

Kenneth J Loh

List of Publications by Year in descending order

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133
papers

2,980
citations

236925
25
h-index

182427
51
g-index

139
all docs

139
docs citations

139
times ranked

2730
citing authors

#	ARTICLE	IF	CITATIONS
1	Piezoelectric rod sensors for scour detection and vortex-induced vibration monitoring. Structural Health Monitoring, 2022, 21, 1031-1045.	7.5	5
2	Active scour monitoring using ultrasonic time domain reflectometry of buried slender sensors. Smart Materials and Structures, 2022, 31, 015045.	3.5	2
3	Distributed Strain Monitoring Using Nanocomposite Paint Sensing Meshes. Sensors, 2022, 22, 812.	3.8	3
4	Passive Multi-Degree-of-Freedom Piezoelectric Rods for Continuous Monitoring of Scour Holes. , 2022, 6, 1-4.		0
5	Ankle Sprain Bracing Solutions and Future Design Consideration for Civilian and Military Use. Expert Review of Medical Devices, 2022, , .	2.8	2
6	Pressure Mapping Using Nanocomposite-Enhanced Foam and Machine Learning. Frontiers in Materials, 2022, 9, .	2.4	5
7	Topological design of strain sensing nanocomposites. Scientific Reports, 2022, 12, .	3.3	2
8	Rapid Soft Material Actuation Through Droplet Evaporation. Soft Robotics, 2021, 8, 555-563.	8.0	7
9	Graphene K�Tape Meshes for Densely Distributed Human Motion Monitoring. Advanced Materials Technologies, 2021, 6, .	5.8	22
10	Wearable nanocomposite kinesiology tape for distributed muscle engagement monitoring. MRS Advances, 2021, 6, 6-13.	0.9	5
11	Liquid vaporization actuated soft structures with active cooling and heat loss control. Smart Materials and Structures, 2021, 30, 055007.	3.5	3
12	In situ crack mapping of large-scale self-sensing concrete pavements using electrical resistance tomography. Cement and Concrete Composites, 2021, 122, 104154.	10.7	22
13	Atomization Control to Improve Soft Actuation Through Vaporization. Frontiers in Robotics and AI, 2021, 8, 747440.	3.2	1
14	Vibration Analysis of a Piezoelectric Ultrasonic Atomizer to Control Atomization Rate. Applied Sciences (Switzerland), 2021, 11, 8350.	2.5	14
15	Planar capacitive imaging for composite delamination damage characterization. Measurement Science and Technology, 2021, 32, 024010.	2.6	16
16	Autonomous bolt loosening detection using deep learning. Structural Health Monitoring, 2020, 19, 105-122.	7.5	98
17	Sensing and actuation technologies for smart socket prostheses. Biomedical Engineering Letters, 2020, 10, 103-118.	4.1	22
18	Graphene sensing meshes for densely distributed strain field monitoring. Structural Health Monitoring, 2020, 19, 1323-1339.	7.5	12

