

# Yoji Okabe

## List of Publications by Year in descending order

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103  
papers

2,374  
citations

186265  
28  
h-index

223800  
46  
g-index

103  
all docs

103  
docs citations

103  
times ranked

1544  
citing authors

#	ARTICLE	IF	CITATIONS
1	Development of smart composite structures with small-diameter fiber Bragg grating sensors for damage detection: Quantitative evaluation of delamination length in CFRP laminates using Lamb wave sensing. <i>Composites Science and Technology</i> , 2005, 65, 2575-2587.	7.8	200
2	Detection of transverse cracks in CFRP composites using embedded fiber Bragg grating sensors. <i>Smart Materials and Structures</i> , 2000, 9, 832-838.	3.5	159
3	High-sensitivity ultrasonic phase-shifted fiber Bragg grating balanced sensing system. <i>Optics Express</i> , 2012, 20, 28353.	3.4	132
4	Effect of thermal residual stress on the reflection spectrum from fiber Bragg grating sensors embedded in CFRP laminates. <i>Composites Part A: Applied Science and Manufacturing</i> , 2002, 33, 991-999.	7.6	99
5	Application of chirped fiber Bragg grating sensors for identification of crack locations in composites. <i>Composites Part A: Applied Science and Manufacturing</i> , 2004, 35, 59-65.	7.6	95
6	Detection of microscopic damages in composite laminates. <i>Composites Science and Technology</i> , 2002, 62, 951-958.	7.8	77
7	Investigation of hindwing folding in ladybird beetles by artificial elytron transplantation and microcomputed tomography. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, 5624-5628.	7.1	76
8	Temperature-compensated strain measurement using fiber Bragg grating sensors embedded in composite laminates. <i>Smart Materials and Structures</i> , 2003, 12, 940-946.	3.5	75
9	Delamination detection in composite laminates using dispersion change based on mode conversion of Lamb waves. <i>Smart Materials and Structures</i> , 2010, 19, 115013.	3.5	65
10	The deformation mode and strengthening mechanism of compression in the beetle elytron plate. <i>Materials and Design</i> , 2017, 131, 481-486.	7.0	60
11	Ultrasonic Structural Health Monitoring Using Fiber Bragg Grating. <i>Sensors</i> , 2018, 18, 3395.	3.8	60
12	Beetle elytron plate and the synergistic mechanism of a trabecular-honeycomb core structure. <i>Science China Technological Sciences</i> , 2019, 62, 87-93.	4.0	54
13	The beetle elytron plate: a lightweight, high-strength and buffering functional-structural bionic material. <i>Scientific Reports</i> , 2017, 7, 4440.	3.3	53
14	Nonlinear ultrasonic detection for evaluating fatigue crack in metal plate. <i>Structural Health Monitoring</i> , 2019, 18, 869-881.	7.5	52
15	Application of a novel optical fiber sensor to detection of acoustic emissions by various damages in CFRP laminates. <i>Smart Materials and Structures</i> , 2015, 24, 015011.	3.5	50
16	Real-time Detection of Debonding between Honeycomb Core and Facesheet using a Small-diameter FBG Sensor Embedded in Adhesive Layer. <i>Journal of Sandwich Structures and Materials</i> , 2007, 9, 9-33.	3.5	47
17	Smart Composite Sandwich Structures for Future Aerospace Application -Damage Detection and Suppression-: a Review. <i>Journal of Solid Mechanics and Materials Engineering</i> , 2007, 1, 3-17.	0.5	41
18	Asymmetric hindwing foldings in rove beetles. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 16349-16352.	7.1	40

