

Jiajie Fan

List of Publications by Year in descending order

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Version: 2024-02-01

79
papers

1,559
citations

361413

20
h-index

345221

36
g-index

82
all docs

82
docs citations

82
times ranked

1049
citing authors

#	ARTICLE	IF	CITATIONS
1	Prediction of mechanical solutions for a laminated LCEs system fusing an analytical model and neural networks. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2022, 125, 104918.	3.1	3
2	High-temperature nanoindentation characterization of sintered nano-copper particles used in high power electronics packaging. <i>Results in Physics</i> , 2022, 33, 105168.	4.1	11
3	Luminous Performances Characterization of YAG: Ce ³⁺ Phosphor/Silicone Composites Using Both Reflective and Transmissive Laser Excitations. <i>IEEE Photonics Journal</i> , 2022, 14, 1-6.	2.0	4
4	Sulfur-Rich Ageing Mechanism of Silicone Encapsulant Used in LED Packaging: An Experimental and Molecular Dynamic Simulation Study. <i>Frontiers in Materials</i> , 2022, 9, .	2.4	3
5	Coupling effects of thermal-humidity-sulfur aging on mechanical properties of (Ca,Sr)AlSiN ₃ :Eu ²⁺ phosphor/silicone composites with experimental and numerical interpretation. <i>Optical Materials</i> , 2022, 128, 112384.	3.6	1
6	Microstructural evolution, fracture behavior and bonding mechanisms study of copper sintering on bare DBC substrate for SiC power electronics packaging. <i>Journal of Materials Research and Technology</i> , 2022, 19, 1407-1421.	5.8	16
7	Genetic Algorithm-Assisted Design of Redistribution Layer Vias for a Fan-Out Panel-Level SiC MOSFET Power Module Packaging. , 2022, , .		4
8	In-air sintering of copper nanoparticle paste with pressure-assistance for die attachment in high power electronics. <i>Journal of Materials Science: Materials in Electronics</i> , 2021, 32, 4544-4555.	2.2	19
9	The Drive towards Optimization of Road Lighting Energy Consumption Based on Mesopic Vision A Suburban Street Case Study. <i>Energies</i> , 2021, 14, 1175.	3.1	21
10	A Gamma process-based degradation testing of silicone encapsulant used in LED packaging. <i>Polymer Testing</i> , 2021, 96, 107090.	4.8	10
11	System level reliability assessment for high power light-emitting diode lamp based on a Bayesian network method. <i>Measurement: Journal of the International Measurement Confederation</i> , 2021, 176, 109191.	5.0	14
12	Prognostics of radiation power degradation lifetime for ultraviolet light-emitting diodes using stochastic data-driven models. <i>Energy and AI</i> , 2021, 4, 100066.	10.6	3
13	Evaluating the moisture resistance of Y ₃ Al ₅ O ₁₂ : Ce ³⁺ phosphor used in high power white LED packaging. <i>Microelectronics Reliability</i> , 2021, 121, 114130.	1.7	4
14	Design of a Fan-Out Panel-Level SiC MOSFET Power Module Using Ant Colony Optimization-Back Propagation Neural Network. <i>IEEE Transactions on Electron Devices</i> , 2021, 68, 3460-3467.	3.0	11
15	The temperature-dependent fractional evolutionary model for sintered nanoscale silver films. <i>European Journal of Mechanics, A/Solids</i> , 2021, 90, 104359.	3.7	8
16	Insights into the high-sulphur aging of sintered silver nanoparticles: An experimental and ReaxFF study. <i>Corrosion Science</i> , 2021, 192, 109846.	6.6	5
17	Bayesian based lifetime prediction for high-power white LEDs. <i>Expert Systems With Applications</i> , 2021, 185, 115627.	7.6	11
18	A hybrid degradation modeling of light-emitting diode using permutation entropy and data-driven methods. , 2021, , .		2