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19	Discussion of user-defined parameters for recursive subspace identification: Application to seismic response of building structures. <i>Earthquake Engineering and Structural Dynamics</i> , 2020, 49, 1738-1757.	4.4	3
20	Laboratory Evaluation of Railroad Crosslevel Tilt Sensing Using Electrical Time Domain Reflectometry. <i>Sensors</i> , 2020, 20, 4470.	3.8	4
21	Warning Time-Based Framework for Bridge Scour Monitoring. <i>Journal of Bridge Engineering</i> , 2020, 25, .	2.9	3
22	Characterization of a Soft Gripper with Detachable Fingers through Rapid Evaporation. , 2020, , .		1
23	Special issue of biomedical engineering letters on advances in intelligent prostheses. <i>Biomedical Engineering Letters</i> , 2020, 10, 1-3.	4.1	1
24	Effect of carbon nanotube alignment on nanocomposite sensing performance. <i>Materials Research Express</i> , 2020, 7, 046406.	1.6	5
25	Surface Morphing of Geometrically Patterned Active Skins. <i>MRS Advances</i> , 2020, 5, 743-750.	0.9	3
26	Self-heating and electrical performance of carbon nanotube-enhanced cement composites. <i>Construction and Building Materials</i> , 2020, 250, 118838.	7.2	28
27	Characterization of Soft Actuation Through Ultrasonic Atomization. <i>Minerals, Metals and Materials Series</i> , 2020, , 881-888.	0.4	1
28	Curing and subsurface damage monitoring of epoxy-based composites. <i>Structural Health Monitoring</i> , 2019, 18, 1040-1055.	7.5	7
29	Role of indentation depth and contact area on human perception of softness for haptic interfaces. <i>Science Advances</i> , 2019, 5, eaaw8845.	10.3	43
30	Performance Characteristics of Diluted Epoxy Asphalt Binders and Their Potential Application in Chip Seal. <i>Journal of Materials in Civil Engineering</i> , 2019, 31, .	2.9	13
31	Effect of Structural Change on Temperature Behavior of a Long-Span Suspension Bridge Pylon. <i>International Journal of Steel Structures</i> , 2019, 19, 2073-2089.	1.3	4
32	Graphene Nanosheets: Printed Strain Sensors Using Graphene Nanosheets Prepared by Water-Assisted Liquid Phase Exfoliation (<i>Adv. Mater. Interfaces</i> 9/2019). <i>Advanced Materials Interfaces</i> , 2019, 6, 1970060.	3.7	1
33	Densely distributed and real-time scour hole monitoring using piezoelectric rod sensors. <i>Advances in Structural Engineering</i> , 2019, 22, 3395-3411.	2.4	11
34	Printed Strain Sensors Using Graphene Nanosheets Prepared by Water-Assisted Liquid Phase Exfoliation. <i>Advanced Materials Interfaces</i> , 2019, 6, 1900034.	3.7	21
35	Bio-Inspired Active Skins for Surface Morphing. <i>Scientific Reports</i> , 2019, 9, 18609.	3.3	16
36	Soft material actuation by atomization. <i>Smart Materials and Structures</i> , 2019, 28, 025030.	3.5	8

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37	Large area distributed strain monitoring using patterned nanocomposite sensing meshes. , 2019, , .		0
38	Topological design of carbon nanotube-based nanocomposites for strain sensing. , 2019, , .		0
39	Enhancing the imaging performance of electrical capacitance tomography for monitoring osseointegrated prostheses. , 2019, , .		0
40	Micro-patterned graphene-based sensing skins for human physiological monitoring. Nanotechnology, 2018, 29, 105503.	2.6	21
41	Noncontact Strain Monitoring of Osseointegrated Prostheses. Sensors, 2018, 18, 3015.	3.8	14
42	Distributed Strain Sensing Using Electrical Time Domain Reflectometry With Nanocomposites. IEEE Sensors Journal, 2018, 18, 9515-9525.	4.7	1
43	Field responsive mechanical metamaterials. Science Advances, 2018, 4, eaau6419.	10.3	154
44	Recent advances in adaptive and active materials 2017. Smart Materials and Structures, 2018, 27, 110201.	3.5	2
45	Monitoring osseointegrated prosthesis loosening and fracture using electrical capacitance tomography. Biomedical Engineering Letters, 2018, 8, 291-300.	4.1	6
46	Thermal response characterization and comparison of carbon nanotube-enhanced cementitious composites. Composite Structures, 2018, 202, 1042-1050.	5.8	29
47	Shaking table tests for evaluating the damage features under earthquake excitations using smartphones. , 2018, , .		3
48	Actuation of soft materials through ultrasonic atomization. , 2018, , .		1
49	A planar array capacitive imaging system for detecting damage in composite structures: a numerical study. , 2018, , .		0
50	Self-sensing concrete enabled by nano-engineered cement-aggregate interfaces. Structural Health Monitoring, 2017, 16, 309-323.	7.5	94
51	Vibration-based system identification of wind turbine system. Structural Control and Health Monitoring, 2017, 24, e1876.	4.0	25
52	Laboratory validation of buried piezoelectric scour sensing rods. Structural Control and Health Monitoring, 2017, 24, e1969.	4.0	17
53	Carbon nanotube thin film strain sensor models assembled using nano- and micro-scale imaging. Computational Mechanics, 2017, 60, 39-49.	4.0	11
54	Wearable carbon nanotube-based fabric sensors for monitoring human physiological performance. Smart Materials and Structures, 2017, 26, 055018.	3.5	57

