

Arnaldo Leal-Junior

List of Publications by Year in descending order

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2728
citing authors

#	ARTICLE	IF	CITATIONS
1	Proof-of-Concept of POF-Based Pressure Sensors Embedded in a Smart Garment for Impact Detection in Perturbation Assessment. Biosystems and Biorobotics, 2022, , 21-25.	0.3	1
2	Characterization and analysis of a POF sensor embedded in different materials: Towards wearable systems for stiffness estimation. Optics and Laser Technology, 2022, 145, 107504.	4.6	2
3	A simple and high-resolution POF displacement sensor based on face-coupling method. Measurement: Journal of the International Measurement Confederation, 2022, 187, 110285.	5.0	9
4	Sensing Applications of Polymer Optical Fiber Fuse. Advanced Photonics Research, 2022, 3, 2100210.	3.6	8
5	The Impact of Assembly Configuration on Diaphragm-Embedded Fiber Bragg Gratings Pressure Sensors. IEEE Sensors Journal, 2022, 22, 2237-2243.	4.7	5
6	Soft wearable robots. , 2022, , 27-52.		1
7	Optical fiber materials. , 2022, , 93-118.		0
8	Optical fiber sensing technologies. , 2022, , 119-148.		0
9	Wearable robots instrumentation. , 2022, , 151-173.		0
10	Smart structures and textiles for gait analysis. , 2022, , 175-200.		1
11	Optical fiber fundamentals and overview. , 2022, , 67-91.		0
12	Soft robotics and compliant actuators instrumentation. , 2022, , 201-219.		0
13	Wearable multifunctional smart textiles. , 2022, , 223-243.		0
14	Multifunctional flexible optical waveguide sensor: on the bioinspiration for ultrasensitive sensors development. Opto-Electronic Advances, 2022, 5, 210098-210098.	13.3	71
15	Introduction and overview of wearable technologies. , 2022, , 3-26.		0
16	Gait analysis: overview, trends, and challenges. , 2022, , 53-64.		1
17	Optical fiber sensors applications for human health. , 2022, , 263-286.		1
18	Smart walker's instrumentation and development with compliant optical fiber sensors. , 2022, , 245-261.		0

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19	Sensors for Vital Signs: Humidity Sensors. , 2022, , 245-261.		0
20	FBG-Embedded Robotic Manipulator Tool for Structural Integrity Monitoring From Critical Strain-Stress Pair Estimation. IEEE Sensors Journal, 2022, 22, 5695-5702.	4.7	11
21	Liquid Level Sensor with Two FBGs Embedded in a PDMS Diaphragm: Analysis of the Linearity and Sensitivity. Sensors, 2022, 22, 1268.	3.8	10
22	Temperature sensor based on an erbium-doped fiber Sagnac interferometer. Applied Optics, 2022, 61, 2352.	1.8	8
23	AI-enabled photonic smart garment for movement analysis. Scientific Reports, 2022, 12, 4067.	3.3	23
24	Diaphragm-assisted impact amplitude and localization measurement system with FBG sensors. Optical Fiber Technology, 2022, 70, 102854.	2.7	2
25	Temperature-Insensitive Curvature Sensor With Plane-by-Plane Inscription of Off-Center Tilted Bragg Gratings in CYTOP Fibers. IEEE Sensors Journal, 2022, 22, 11725-11731.	4.7	6
26	Polymer Optical Fiber Multimaterial: Flexible and Customizable Approach in Sensors Development. IEEE Photonics Technology Letters, 2022, 34, 611-614.	2.5	2
27	Fiber-Optic Hydrophone Based on Michelson's Interferometer with Active Stabilization for Liquid Volume Measurement. Sensors, 2022, 22, 4404.	3.8	5
28	Strain Measurement in Hyrax Appliances Using FBG Sensors in a 3D-Printed Human Maxillary Model. IEEE Photonics Technology Letters, 2022, 34, 811-814.	2.5	1
29	Force-Displacement Analysis in Diaphragm-Embedded Fiber Bragg Grating Sensors. Sensors, 2022, 22, 5355.	3.8	4
30	Sleeve for Knee Angle Monitoring: An IMU-POF Sensor Fusion System. IEEE Journal of Biomedical and Health Informatics, 2021, 25, 465-474.	6.3	17
31	Highly Sensitive Fiber-Optic Intrinsic Electromagnetic Field Sensing. Advanced Photonics Research, 2021, 2, 2000078.	3.6	34
32	Wearable and Fully-Portable Smart Garment for Mechanical Perturbation Detection With Nanoparticles Optical Fibers. IEEE Sensors Journal, 2021, 21, 2995-3003.	4.7	27
33	Sensors for Vital Signs: Humidity Sensors. , 2021, , 1-17.		0
34	Photonic smart bandage for wound healing assessment. Photonics Research, 2021, 9, 272.	7.0	76
35	Cortisol AuPd plasmonic unclad POF biosensor. Biotechnology Reports (Amsterdam, Netherlands), 2021, 29, e00587.	4.4	76
36	FBG-Based Measurement Systems for Density, Specific Heat Capacity and Thermal Conductivity Assessment for Liquids. IEEE Sensors Journal, 2021, 21, 7657-7664.	4.7	11

