Wilfried Blanc

List of Publications by Year
in descending order

123 papers	2,111 citations	201658 27 h-index	276858 41 g-index
123 all docs	123 docs citations	123 times ranked	1345 citing authors

#	Article	IF	Citations
1	Green-Synthesized Silver Nanoparticleâ€"Assisted Radiofrequency Ablation for Improved Thermal Treatment Distribution. Nanomaterials, 2022, 12, 426.	4.1	8
2	Toward Engineered Nanoparticle-Doped Optical Fibers for Sensor Applications. Frontiers in Sensors, 2022, 2, .	3.3	6
3	Highlighting of LaF3 Reactivity with SiO2 and GeO2 at High Temperature. Ceramics, 2022, 5, 182-200.	2.6	7
4	Fiber-Optic Distributed Sensing Network for Thermal Mapping of Gold Nanoparticles-Mediated Radiofrequency Ablation. Biosensors, 2022, 12, 352.	4.7	4
5	Distributed fiber optics strain sensors: from long to short distance. Comptes Rendus - Geoscience, 2022, 354, 161-183.	1.2	3
6	Nanoparticles in optical fiber, issue and opportunity of light scattering [Invited]. Optical Materials Express, 2022, 12, 2635.	3.0	27
7	Transmission-Reflection Performance Analysis Using Oxide Nanoparticle-Doped High Scattering Fibers. IEEE Photonics Technology Letters, 2022, 34, 874-877.	2.5	6
8	Phase-separated Ca and Mg-based nanoparticles in SiO$$_{2}$$ glass investigated by molecular dynamics simulations. Scientific Reports, 2022, 12, .	3.3	3
9	Enhanced Backscattering Optical Fiber Distributed Sensors: Tutorial and Review. IEEE Sensors Journal, 2021, 21, 12667-12678.	4.7	38
10	Rayleigh scattering characterization of a low-loss MgO-based nanoparticle-doped optical fiber for distributed sensing. Optics and Laser Technology, 2021, 133, 106523.	4.6	29
11	Fabrication and performance evaluation of reflectorless refractive index fiber optic sensors using etched enhanced backscattering fibers. Measurement: Journal of the International Measurement Confederation, 2021, 172, 108874.	5.0	5
12	Wearable and Fully-Portable Smart Garment for Mechanical Perturbation Detection With Nanoparticles Optical Fibers. IEEE Sensors Journal, 2021, 21, 2995-3003.	4.7	27
13	Structure Characterizations and Molecular Dynamics Simulations of Melt, Glass, and Glass Fibers. , 2021, , 89-216.		1
14	Distributed X-Ray Dosimetry With Optical Fibers by Optical Frequency Domain Interferometry. IEEE Transactions on Instrumentation and Measurement, 2021, 70, 1-9.	4.7	11
15	The Effect of Size and Thermal Treatment on the Photoluminescent Properties of Europium-Doped SiO2 Nanoparticles Prepared in One Pot by Sol-Gel. Materials, 2021, 14, 1607.	2.9	2
16	Tailoring the Glass Composition to Increase the Thermal Stability without Impacting the Crystallization Behavior of Oxyfluorophosphate Glass. Ceramics, 2021, 4, 148-159.	2.6	3
17	Design and analysis of a fiber-optic sensing system for shape reconstruction of a minimally invasive surgical needle. Scientific Reports, 2021, 11, 8609.	3.3	27
18	Combined FIB/SEM tomography and TEM analysis to characterize high aspect ratio Mg-silicate particles inside silica-based optical fibres. Materials Characterization, 2021, 178, 111261.	4.4	7