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55	Noncontact Electrical Permittivity Mapping and pH-Sensitive Films for Osseointegrated Prosthesis and Infection Monitoring. IEEE Transactions on Medical Imaging, 2017, 36, 2193-2203.	8.9	26
56	Carbon nanotube thin film strain sensors: comparison between experimental tests and numerical simulations. Nanotechnology, 2017, 28, 155502.	2.6	22
57	Non-contact Tomographic Imaging and Nanocomposite Thin Films for Monitoring Human-prosthesis Interfaces. Procedia Engineering, 2017, 188, 110-118.	1.2	3
58	Comparison of electrical impedance tomography inverse solver approaches for damage sensing. , 2017, , .		3
59	Noninvasive Monitoring of Epoxy Curing. , 2017, 1, 1-4.		13
60	Characterizing the Conductivity and Enhancing the Piezoresistivity of Carbon Nanotube-Polymeric Thin Films. Materials, 2017, 10, 724.	2.9	5
61	Nanocomposite Fabric Sensors for Monitoring Inflatable and Deployable Space Structures. , 2016, , .		3
62	An experimental and numerical study on the mechanical properties of carbon nanotube-latex thin films. Journal of the European Ceramic Society, 2016, 36, 2255-2262.	5.7	16
63	Distributed Pressure Sensing Using Carbon Nanotube Fabrics. IEEE Sensors Journal, 2016, 16, 4663-4664.	4.7	16
64	Multifunctional Cement Composites Enhanced With Carbon Nanotube Thin Film Interfaces. Proceedings of the IEEE, 2016, 104, 1547-1560.	21.3	18
65	Dissolved Oxygen Sensors for Scour Monitoring. IEEE Sensors Journal, 2016, , 1-1.	4.7	2
66	Sensing uniaxial tensile damage in fiber-reinforced polymer composites using electrical resistance tomography. Smart Materials and Structures, 2016, 25, 085016.	3.5	19
67	Strain sensing and structural health monitoring using nanofilms and nanocomposites. , 2016, , 303-326.		2
68	Sensing human physiological response using wearable carbon nanotube-based fabrics. , 2016, , .		1
69	Characterization and Localization of Sub-Surface Structural Features Using Non-Contact Tomography. , 2016, , .		4
70	Cementitious Composites Engineered with Embedded Carbon Nanotube Thin Films for Enhanced Sensing Performance. Journal of Physics: Conference Series, 2015, 628, 012042.	0.4	18
71	Development of a portable electrical impedance tomography data acquisition system for near-real-time spatial sensing. , 2015, , .		1
72	Effects of Ultra-low Concentrations of Carbon Nanotubes on the Electromechanical Properties of Cement Paste. , 2015, , 371-376.		8