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37	Datacenter Thermal Monitoring Without Blind Spots: FBG-Based Quasi-Distributed Sensing. IEEE Sensors Journal, 2021, 21, 9869-9876.	4.7	8
38	An enlarge polymer optical fiber linear-displacement sensor based on constructive interference. Optical Fiber Technology, 2021, 63, 102481.	2.7	13
39	Polymer Optical Fiber-Embedded Force Sensor System for Assistive Devices With Dynamic Compensation. IEEE Sensors Journal, 2021, 21, 13255-13262.	4.7	4
40	Diaphragm-Embedded Optical Fiber Sensors: A Review and Tutorial. IEEE Sensors Journal, 2021, 21, 12719-12733.	4.7	40
41	FBG-Based Temperature Sensors for Liquid Identification and Liquid Level Estimation via Random Forest. Sensors, 2021, 21, 4568.	3.8	26
42	Optical Fiber-Integrated Smart Structures: Towards Transparent Devices for Healthcare 4.0. IEEE Instrumentation and Measurement Magazine, 2021, 24, 41-49.	1.6	2
43	Polymer Optical Fiber-Based Smart Garment for Impact Identification and Balance Assessment. IEEE Sensors Journal, 2021, 21, 20078-20085.	4.7	5
44	Machine learning techniques for liquid level estimation using FBG temperature sensor array. Optical Fiber Technology, 2021, 65, 102612.	2.7	27
45	Surface Plasmon Resonance-based Optical Fiber Sensors for H ₂ S In Situ detection. Plasmonics, 2021, 16, 787-797.	3.4	15
46	FBG-Based Sensor for the Assessment of Heat Transfer Rate of Liquids in a Forced Convective Environment. Sensors, 2021, 21, 6922.	3.8	5
47	Influence of Two-Plane Position and Stress on Intensity-Variation-Based Sensors: Towards Shape Sensing in Polymer Optical Fibers. Sensors, 2021, 21, 7848.	3.8	3
48	Comparative Study of $\hat{\Gamma}^3$ - and e-Radiation-Induced Effects on FBGs Using Different Femtosecond Laser Inscription Methods. Sensors, 2021, 21, 8379.	3.8	6
49	Optical Fiber Specklegram Sensors for Mechanical Measurements: A Review. IEEE Sensors Journal, 2020, 20, 569-576.	4.7	69
50	Polymer Optical Fiber Sensor System for Multi Plane Bending Angle Assessment. IEEE Sensors Journal, 2020, 20, 2518-2525.	4.7	5
51	Transmission-Reflection Analysis in high scattering optical fibers: A comparison with single-mode optical fiber. Optical Fiber Technology, 2020, 58, 102303.	2.7	30
52	Perfluorinated fiber material properties following femtosecond laser inscription. Optical Materials, 2020, 109, 110412.	3.6	3
53	Smart textiles for multimodal wearable sensing using highly stretchable multiplexed optical fiber system. Scientific Reports, 2020, 10, 13867.	3.3	111
54	Highly Stretchable Polymer Optical Fiber for Mechanical Sensing in Artificial Tendons: Towards Novel Sensors for Soft Robotics. Actuators, 2020, 9, 125.	2.3	10