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19	Quantitative evaluation of transverse cracks in carbon fiber reinforced plastic quasi-isotropic laminates with embedded small-diameter fiber Bragg grating sensors. <i>Smart Materials and Structures</i> , 2003, 12, 898-903.	3.5	38
20	A novel method of identifying damage types in carbon fiber-reinforced plastic cross-ply laminates based on acoustic emission detection using a fiber-optic sensor. <i>Composites Science and Technology</i> , 2016, 135, 116-122.	7.8	36
21	Evaluation of debonding progress in composite bonded structures using ultrasonic waves received in fiber Bragg grating sensors. <i>Smart Materials and Structures</i> , 2007, 16, 1370-1378.	3.5	34
22	Ultrasonic sensor employing two cascaded phase-shifted fiber Bragg gratings suitable for multiplexing. <i>Optics Letters</i> , 2012, 37, 3336.	3.3	34
23	Sensitivity Distribution Properties of a Phase-Shifted Fiber Bragg Grating Sensor to Ultrasonic Waves. <i>Sensors</i> , 2014, 14, 1094-1105.	3.8	33
24	Design and fabrication of aluminum honeycomb structures based on origami technology. <i>Journal of Sandwich Structures and Materials</i> , 2019, 21, 1224-1242.	3.5	33
25	New Deployable Structures Based on an Elastic Origami Model. <i>Journal of Mechanical Design, Transactions of the ASME</i> , 2015, 137, .	2.9	32
26	Effect of fiber coating on crack detection in carbon fiber reinforced plastic composites using fiber Bragg grating sensors. <i>Smart Materials and Structures</i> , 2002, 11, 892-898.	3.5	29
27	Investigation of dynamic properties of erbium fiber laser for ultrasonic sensing. <i>Optics Express</i> , 2014, 22, 8405.	3.4	29
28	Acoustic emission detection and position identification of transverse cracks in carbon fiber-reinforced plastic laminates by using a novel optical fiber ultrasonic sensing system. <i>Structural Health Monitoring</i> , 2015, 14, 205-213.	7.5	29
29	Fiber-Optic Sensor-Based Remote Acoustic Emission Measurement in a 1000 Å°C Environment. <i>Sensors</i> , 2017, 17, 2908.	3.8	29
30	Application of an Optical Fiber Sensor for Nonlinear Ultrasonic Evaluation of Fatigue Crack. <i>IEEE Sensors Journal</i> , 2019, 19, 4992-4999.	4.7	28
31	An ultrasonic visualization system using a fiber-optic Bragg grating sensor and its application to damage detection at a temperature of 1000Å°C. <i>Mechanical Systems and Signal Processing</i> , 2021, 147, 107140.	8.0	26
32	Fiber-optic sensor-based remote acoustic emission measurement of composites. <i>Smart Materials and Structures</i> , 2016, 25, 105033.	3.5	25
33	Compression properties of metal beetle elytron plates and the elementary unit of the trabecular-honeycomb core structure. <i>Journal of Sandwich Structures and Materials</i> , 2019, 21, 2031-2041.	3.5	24
34	Structural Health Monitoring of an Advanced Grid Structure with Embedded Fiber Bragg Grating Sensors. <i>Structural Health Monitoring</i> , 2007, 6, 309-324.	7.5	23
35	The identification of damage types in carbon fiber-reinforced plastic cross-ply laminates using a novel fiber-optic acoustic emission sensor. <i>Structural Health Monitoring</i> , 2016, 15, 93-103.	7.5	23
36	Influence of honeycomb dimensions and forming methods on the compressive properties of beetle elytron plates. <i>Journal of Sandwich Structures and Materials</i> , 2020, 22, 28-39.	3.5	22