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19	Temperature compensation of the fiber-optic based system for the shape reconstruction of a minimally invasive surgical needle. Sensors and Actuators A: Physical, 2021, 329, 112795.	4.1	4
20	Shape sensing of an epidural needle through a network of nanoparticles-doped optical fibers. , 2021, , .		0
21	Distributed Sensing Network Enabled by High-Scattering MgO-Doped Optical Fibers for 3D Temperature Monitoring of Thermal Ablation in Liver Phantom. Sensors, 2021, 21, 828.	3.8	8
22	TL Properties of RE-Doped and Co-Doped Sol-Gel Silica Rods. Application to Passive (OSL) and Real-Time (RL) Dosimetry. IEEE Sensors Journal, 2021, 21, 27465-27472.	4.7	3
23	Fiber Optic Distributed Sensing Network for Shape Sensing-Assisted Epidural Needle Guidance. Biosensors, 2021, 11, 446.	4.7	11
24	Bragg gratings and Fabry-Perot interferometers on an Er-MgO-doped optical fiber. Optics and Laser Technology, 2020, 123, 105946.	4.6	6
25	Fiber Optic Refractive Index Distributed Multi-Sensors by Scattering-Level Multiplexing With MgO Nanoparticle-Doped Fibers. IEEE Sensors Journal, 2020, 20, 2504-2510.	4.7	28
26	(INVITED) Fiber loop resonator sensor achieved by high-scattering MgO nanoparticle-doped fibers. Optical Materials: X, 2020, 7, 100057.	0.8	2
27	Distributed 2D temperature sensing during nanoparticles assisted laser ablation by means of high-scattering fiber sensors. Scientific Reports, 2020, 10, 12593.	3.3	24
28	Preliminary investigation of radiation dose sensors based on aluminum-doped silicate optical fibers. , 2020, , .		2
29	Secondary Ion Mass Spectrometry (SIMS) and Atom Probe Tomography (APT): Powerful Synergetic Techniques for Materials Scientists. Microscopy and Microanalysis, 2020, 26, 524-525.	0.4	0
30	Transmissionâ€"Reflection Analysis in high scattering optical fibers: A comparison with single-mode optical fiber. Optical Fiber Technology, 2020, 58, 102303.	2.7	30
31	Optical Fiber Biosensor Based on an Etched High-Scattering Fiber: Towards Reflector-Less Biosensors. , 2020, , .		1
32	Reflector-less nanoparticles doped optical fiber biosensor for the detection of proteins: Case thrombin. Biosensors and Bioelectronics, 2020, 165, 112365.	10.1	37
33	Performance Analysis of Scattering-Level Multiplexing (SLMux) in Distributed Fiber-Optic Backscatter Reflectometry Physical Sensors. Sensors, 2020, 20, 2595.	3.8	17
34	The influence of codoping on optical properties and glass connectivity of silica fiber preforms. Ceramics International, 2020, 46, 26251-26259.	4.8	5
35	Investigation of Thermoluminescence Properties of Potential Fibered-OSL Dosimeter Materials. IEEE Transactions on Nuclear Science, 2020, 67, 1663-1668.	2.0	3
36	In situ formation of rare-earth-doped nanoparticles in a silica matrix from Molecular Dynamics simulations. Ceramics International, 2020, 46, 26264-26272.	4.8	5

