2018, , .		1
123	Spectral and time-resolved analysis of rare earth-doped SnO2 emission. , 2020, , .		1
124	Design and fabrication of multilayer-driven optomechanical device for force and vibration sensing. , 2020, , .		1
125	Design of active devices based on rare-earth-doped glass/glass ceramic: from the material characterization to the device parameter refinement. , 2020, , .		1
126	Effect of ZnO on solâ€“gel glass properties toward (bio)application. Polyhedron, 2022, 223, 115952.	2.2	1

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127	Fabrication and measurements of sol-gel planar and stripe waveguides in LTCC structure. , 2007, , .		0
128	Photopolymerazed sol-gel optical layers deposited on LTCC substrates. , 2011, , .		0
129	Influence of terbium on structure and luminescence of nanocrystalline TiO2 thin films. Open Physics, 2013, 11, .	1.7	0
130	Glass-Based Sub-Wavelength Photonic Structures. , 2013, , .		0
131	Red photonic glasses and confined structures. Bulletin of the Polish Academy of Sciences: Technical Sciences, 2014, 62, 647-653.	0.8	0
132	Glass-Based Photonic Crystals: From Fabrication to Applications. Advances in Science and Technology, 0, , .	0.2	0
133	Fiber coupled erbium doped microsphere: NIR and mid-IR wavelength ranges. , 2014, , .		0
134	Enhancing photovoltaic performance of silicon solar cells by rare earth doped glass ceramic. , 2015, , .		0
135	Strain-sensitive photonic crystals for sensing applications in structural health monitoring. , 2015, , .		0
136	RF-sputtering derived phosphosilicate planar waveguides activated by Er3+ions. , 2016, , .		0
137	Graphene for white lighting. , 2016, , .		0
138	Effect of increasing temperature on the physical properties of nano-composite phospho-silicate. , 2016, , .		0
139	1-D Photonic Crystals Fabricated by RF Sputtering Towards Photonic Applications. NATO Science for Peace and Security Series B: Physics and Biophysics, 2017, , 563-564.	0.3	0
140	Tin dioxide based photonic systems. , 2017, , .		0
141	Effect of Modifiers on Optical and Structural Properties of Barium Gallo-Germanate Glasses Doped with RE Ions. , 2018, , .		0
142	Nanoparticles in Optical Waveguides: A Toolbox to Promote Lasers, Amplifiers and Sensors. , 2019, , .		0
143	XPS Characterization of Materials for Photonic Applications. , 2019, , .		0
144	Photonic glass systems fabricated by RF sputtering on flexible substrates. , 2021, , .		0

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145	Fabrication and Spectroscopic Assessment of Glass-Based Sub-Wavelength Structures for Hybrid 1-D Dielectric 633-nm Laser Microcavity. , 2014, , .		0
146	Glass-based confined structures enabling light control. AIP Conference Proceedings, 2015, , .	0.4	0
147	Glass based structures fabricated by rf-sputtering. , 2017, , .		0
148	Active Sol-Gel Materials, Fluorescence Spectra, and Lifetimes. , 2018, , 1607-1649.		0
149	Spectroscopic properties of rare earth doped germanate glasses. , 2018, , .		0
150	One-dimensional disordered photonic structures with two or more materials. , 2018, , .		0
151	Glass photonic structures fabricated by sol-gel route. , 2018, , .		0
152	Fabrication by rf-sputtering and assessment of dielectric Er3+ doped monolithic 1-D microcavity for coherent emission at 1.5 um. , 2018, , .		0
153	Impact of the reverse cross-relaxation process on pumping efficiency in Tm-doped glass lasers materials. , 2018, , .		0
154	Glass Nanospheres and Artificial Opals. , 2019, , 101-138.		0
155	Optical, structure and dielectric properties of Er3+ ions doped Al-Na-K-Ba phosphate glasses. Egyptian Journal of Chemistry, 2020, .	0.2	0
156	3D-photonic crystals: Opal structures. , 2020, , 113-144.		0
157	Modeling and parameter recovering of rare-earth-doped/co-doped glass and glass ceramics optical devices. , 2020, , .		0
158	Flexible sol-gel coatings on polymeric and metallic materials. , 2020, , .		0
159	Enhanced photorefractivity and rare-earth photoluminescence in SnO2 nanocrystals-based photonic glass-ceramics. EPJ Web of Conferences, 2021, 255, 05001.	0.3	0
160	Novel CaOâ€“SiO2â€“P2O5 Nanobioglass Activated with Hafnium Phthalocyanine. Nanomaterials, 2022, 12, 1719.	4.1	0