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37	Linear damage localization in CFRP laminates using one single fiber-optic Bragg grating acoustic emission sensor. <i>Composite Structures</i> , 2020, 238, 111992.	5.8	22
38	Fiber Sensor Based on Interferometer and Bragg Grating for Multiparameter Detection. <i>IEEE Photonics Technology Letters</i> , 2015, 27, 1345-1348.	2.5	21
39	The compressive properties and strengthening mechanism of the middle-trabecular beetle elytron plate. <i>Journal of Sandwich Structures and Materials</i> , 2020, 22, 948-961.	3.5	21
40	Designing of self-deploying origami structures using geometrically misaligned crease patterns. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2016, 472, 20150235.	2.1	20
41	“Segment-wise model” for theoretical simulation of barely visible indentation damage in composite sandwich beams: Part I “Formulation. <i>Composites Part A: Applied Science and Manufacturing</i> , 2008, 39, 133-144.	7.6	18
42	Novel real-time acousto-ultrasonic sensors using two phase-shifted fiber Bragg gratings. <i>Journal of Intelligent Material Systems and Structures</i> , 2014, 25, 640-646.	2.5	18
43	Feasibility studies on active damage detection for CFRP aircraft bonding structures. <i>Advanced Composite Materials</i> , 2006, 15, 153-173.	1.9	17
44	Simplified modeling method of impact damage for numerical simulation of Lamb wave propagation in quasi-isotropic composite structures. <i>Composite Structures</i> , 2020, 243, 112150.	5.8	17
45	Smart Honeycomb Sandwich Panels With Damage Detection and Shape Recovery Functions. <i>Advanced Composite Materials</i> , 2008, 17, 41-56.	1.9	16
46	Laser ultrasonic visualization technique using a fiber-optic Bragg grating ultrasonic sensor with an improved adhesion configuration. <i>Structural Health Monitoring</i> , 2021, 20, 303-320.	7.5	15
47	Development of damage monitoring system for aircraft structure using a PZT actuator/FBG sensor hybrid system. , 2004, 5388, 425.		12
48	Evaluation of the matrix crack number in carbon fiber reinforced plastics using linear and nonlinear acousto-ultrasonic detections. <i>Composite Structures</i> , 2021, 255, 112962.	5.8	12
49	Structural characteristics of the core layer and biomimetic model of the ladybug forewing. <i>Micron</i> , 2017, 101, 156-161.	2.2	10
50	Experimental study of the edgewise compressive mechanical properties of biomimetic fully integrated honeycomb plates. <i>Journal of Sandwich Structures and Materials</i> , 2019, 21, 2735-2750.	3.5	10
51	Dispersion relation of Lamb waves in cross-ply composite laminates using multi-layered models. <i>Composite Structures</i> , 2021, 264, 113691.	5.8	10
52	Evaluation of Crack Suppression Effect of TiNi SMA Foil Embedded in CFRP Cross-Ply Laminates with Embedded Small-Diameter FBG Sensor. <i>JSME International Journal Series A-Solid Mechanics and Material Engineering</i> , 2005, 48, 443-450.	0.4	9
53	“Segment-wise model” for theoretical simulation of barely visible indentation damage in composite sandwich beams: Part II “Experimental verification and discussion. <i>Composites Part A: Applied Science and Manufacturing</i> , 2007, 38, 2443-2450.	7.6	9
54	Modeling of thermo-mechanical behavior of Ti-Ni shape memory alloy foils embedded in carbon fiber reinforced plastic laminates. <i>Advanced Composite Materials</i> , 2005, 14, 25-42.	1.9	8

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55	Investigation of an integrated fiber laser sensor system in ultrasonic structural health monitoring. Smart Materials and Structures, 2016, 25, 035020.	3.5	8
56	Characteristics of the shear mechanical properties and the influence mechanism of short basalt fiber reinforced polymer composite materials. Journal of Sandwich Structures and Materials, 2019, 21, 1520-1534.	3.5	8
57	<title>Application of chirped fiber Bragg grating sensors for damage identification in composites</title>. , 2002, 4694, 106.		7
58	Damage growth detection of composite laminate using embedded FBG sensor/PZT actuator hybrid system. , 2005, , .		7
59	Demonstration of detectability of SHM system with FBG/PZT hybrid system in composite wing box structure. Proceedings of SPIE, 2008, , .	0.8	7
60	Lightweight Actuator Structure With SMA Honeycomb Core and CFRP Skins. Journal of Mechanical Design, Transactions of the ASME, 2011, 133, .	2.9	7
61	Waveform reconstruction for an ultrasonic fiber Bragg grating sensor demodulated by an erbium fiber laser. Applied Optics, 2015, 54, 694.	1.8	7
62	Novel acoustic emission sensor system based on two cascaded phase-shifted fiber Bragg gratings. , 2012, , .		6
63	Application of small-diameter FBG sensors for detection of damages in composites. , 2001, 4328, 295.		5
64	Application of chirped FBG sensors for detection of local delamination in composite laminates. , 2003, 5050, 171.		5
65	Impact monitoring of the aircraft composite structure using FBG sensor/PZT actuator hybrid sensor system. , 2007, , .		5
66	Regenerated Fiber Bragg Grating Sensing System for Ultrasonic Detection in a 900â€™%Â°C Environment. Journal of Nondestructive Evaluation, Diagnostics and Prognostics of Engineering Systems, 2019, 2, .	0.9	5
67	Detection of a single transverse crack in a CFRP cross-ply laminate by visualizing mode conversion of Lamb waves. Composite Structures, 2022, 283, 115118.	5.8	5
68	Impact Damage Detection Using Chirp Ultrasonic Guided Waves for Development of Health Monitoring System for CFRP Mobility Structures. Sensors, 2022, 22, 789.	3.8	5
69	<title>Detection of delamination in composite laminates using small-diameter FBG sensors</title>. , 2002, 4694, 138.		4
70	<title>Temperature-compensated strain measurement using FBG sensors embedded in composite laminates</title>. , 2002, , .		4
71	Application of fiber Bragg grating sensors to real-time strain measurement of cryogenic tanks. , 2003, 5056, 304.		4
72	Design of a 3D Wing Honeycomb Core Based on Origami Techniques. , 2016, , .		4