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37	Preparation and properties of Tm-doped SiO₂-ZrO₂ phase separated optical fibers for use in fiber lasers. Optical Materials Express, 2020, 10, 1383.	3.0	16
38	2D temperature sensing obtained by multiplexing of optical backscattering reflectometry. , 2020, , .		1
39	PREâ€²19. Ceramics International, 2020, 46, 26245-26246.	4.8	0
40	On the morphologies of oxides particles in optical fibers: Effect of the drawing tension and composition. Optical Materials, 2019, 87, 74-79.	3.6	20
41	Analytical modelling of Tm-doped tellurite glass including cross-relaxation process. Optical Materials, 2019, 87, 29-34.	3.6	2
42	Fiber Bragg Grating (FBG) Sensors in a High-Scattering Optical Fiber Doped with MgO Nanoparticles for Polarization-Dependent Temperature Sensing. Applied Sciences (Switzerland), 2019, 9, 3107.	2.5	16
43	Compositional Changes at the Early Stages of Nanoparticles Growth in Glasses. Journal of Physical Chemistry C, 2019, 123, 29008-29014.	3.1	36
44	Refractive Index Sensor by Interrogation of Etched MgO Nanoparticle-Doped Optical Fiber Signature. IEEE Photonics Technology Letters, 2019, 31, 1253-1256.	2.5	22
45	Molecular Dynamics Simulations of Rare-Earth-Doped Nanoparticles in Silica Matrix: Drawing of a Preform to a Fiber. , 2019, , .		0
46	Nanoparticles in Optical Waveguides: A Toolbox to Promote Lasers, Amplifiers and Sensors. , 2019, , .		0
47	Simultaneous Distributed Sensing on Multiple MgO-Doped High Scattering Fibers by Means of Scattering-Level Multiplexing. Journal of Lightwave Technology, 2019, 37, 3413-3421.	4.6	42
48	Nano-Structured Optical Fibers Made of Glass-Ceramics, and Phase Separated and Metallic Particle-Containing Glasses. Fibers, 2019, 7, 105.	4.0	30
49	Multi-fiber distributed thermal profiling of minimally invasive thermal ablation with scattering-level multiplexing in MgO-doped fibers. Biomedical Optics Express, 2019, 10, 1282.	2.9	47
50	Distributed fiber optics 3D shape sensing by means of high scattering NP-doped fibers simultaneous spatial multiplexing. Optics Express, 2019, 27, 22074.	3.4	72
51	Systematic investigation of composition effects on the radiation-induced attenuation mechanisms of aluminosilicate, Yb-doped silicate, Yb- and Yb,Ce-doped aluminosilicate fiber preforms [Invited]. Optical Materials Express, 2019, 9, 2466.	3.0	13
52	Multiplexing techniques and applications in fiber-optic spatially resolved sensing networks. , 2019, , .		1
53	Multiplexing of distributed temperature sensing achieved by nanoparticle-doped fibers. , 2019, , .		2
54	3D shape sensing medical needle based on the multiplexing of optical backscattering reflectometry. , 2019, , .		0

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55	Gradual-Time Solution Doping for the Fabrication of Longitudinally Varying Optical Fibres. Journal of Lightwave Technology, 2018, 36, 1786-1791.	4.6	7
56	On the Enlargement of the Emission Spectra from the 4I13/2 Level of Er3+ in Silica-Based Optical Fibers through Lanthanum or Magnesium Co-Doping. Ceramics, 2018, 1, 364-374.	2.6	8
57	Europium-Doped Sol-Gel SiO2-Based Glasses: Effect of the Europium Source and Content, Magnesium Addition and Thermal Treatment on Their Photoluminescence Properties. Molecules, 2018, 23, 1768.	3.8	14
58	YAG Ceramic Nanocrystals Implementation into MCVD Technology of Active Optical Fibers. Applied Sciences (Switzerland), 2018, 8, 833.	2.5	17
59	Molecular dynamics study of rare-earth doped Mg-silicate nanoparticles in vitreous silica: from the preform to the fiber. , 2018, , .		3
60	Fiber optic refractive index sensors through spectral detection of Rayleigh backscattering in a chemically etched MgO-based nanoparticle-doped fiber. Optics Letters, 2018, 43, 5945.	3.3	43
61	Tm-doped nanoparticles in optical fibers. , 2018, , .		1
62	Impact of the reverse cross-relaxation process on pumping efficiency in Tm-doped glass lasers materials. , 2018, , .		0
63	Characterization of a nanoparticles-doped optical fiber by the use of optical backscatter reflectometry. , 2018, , .		6
64	Fiberâ€drawâ€induced elongation and breakâ€up of particles inside the core of a silicaâ€based optical fiber. Journal of the American Ceramic Society, 2017, 100, 1814-1819.	3.8	38
65	Use of thulium-doped LaF3 nanoparticles to lower the phonon energy of the thulium's environment in silica-based optical fibres. Optical Materials, 2017, 68, 24-28.	3.6	39
66	Cerium/aluminum correlation in aluminosilicate glasses and optical silica fiber preforms. Journal of Non-Crystalline Solids, 2017, 475, 85-95.	3.1	24
67	Impact of cerium and lanthanum on the photo-darkening and photo-bleaching mechanisms in thulium-doped fibre. Optical Materials, 2017, 72, 106-114.	3.6	6
68	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
69	The incorporation site of Er in nanosized CaF2. Journal of Physics Condensed Matter, 2016, 28, 485301.	1.8	2
70	Steady photodarkening of thulium alumino-silicate fibers pumped at 107â€‰â€‰Î¼m: quantitative effect of lanthanum, cerium, and thulium. Optics Letters, 2016, 41, 2771.	3.3	20
71	Deformation of silica glass studied by molecular dynamics: Structural origin of the anisotropy and non-Newtonian behavior. Journal of Non-Crystalline Solids, 2016, 433, 38-44.	3.1	15
72	Formation and applications of nanoparticles in silica optical fibers. Journal of Optics (India), 2016, 45, 247-254.	1.7	61