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55	Thermal and Mechanical Analyses of Fiber Bragg Gratings-Embedded Polymer Diaphragms. IEEE Photonics Technology Letters, 2020, 32, 623-626.	2.5	20
56	Polymer Optical Fiber-Based Integrated Instrumentation in a Robot-Assisted Rehabilitation Smart Environment: A Proof of Concept. Sensors, 2020, 20, 3199.	3.8	12
57	Low-cost Fiberoptic Probe for Ammonia Early Detection in Fish Farms. Remote Sensing, 2020, 12, 1439.	4.0	27
58	FPI-POFBG Angular Movement Sensor Inscribed in CYTOP Fibers With Dynamic Angle Compensator. IEEE Sensors Journal, 2020, 20, 5962-5969.	4.7	21
59	Bragg Gratings Inscribed in Solid-Core Microstructured Single-Mode Polymer Optical Fiber Drawn From a 3D-Printed Polycarbonate Preform. IEEE Sensors Journal, 2020, 20, 12744-12757.	4.7	13
60	Development and Characterization of UV-Resin Coated Fiber Bragg Gratings. Sensors, 2020, 20, 3026.	3.8	10
61	High Sensitive Ammonia Detection in Water With Fabry-Perot Interferometers. IEEE Photonics Technology Letters, 2020, 32, 863-866.	2.5	14
62	A fiber Bragg gratings pair embedded in a polyurethane diaphragm: Towards a temperature-insensitive pressure sensor. Optics and Laser Technology, 2020, 131, 106440.	4.6	41
63	Optimizing Linearity and Sensitivity of 3D-Printed Diaphragms With Chirped FBGs in CYTOP Fibers. IEEE Access, 2020, 8, 31983-31991.	4.2	28
64	Performance Analysis of a Lower Limb Multi Joint Angle Sensor Using CYTOP Fiber: Influence of Light Source Wavelength and Angular Velocity Compensation. Sensors, 2020, 20, 326.	3.8	8
65	A machine learning approach for simultaneous measurement of magnetic field position and intensity with fiber Bragg grating and magnetorheological fluid. Optical Fiber Technology, 2020, 56, 102184.	2.7	68
66	Low-cost and high-resolution pressure sensors using highly stretchable polymer optical fibers. Materials Letters, 2020, 271, 127810.	2.6	27
67	Polymer optical fibers for mechanical wave monitoring. Optics Letters, 2020, 45, 5057.	3.3	4
68	Femtosecond laser-written long period grating in a multimode CYTOP polymer fibre. , 2020, , .		2
69	Mechanical analysis of microstructured polymer optical fibres with different drawing pressures. Electronics Letters, 2020, 56, 1128-1130.	1.0	1
70	Fibre Bragg grating sensors for sutural expansion assessment in rapid palatal expanders: an ex vivo validation. IET Optoelectronics, 2020, 14, 337-342.	3.3	2
71	Detection of water, oil and oil contamination in water using chirped fiber Bragg gratings inscribed in CYTOP fibers. , 2020, , .		1
72	Polymer optical fiber-based sensor for simultaneous measurement of breath and heart rate under dynamic movements. Optics and Laser Technology, 2019, 109, 429-436.	4.6	105