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73	Dual-frequency acousto-ultrasonic sensing of impact damage in composites for mitigating signal instability. <i>Structural Health Monitoring</i> , 2022, 21, 282-297.	7.5	4
74	Numerical analysis of Lamb waves propagating through impact damage in a skin-stringer structure composed of interlaminar-toughened CFRP. <i>Composite Structures</i> , 2021, 277, 114639.	5.8	4
75	Macroscopic and Microscopic Elastic Constant Measurements of Ceramic Matrix Composites Using Ultrasonic Waves. <i>Journal of Composite Materials</i> , 1999, 33, 1743-1755.	2.4	3
76	Quantitative Evaluation of Interlaminar-Toughened CFRP Composite by Ultrasonic Wave Propagation Characteristics. <i>Journal of Composite Materials</i> , 2002, 36, 757-769.	2.4	3
77	Identification of damage location in advanced grid structures using fiber Bragg grating sensor. , 2005, , .		3
78	Real-Time Damage Detection of Honeycomb Sandwich Structures using Small-Diameter Fiber Bragg Grating Sensors. , 2005, , 383-392.		3
79	Evaluation of debonding progress in composite bonded structures by ultrasonic wave sensing with fiber Bragg grating sensors. , 2006, , .		3
80	Shape-variable sandwich structure with SMA honeycomb core and CFRP skins. , 2009, , .		3
81	PARAFAC Decomposition for Ultrasonic Wave Sensing of Fiber Bragg Grating Sensors: Procedure and Evaluation. <i>Sensors</i> , 2015, 15, 16388-16411.	3.8	3
82	Debonding monitoring of a composite repair patch using small-diameter FBG sensors. , 2004, , .		2
83	Evaluation of the damage suppression effect of Ti-Ni shape memory alloy foils embedded in carbon fiber reinforced plastic laminates. <i>Advanced Composite Materials</i> , 2005, 14, 43-61.	1.9	2
84	Damage growth monitoring for a bonding layer of the aircraft bonding structure. , 2006, , .		2
85	Debonding Detection in CFRP Bonded Structures Using a Built-In Broadband Lamb Wave Propagation System. <i>Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A</i> , 2010, 76, 465-472.	0.2	2
86	Health Monitoring of Composite Materials Using Optical Fiber Sensors. <i>Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A</i> , 2001, 67, 378-383.	0.2	1
87	<title>Effect of thermal residual stress on the reflection spectrum from FBG sensors embedded in CFRP composites</title>. , 2002, 4704, 59.		1
88	<title>Crack identification in CFRP laminates using small-diameter FBG sensors</title>. , 2002, 4694, 330.		1
89	Damage Detection in Aircraft Composite Materials Using a Built-in Broadband Ultrasonic Propagation System. <i>Journal of System Design and Dynamics</i> , 2011, 5, 966-981.	0.3	1
90	For the Practical Use of a Lamb Wave-based SHM System. , 0, , .		1

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91	Fiber Bragg Grating Sensors in Aeronautics and Astronautics. , 2011, , 171-184.		1
92	2D slowness visualization of ultrasonic wave propagation for delamination detection in CFRP laminates. NDT and E International, 2022, 131, 102696.	3.7	1
93	Influence of Stress Induced Birefringence on FBC Sensors Embedded in CFRP Laminates. , 2004, , 937-942.		0
94	Design and testing of integrated Bragg grating sensor systems for advanced grid structure. , 2006, 6173, 407.		0
95	Lightweight Actuator Structure With SMA Honeycomb Core and CFRP Skins. , 2009, , .		0
96	New Deployable Structures Based on an Elastic Origami Model. , 2013, , .		0
97	Study on Mechanical Performance and Optimal Shape of SMA Artificial Muscle. Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A, 2013, 79, 1127-1131.	0.2	0
98	Novel optical fiber ultrasonic sensor based on fiber laser. , 2014, , .		0
99	Fiber-optic ultrasonic sensing systems using PS-FBG for damage monitoring in composite materials. , 2015, , .		0
100	Flight Testing of an Ultrasonic Based SHM System. Lecture Notes in Mechanical Engineering, 2020, , 1010-1021.	0.4	0
101	Physical Sensors: Acoustic Sensors. , 2021, , .		0
102	Smart Composite Material and Structure Systems Using Fiber Bragg Grating Sensors. The Review of Laser Engineering, 2005, 33, 577-581.	0.0	0
103	Application of phase shifted fiber Bragg grating to advanced ultrasonic structural health monitoring. , 2016, , .		0