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73	A simple transferable adaptive potential to study phase separation in large-scale xMgO-(1-x)SiO2 binary glasses. Journal of Chemical Physics, 2015, 143, 154501.	3.0	12
74	PropriÃ©tÃ©s de luminescence des ions de terres rares dopÃ©s dans des nanoparticules diÃ©lectriques incorporÃ©es dans une matrice vitreuse. Materiaux Et Techniques, 2015, 103, 407.	0.9	0
75	New challenges and directions toward nanoscale control of rare-earth properties in silica amplifying optical fibres. , 2014, , .		1
76	Correlative Compositional Analysis of Fiber-Optic Nanoparticles. Microscopy and Microanalysis, 2014, 20, 994-995.	0.4	5
77	Experimental evidence of Er^3+ ion reduction in the radiation-induced degradation of erbium-doped silica fibers. Optics Letters, 2014, 39, 6154.	3.3	20
78	Different Er3+ environments in Mg-based nanoparticle-doped optical fibre preforms. Journal of Non-Crystalline Solids, 2014, 401, 50-53.	3.1	18
79	Spectroscopic properties of LaF3:Tm3+ nanoparticle-doped silica optical fibers. , 2014, , .		0
80	Composition of nanoparticles in optical fibers by Secondary Ion Mass Spectrometry. Optical Materials Express, 2012, 2, 1504.	3.0	40
81	Experimental phase-space-based optical amplification of scar modes. Physical Review E, 2012, 85, 047201.	2.1	4
82	Editorial: Nanoscience and Nanotechnology in Provence-Alpes-CÃ´te d'Azur. International Journal of Nanotechnology, 2012, 9, 163.	0.2	0
83	Erbium-doped nanoparticles in silica-based optical fibres. International Journal of Nanotechnology, 2012, 9, 480.	0.2	14
84	Erbium-doped transparent glass ceramic optical fibres: Characterization using mass spectroscopy and molecular dynamics modeling. , 2012, , .		0
85	Thulium-doped silica fibers with enhanced ³H<inf>4</inf> level lifetime for fiber lasers and amplifiers. , 2012, , .		2
86	Characterization of Erbium-Doped Nanoparticles in Transparent Glass Ceramic Optical Fibres. , 2012, , .		0
87	Theoretical modeling of fiber laser at 810 nm based on thulium-doped silica fibers with enhanced ^3H_4 level lifetime. Optics Express, 2011, 19, 2773.	3.4	74
88	Preparation and characterization of highly thulium- and alumina-doped optical fibers for single-frequency fiber lasers. , 2011, , .		2
89	Fabrication of Rare Earth-Doped Transparent Glass Ceramic Optical Fibers by Modified Chemical Vapor Deposition. Journal of the American Ceramic Society, 2011, 94, 2315-2318.	3.8	94
90	Spectroscopic signature of phosphate crystallization in erbium-doped optical fibre preforms. Optical Materials, 2011, 33, 835-838.	3.6	15