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73	Fiber Bragg Based Sensors for Foot Plantar Pressure Analysis. Communications in Computer and Information Science, 2019, , 3-25.	0.5	2
74	3D-Printing Techniques on the Development of Multiparameter Sensors Using One FBG. Sensors, 2019, 19, 3514.	3.8	19
75	POF Smart Carpet: A Multiplexed Polymer Optical Fiber-Embedded Smart Carpet for Gait Analysis. Sensors, 2019, 19, 3356.	3.8	33
76	Fabry-Perot Curvature Sensor With Cavities Based on UV-Curable Resins: Design, Analysis, and Data Integration Approach. IEEE Sensors Journal, 2019, 19, 9798-9805.	4.7	37
77	Perrogator: A Portable Energy-Efficient Interrogator for Dynamic Monitoring of Wavelength-Based Sensors in Wearable Applications. Sensors, 2019, 19, 2962.	3.8	47
78	Polymer Optical Fiber Sensors in Healthcare Applications: A Comprehensive Review. Sensors, 2019, 19, 3156.	3.8	139
79	Smartphone Integrated Polymer Optical Fiber Humidity Sensor: Towards a Fully Portable Solution for Healthcare. , 2019, 3, 1-4.		4
80	Analysis of viscoelastic properties influence on strain and temperature responses of Fabry-Perot cavities based on UV-curable resins. Optics and Laser Technology, 2019, 120, 105743.	4.6	40
81	Plane-by-Plane Written, Low-Loss Polymer Optical Fiber Bragg Grating Arrays for Multiparameter Sensing in a Smart Walker. IEEE Sensors Journal, 2019, 19, 9221-9228.	4.7	22
82	Optical Fiber Sensing for Sub-Millimeter Liquid-Level Monitoring: A Review. IEEE Sensors Journal, 2019, 19, 7179-7191.	4.7	67
83	Large-Range Polymer Optical-Fiber Strain-Gauge Sensor for Elastic Tendons in Wearable Assistive Robots. Materials, 2019, 12, 1443.	2.9	21
84	Quasi-Distributed Torque and Displacement Sensing on a Series Elastic Actuator's Spring Using FBG Arrays Inscribed in CYTOP Fibers. IEEE Sensors Journal, 2019, 19, 4054-4061.	4.7	70
85	3D-printed POF insole: Development and applications of a low-cost, highly customizable device for plantar pressure and ground reaction forces monitoring. Optics and Laser Technology, 2019, 116, 256-264.	4.6	48
86	A Comparative Study of Markerless Systems Based on Color-Depth Cameras, Polymer Optical Fiber Curvature Sensors, and Inertial Measurement Units: Towards Increasing the Accuracy in Joint Angle Estimation. Electronics (Switzerland), 2019, 8, 173.	3.1	21
87	Toward Commercial Polymer Fiber Bragg Grating Sensors: Review and Applications. Journal of Lightwave Technology, 2019, 37, 2605-2615.	4.6	185
88	Simultaneous measurement of pressure and temperature with a single FBG embedded in a polymer diaphragm. Optics and Laser Technology, 2019, 112, 77-84.	4.6	91
89	Combined Bending and Torsion Sensing by Induced Birefringence in Distributed Bragg Reflector Laser. Journal of Lightwave Technology, 2019, 37, 861-867.	4.6	11
90	Polymer Optical Fiber-Based Sensor System for Smart Walker Instrumentation and Health Assessment. IEEE Sensors Journal, 2019, 19, 567-574.	4.7	20

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91	Simultaneous Measurement of Axial Strain, Bending and Torsion With a Single Fiber Bragg Grating in CYTOP Fiber. Journal of Lightwave Technology, 2019, 37, 971-980.	4.6	85
92	Polymer optical fiber-embedded, 3D-printed instrumented support for microclimate and human-robot interaction forces assessment. Optics and Laser Technology, 2019, 112, 323-331.	4.6	21
93	Multiplexing technique for quasi-distributed sensors arrays in polymer optical fiber intensity variation-based sensors. Optics and Laser Technology, 2019, 111, 81-88.	4.6	75
94	Long period grating in a multimode cyclic transparent optical polymer fiber inscribed using a femtosecond laser. Optics Letters, 2019, 44, 5346.	3.3	36
95	Development of Polymer Optical Fiber Sensors for Lower Limb Exoskeletons Instrumentation. Biosystems and Biorobotics, 2019, , 155-159.	0.3	4
96	Temperature cross-sensitivity compensation in liquid level sensor using Mach-Zehnder interferometers. , 2019, , .		1
97	Proof-of-concept of a carpet-embedded heterogeneous optical fiber sensor system for gait analysis. , 2019, , .		0
98	Analysis of the Diaphragm Thickness Influence in a FBG Pressure Sensor Response. , 2019, , .		0
99	Design and Implementation of a Polymer Optical Fiber Curvature Sensor for Dynamic Robotâ€™s Instrumentation. , 2019, , .		0
100	Polymer Optical Fiber Sensors for Treadmill Instrumentation. , 2019, , .		0
101	Temperature Cross-Sensitivity Optimization for Mach-Zehnder Interferometers Liquid Level Sensors. , 2019, , .		0
102	Fiber Bragg gratings sensor for thermal conductivity measurements in liquids. , 2019, , .		0
103	Instrumentation and validation of polymer optical fiber sensor technology on a knee exoskeleton. , 2019, , .		1
104	Fiber Bragg Gratings Sensors on Sutural Expansion Assessment: a Pilot Study. , 2019, , .		0
105	Design and Analysis of a Smartphone-integrated Polymer Optical Fiber Curvature Sensor. , 2019, , .		1
106	Polymer Optical Fiber for Angle and Torque Measurements of a Series Elastic Actuator's Spring. Journal of Lightwave Technology, 2018, 36, 1698-1705.	4.6	62
107	FBG-Embedded Oblong Diaphragms with Extended Dynamic Range. , 2018, 2, 1-4.		7
108	Liquid Level Measurement Based on FBG-Embedded Diaphragms With Temperature Compensation. IEEE Sensors Journal, 2018, 18, 193-200.	4.7	106