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73	A 2D percolation-based model for characterizing the piezoresistivity of carbon nanotube-based films. Journal of Materials Science, 2015, 50, 2973-2983.	3.7	51
74	Inkjet-printed, flexible, and photoactive thin film strain sensors. Journal of Intelligent Material Systems and Structures, 2015, 26, 1699-1710.	2.5	17
75	Monitoring bridge scour using dissolved oxygen probes. Structural Monitoring and Maintenance, 2015, 2, 145-164.	1.7	15
76	Vibration-based identification of rotating blades using Rodrigues' rotation formula from a 3-D measurement. Wind and Structures, an International Journal, 2015, 21, 677-691.	0.8	1
77	Analyzing the dynamic response of rotating blades in small-scale wind turbines. , 2014, , .		0
78	Design and characterization of a piezoelectric sensor for monitoring scour hole evolution. Proceedings of SPIE, 2014, , .	0.8	2
79	In situ phase change characterization of PVDF thin films using Raman spectroscopy. Proceedings of SPIE, 2014, , .	0.8	9
80	Multi-modal sensing using photoactive thin films. Smart Materials and Structures, 2014, 23, 085011.	3.5	12
81	Modeling the electromechanical and strain response of carbon nanotube-based nanocomposites. Proceedings of SPIE, 2014, , .	0.8	5
82	Photoactive and self-sensing P3HT-based thin films for strain and corrosion monitoring. , 2014, , .		0
83	Operational model updating of spinning finite element models for HAWT blades. Proceedings of SPIE, 2014, , .	0.8	0
84	A distributed piezo-polymer scour net for bridge scour hole topography monitoring. Structural Monitoring and Maintenance, 2014, 1, 183-195.	1.7	3
85	Spatial Sensing Using Electrical Impedance Tomography. IEEE Sensors Journal, 2013, 13, 2357-2367.	4.7	84
86	The electrical response of carbon nanotube-based thin film sensors subjected to mechanical and environmental effects. Smart Materials and Structures, 2013, 22, 025010.	3.5	30
87	Active sensing and damage detection using piezoelectric zinc oxide-based nanocomposites. Nanotechnology, 2013, 24, 185501.	2.6	39
88	Detection of spatially distributed damage in fiber-reinforced polymer composites. Structural Health Monitoring, 2013, 12, 225-239.	7.5	77
89	Evaluation of the Damage Detection Characteristics of Electrical Impedance Tomography. , 2013, , .		5
90	Piezoelectric nanocomposite sensors assembled using zinc oxide nanoparticles and poly(vinylidene fluoride) (PVDF). Journal of Intelligent Material Systems and Structures, 2013, 24, 1699-1710.	1.9	27

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91	Enhancing the piezoelectric performance of PVDF-TrFE thin films using zinc oxide nanoparticles. Proceedings of SPIE, 2012, , .	0.8	5
92	Strain sensing using photocurrent generated by photoactive P3HT-based nanocomposites. Smart Materials and Structures, 2012, 21, 065016.	3.5	20
93	EVALUATING THE PH SENSITIVITY OF CARBON NANOTUBE-POLYANILINE THIN FILMS WITH DIFFERENT DOPANTS. Nano LIFE, 2012, 02, 1242001.	0.9	5
94	Recent Advances in Skin-Inspired Sensors Enabled by Nanotechnology. Jom, 2012, 64, 793-801.	1.9	18
95	Piezoelectric Characterization of PVDF-TrFE Thin Films Enhanced With ZnO Nanoparticles. IEEE Sensors Journal, 2012, 12, 1889-1890.	4.7	75
96	Self-Sensing Photoactive Thin Films for Monitoring Space Structures. , 2012, , .		1
97	Conductivity-Based Damage Detection in Carbon Fiber Composites. , 2012, , .		0
98	Characterizing the viscoelastic properties of layer-by-layer carbon nanotubeâ€“polyelectrolyte thin films. Smart Materials and Structures, 2011, 20, 075020.	3.5	7
99	Validation of photocurrent-based strain sensing using a P3HT-based nanocomposite. Proceedings of SPIE, 2011, , .	0.8	4
100	Static and dynamic strain monitoring of GFRP composites using carbon nanotube thin films. , 2011, , .		8
101	Zinc oxide nanoparticle-polymeric thin films for dynamic strain sensing. Journal of Materials Science, 2011, 46, 228-237.	3.7	84
102	A wireless impedance analyzer for automated tomographic mapping of a nanoengineered sensing skin. Smart Structures and Systems, 2011, 8, 139-155.	1.9	23
103	In situ reduction of gold nanoparticles in PDMS matrices and applications for large strain sensing. Smart Structures and Systems, 2011, 8, 471-486.	1.9	57
104	Passive wireless sensors for monitoring particle movement at soil-structure interfaces. Proceedings of SPIE, 2010, , .	0.8	3
105	In situ strain monitoring of fiber-reinforced polymers using embedded piezoresistive nanocomposites. Journal of Materials Science, 2010, 45, 6786-6798.	3.7	78
106	Embedded Piezoresistive Thin Films for Monitoring GFRP Composites. , 2010, , .		0
107	Nanoengineering Ultra-High-Performance Concrete with Multiwalled Carbon Nanotubes. Transportation Research Record, 2010, 2142, 119-126.	1.9	66
108	Piezoelectric and Mechanical Performance Characterization of ZnO-Based Nanocomposites. , 2010, , .		0