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91	Design and fabrication of an asymmetric twin-core fiber directional coupler for gain-flattened EDFA. Proceedings of SPIE, 2011, , .	0.8	1
92	Thulium-doped silica fibers with enhanced3H 4 level lifetime: modelling the devices for 800-820 nm band. , 2010, , .		2
93	Thermoluminescence characterization of traps involved in the photodarkening of ytterbium-doped silica fibers. Optics Letters, 2010, 35, 3541.	3.3	27
94	Erbium emission properties in nanostructured fibers. Applied Optics, 2009, 48, G119.	2.1	29
95	Controlled excitation of scar modes in passive and active multimode chaotic fiber. Applied Optics, 2009, 48, G163.	2.1	1
96	Role of CaO addition in the local order around Erbium in SiO2â€“GeO2â€“P2O5 fiber preforms. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2008, 146, 167-170.	3.5	20
97	Thulium environment in a silica doped optical fibre. Journal of Non-Crystalline Solids, 2008, 354, 435-439.	3.1	35
98	Visible and near infra-red up-conversion in Tm^3+/Yb^3+ co-doped silica fibers under 980 nm excitation. Optics Express, 2008, 16, 13781.	3.4	64
99	Luminescent Ions in Silica-Based Optical Fibers. Fiber and Integrated Optics, 2008, 27, 484-504.	2.5	6
100	Broadening of the erbium emission in dielectric nanoparticles doped silica-based fibres. , 2008, , .		0
101	Estimation of energy transfer parameters in thulium- and ytterbium-doped silica fibers. , 2008, , .		9
102	Passive Temperature-Compensating Technique for Microstructured Fiber Bragg Gratings. IEEE Sensors Journal, 2008, 8, 1073-1078.	4.7	11
103	Distributed gain in a Tm-doped silica fiber - experiment and modeling. , 2007, , .		2
104	Novel Dopants for Silica-Based Fiber Amplifiers. , 2007, , .		3
105	Tm³⁺/Yb³⁺ co-doped alumino-silicate fibre: potential for S-band optical amplification. , 2007, , .		0
106	Temperature compensation technique for Bragg gratings in microstructured optical fibers for sensing applications. , 2007, , .		0
107	Alternative Dopants for Silica Fibre Amplifiers. , 2007, , .		0
108	Three-hole microstructured optical fiber for efficient fiber Bragg grating refractometer. Optics Letters, 2007, 32, 2390.	3.3	113

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109	Improvement of the Tm3+:3H4 level lifetime in silica optical fibers by lowering the local phonon energy. Journal of Non-Crystalline Solids, 2007, 353, 2767-2773.	3.1	57
110	Thulium-doped silica-based optical fibers for cladding-pumped fiber amplifiers. Optical Materials, 2007, 30, 174-176.	3.6	26
111	Fibre Bragg grating photowriting in microstructured optical fibres for refractive index measurement. Measurement Science and Technology, 2006, 17, 992-997.	2.6	52
112	Tilted Fiber Bragg Grating photowritten in microstructured optical fiber for improved refractive index measurement. Optics Express, 2006, 14, 10359.	3.4	43
113	Energy transfer up-conversion in Tm3+-doped silica fiber. Journal of Non-Crystalline Solids, 2006, 352, 136-141.	3.1	31
114	<title>Characterization of a thulium-doped silica-based optical fibre for S-band amplification</title>. , 2006, 6180, 181.		4
115	Impact of Aluminium Codoping on the 1.47 Â¿m Emission Efficiency in a Thulium-Doped Silica Fibre. , 2006, , .		1
116	Microstructured fibers for sensing applications (Invited Paper). , 2005, , .		4
117	Fiber Bragg grating photowriting in microstructured optical fibers for sensing application based on refractive index measurement. , 2005, , .		2
118	Coherent combining in an Yb-doped double-core fiber laser. Optics Letters, 2005, 30, 1962.	3.3	25
119	Theoretical modelling of S-band thulium-doped silica fibre amplifiers. Optical and Quantum Electronics, 2004, 36, 201-212.	3.3	113
120	On the role of the 4f-Lu level in the scintillation mechanisms of cerium-doped lutetium-based fluoride crystals. Radiation Effects and Defects in Solids, 1999, 150, 41-46.	1.2	7
121	The study of small and large size LuAlO/sub 3/:Ce/sup 3+/. IEEE Transactions on Nuclear Science, 1998, 45, 467-471.	2.0	9
122	Optical and scintillation properties of large crystals. Journal of Physics Condensed Matter, 1998, 10, 3061-3073.	1.8	69
123	Tailoring of the Local Environment of Active Ions in Rare-Earth- and Transition-Metal-Doped Optical Fibres, and Potential Applications. , 0, , .		10