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109	Dynamic Mechanical Analysis on a PolyMethyl Methacrylate (PMMA) Polymer Optical Fiber. IEEE Sensors Journal, 2018, 18, 2353-2361.	4.7	60
110	Polymer optical fiber strain gauge for human-robot interaction forces assessment on an active knee orthosis. Optical Fiber Technology, 2018, 41, 205-211.	2.7	58
111	Polymer Optical Fiber for In-Shoe Monitoring of Ground Reaction Forces During the Gait. IEEE Sensors Journal, 2018, 18, 2362-2368.	4.7	54
112	Multi-interface level in oil tanks and applications of optical fiber sensors. Optical Fiber Technology, 2018, 40, 82-92.	2.7	72
113	POF-IMU sensor system: A fusion between inertial measurement units and POF sensors for low-cost and highly reliable systems. Optical Fiber Technology, 2018, 43, 82-89.	2.7	15
114	Viscoelastic features based compensation technique for polymer optical fiber curvature sensors. Optics and Laser Technology, 2018, 105, 35-40.	4.6	47
115	Dynamic Compensation Technique for POF Curvature Sensors. Journal of Lightwave Technology, 2018, 36, 1112-1117.	4.6	23
116	Sensitive zone parameters and curvature radius evaluation for polymer optical fiber curvature sensors. Optics and Laser Technology, 2018, 100, 272-281.	4.6	68
117	Compensation technique for environmental and light source power variations applied in a polymer optical fiber curvature sensor for wearable devices. Research on Biomedical Engineering, 2018, 34, 37-44.	2.2	4
118	Fiber Bragg Gratings in CYTOP Fibers Embedded in a 3D-Printed Flexible Support for Assessment of Human-Robot Interaction Forces. Materials, 2018, 11, 2305.	2.9	60
119	Application of Additive Layer Manufacturing Technique on the Development of High Sensitive Fiber Bragg Grating Temperature Sensors. Sensors, 2018, 18, 4120.	3.8	68
120	Fiber Bragg grating-based sensor for torque and angle measurement in a series elastic actuator's spring. Applied Optics, 2018, 57, 7883.	1.8	19
121	Design considerations, analysis, and application of a low-cost, fully portable, wearable polymer optical fiber curvature sensor. Applied Optics, 2018, 57, 6927.	1.8	24
122	Mechanical properties characterization of polymethyl methacrylate polymer optical fibers after thermal and chemical treatments. Optical Fiber Technology, 2018, 43, 106-111.	2.7	23
123	Influence of the Cladding Structure in PMMA mPOFs Mechanical Properties for Strain Sensors Applications. IEEE Sensors Journal, 2018, 18, 5805-5811.	4.7	10
124	Polymer Optical Fiber Sensors in Wearable Devices: Toward Novel Instrumentation Approaches for Gait Assistance Devices. IEEE Sensors Journal, 2018, 18, 7085-7092.	4.7	57
125	Fast and stable gratings inscription in POFs made of different materials with pulsed 248 nm KrF laser. Optics Express, 2018, 26, 2013.	3.4	63
126	Material features based compensation technique for the temperature effects in a polymer diaphragm-based FBG pressure sensor. Optics Express, 2018, 26, 20590.	3.4	75