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109	Characterizing the self-sensing performance of carbon nanotube-enhanced fiber-reinforced polymers. , 2010, , .		3
110	Carbon Nanotube Sensing Skins for Spatial Strain and Impact Damage Identification. Journal of Nondestructive Evaluation, 2009, 28, 9-25.	2.4	213
111	Layer-by-layer carbon nanotube bio-templates for in situ monitoring of the metabolic activity of nitrifying bacteria. Proceedings of SPIE, 2009, , .	0.8	0
112	Carbon Nanotube Sensing Skins for Spatial Strain and Impact Damage Identification. , 2009, 28, 9.		1
113	Piezoelectric polymeric thin films tuned by carbon nanotube fillers. , 2008, , .		12
114	Tailoring Piezoresistive Sensitivity of Multilayer Carbon Nanotube Composite Strain Sensors. Journal of Intelligent Material Systems and Structures, 2008, 19, 747-764.	2.5	155
115	Inductively coupled nanocomposite wireless strain and pH sensors. Smart Structures and Systems, 2008, 4, 531-548.	1.9	46
116	Spatial structural sensing by carbon nanotube-based skins. , 2008, , .		2
117	Passive wireless sensing using SWNT-based multifunctional thin film patches. International Journal of Applied Electromagnetics and Mechanics, 2008, 28, 87-94.	0.6	18
118	Design and Validation of Carbon Nanotube Thin Film Wireless Sensors for pH and Corrosion Monitoring. , 2008, , .		0
119	Passive wireless strain and pH sensing using carbon nanotube-gold nanocomposite thin films. , 2007, , .		17
120	Electrical impedance tomography of carbon nanotube composite materials. , 2007, , .		9
121	Spatial conductivity mapping of carbon nanotube composite thin films by electrical impedance tomography for sensing applications. Nanotechnology, 2007, 18, 315501.	2.6	111
122	Multifunctional layer-by-layer carbon nanotubeâ€“polyelectrolyte thin films for strain and corrosion sensing. Smart Materials and Structures, 2007, 16, 429-438.	3.5	259
123	Mechanical-electrical characterization of carbon-nanotube thin films for structural monitoring applications. , 2006, , .		2
124	Performance monitoring of the Geumdang Bridge using a dense network of high-resolution wireless sensors. Smart Materials and Structures, 2006, 15, 1561-1575.	3.5	216
125	Remote Sensing with the Synthetic Aperture Radar (SAR) for Urban Damage Detection. , 2004, , 223.		2
126	Real-time visualization of bridge structural response through wireless MEMS sensors. , 2004, , .		18

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127	Rapid Assembly of Multifunctional Thin Film Sensors for Wind Turbine Blade Monitoring. Key Engineering Materials, 0, 569-570, 515-522.	0.4	24
128	Analyzing the Strain Sensing Response of Photoactive Thin Films Using Absorption Spectroscopy. Key Engineering Materials, 0, 569-570, 695-701.	0.4	4
129	Characterization of Carbon Nanotube Strain Sensors Using Experimental Tests and Percolation Modeling. , 0, , .		2
130	Damage Detection Using Smart Concrete Engineered with Nanocomposite Cement-Aggregate Interfaces. , 0, , .		3
131	Noncontact and Noninvasive Strain Monitoring of Osseointegrated Prostheses. , 0, , .		1
132	Laboratory Validation of a Piezoelectric Scour Monitoring Sensor. , 0, , .		1
133	Selective Heating Through Y-Function Waveguide Designed by Acoustic Shape Optimization. Advanced Engineering Materials, 0, , 2200756.	3.5	0