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127	Dynamic mechanical characterization with respect to temperature, humidity, frequency and strain in mPOFs made of different materials. <i>Optical Materials Express</i> , 2018, 8, 804.	3.0	57
128	Polymer-optical-fiber-based sensor system for simultaneous measurement of angle and temperature. <i>Applied Optics</i> , 2018, 57, 1717.	1.8	64
129	Strain, temperature, moisture, and transverse force sensing using fused polymer optical fibers. <i>Optics Express</i> , 2018, 26, 12939.	3.4	26
130	Design and characterization of a curvature sensor using fused polymer optical fibers. <i>Optics Letters</i> , 2018, 43, 2539.	3.3	22
131	Dynamic mechanical analysis on fused polymer optical fibers: towards sensor applications. <i>Optics Letters</i> , 2018, 43, 1754.	3.3	15
132	Advances on Polymer Optical Fiber Gratings Using a KrF Pulsed Laser System Operating at 248 nm. <i>Fibers</i> , 2018, 6, 13.	4.0	59
133	Polymer Optical Fiber Bragg Gratings in CYTOP Fibers for Angle Measurement with Dynamic Compensation. <i>Polymers</i> , 2018, 10, 674.	4.5	76
134	A Polymer Optical Fiber Temperature Sensor Based on Material Features. <i>Sensors</i> , 2018, 18, 301.	3.8	77
135	Measurement of Temperature and Relative Humidity with Polymer Optical Fiber Sensors Based on the Induced Stress-Optic Effect. <i>Sensors</i> , 2018, 18, 916.	3.8	62
136	Thermal Treatments and Compensation Techniques for the Improved Response of FBG Sensors in POFs. <i>Journal of Lightwave Technology</i> , 2018, 36, 3611-3617.	4.6	15
137	Compensation Method for Temperature Cross-Sensitivity in Transverse Force Applications With FBG Sensors in POFs. <i>Journal of Lightwave Technology</i> , 2018, 36, 3660-3665.	4.6	74
138	FBG-Embedded 3-D Printed ABS Sensing Pads: The Impact of Infill Density on Sensitivity and Dynamic Range in Force Sensors. <i>IEEE Sensors Journal</i> , 2018, 18, 8381-8388.	4.7	74
139	Fabrication and Characterization of Bragg Grating in CYTOP POF at 600-nm Wavelength. , 2018, 2, 1-4.		265
140	Characterization of a new polymer optical fiber with enhanced sensing capabilities using a Bragg grating. <i>Optics Letters</i> , 2018, 43, 4799.	3.3	66
141	Water-oil interface level sensor based on FBG-embedded multi-diaphragms system. , 2018, , .		0
142	Analytical model for a polymer optical fiber under dynamic bending. <i>Optics and Laser Technology</i> , 2017, 93, 92-98.	4.6	65
143	Hysteresis compensation technique for POF curvature sensors. <i>Proceedings of SPIE</i> , 2017, , .	0.8	2
144	Hysteresis compensation technique applied to polymer optical fiber curvature sensor for lower limb exoskeletons. <i>Measurement Science and Technology</i> , 2017, 28, 125103.	2.6	29

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145	Polymethyl methacrylate (PMMA) recycling for the production of optical fiber sensor systems. Optics Express, 2017, 25, 30051.	3.4	58
146	Low-Cost Interrogation Technique for Dynamic Measurements with FBG-Based Devices. Sensors, 2017, 17, 2414.	3.8	62
147	POFBG-Embedded Cork Insole for Plantar Pressure Monitoring. Sensors, 2017, 17, 2924.	3.8	75
148	Interrogation of optical fiber based on the fusion of OFDR and TRA techniques. Optical and Quantum Electronics, 2016, 48, 1.	3.3	2
149	Envelope-based technique for liquid level sensors using an in-line fiber Mach-Zehnder interferometer. Applied Optics, 2016, 55, 9803.	2.1	31
150	Corrosion Resistant FBG-Based Quasi-Distributed Sensor for Crude Oil Tank Dynamic Temperature Profile Monitoring. Sensors, 2015, 15, 30693-30703.	3.8	60
151	Simulation of FBG Temperature Sensor Array for Oil Identification via Random Forest Classification. , 0, , .		1