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19	Hydrolysis kinetic study of CaAlSiN ₃ :Eu ²⁺ red phosphor with both water immersion test and first-principles calculation. <i>Journal of Luminescence</i> , 2020, 219, 116874.	3.1	14
20	The interface adhesion of CaAlSiN ₃ : Eu ²⁺ phosphor/silicone used in light-emitting diode packaging: A first principles study. <i>Applied Surface Science</i> , 2020, 510, 145251.	6.1	9
21	Random Voids Generation and Effect of Thermal Shock Load on Mechanical Reliability of Light-Emitting Diode Flip Chip Solder Joints. <i>Materials</i> , 2020, 13, 94.	2.9	7
22	Characterization and reconstruction for stochastically distributed void morphology in nano-silver sintered joints. <i>Materials and Design</i> , 2020, 196, 109079.	7.0	16
23	Machine Learning and Digital Twin Driven Diagnostics and Prognostics of Light-Emitting Diodes. <i>Laser and Photonics Reviews</i> , 2020, 14, 2000254.	8.7	43
24	Thermal kinetic and mechanical behaviors of pressure-assisted Cu nanoparticles sintering: A molecular dynamics study. <i>Results in Physics</i> , 2020, 19, 103486.	4.1	19
25	Effects of silicone lens aging on degradation kinetics of light-emitting diode package in various accelerated testing. <i>Optical Materials</i> , 2020, 107, 110071.	3.6	7
26	Lifetime Prediction of Ultraviolet Light-Emitting Diodes Using a Long Short-Term Memory Recurrent Neural Network. <i>IEEE Electron Device Letters</i> , 2020, 41, 1817-1820.	3.9	24
27	Machine-Learning Assisted Prediction of Spectral Power Distribution for Full-Spectrum White Light-Emitting Diode. <i>IEEE Photonics Journal</i> , 2020, 12, 1-18.	2.0	14
28	A variable-order fractional model of tensile and shear behaviors for sintered nano-silver paste used in high power electronics. <i>Mechanics of Materials</i> , 2020, 145, 103391.	3.2	27
29	Deep machine learning of the spectral power distribution of the LED system with multiple degradation mechanisms. <i>Journal of Mechanics</i> , 2020, 37, 172-183.	1.4	17
30	Experimental Investigation on the Sintering Kinetics of Nanosilver Particles Used in High-Power Electronic Packaging. <i>IEEE Transactions on Components, Packaging and Manufacturing Technology</i> , 2020, 10, 1101-1109.	2.5	12
31	High Temperature Performance Evaluation and Life Prediction for Titanium Modified Silicone Used in Light-Emitting Diodes Chip Scale Packages. <i>Journal of Electronic Packaging, Transactions of the ASME</i> , 2020, 142, .	1.8	7
32	Dynamic prediction of optical and chromatic performances for a light-emitting diode array based on a thermal-electrical-spectral model. <i>Optics Express</i> , 2020, 28, 13921.	3.4	8
33	High Moisture Accelerated Mechanical Behavior Degradation of Phosphor/Silicone Composites Used in White Light-Emitting Diodes. <i>Polymers</i> , 2019, 11, 1277.	4.5	17
34	A SPICE-based Transient Thermal-Electronic Model for LEDs. , 2019, , .		3
35	Lifetime Prediction of Ultraviolet Light-emitting Diodes with Accelerated Wiener Degradation Process. , 2019, , .		3
36	Effects of humidity and phosphor on silicone/phosphor composite in white light-emitting diode package. <i>Journal of Materials Science: Materials in Electronics</i> , 2019, 30, 20471-20478.	2.2	7

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37	Investigation of Step-Stress Accelerated Degradation Test Strategy for Ultraviolet Light Emitting Diodes. <i>Materials</i> , 2019, 12, 3119.	2.9	17
38	A Reliability Prediction Methodology for LED Arrays. <i>IEEE Access</i> , 2019, 7, 8127-8134.	4.2	4
39	Reliability Assessment of Light-Emitting Diode Packages With Both Luminous Flux Response Surface Model and Spectral Power Distribution Method. <i>IEEE Access</i> , 2019, 7, 68495-68502.	4.2	17
40	The Effect of Light Distribution of LED Luminaire on Human Ocular Physiological Characteristics. <i>IEEE Access</i> , 2019, 7, 28478-28486.	4.2	4
41	A Better Photometric Index of Photo-Biological Effect on Visual Function of Human Eye: Illuminance or Luminance?. <i>IEEE Access</i> , 2019, 7, 165919-165927.	4.2	1
42	Lumen Degradation Lifetime Prediction for High-Power White LEDs Based on the Gamma Process Model. <i>IEEE Photonics Journal</i> , 2019, 11, 1-16.	2.0	21
43	Effects of Sintering Pressure on the Densification and Mechanical Properties of Nanosilver Double-Side Sintered Power Module. <i>IEEE Transactions on Components, Packaging and Manufacturing Technology</i> , 2019, 9, 963-972.	2.5	13
44	Effects of Voids on Mechanical and Thermal Properties of the Die Attach Solder Layer Used in High-Power LED Chip-Scale Packages. <i>IEEE Transactions on Components, Packaging and Manufacturing Technology</i> , 2018, 8, 1254-1262.	2.5	35
45	A design and qualification of LED flip Chip-on-Board module with tunable color temperatures. <i>Microelectronics Reliability</i> , 2018, 84, 140-148.	1.7	5
46	A new hermetic sealing method for ceramic package using nanosilver sintering technology. <i>Microelectronics Reliability</i> , 2018, 81, 143-149.	1.7	11
47	Fault Diagnostics and Lifetime Prognostics for Phosphor-Converted White LED Packages. <i>Solid State Lighting Technology and Application Series</i> , 2018, , 255-299.	0.3	2
48	Lumen Maintenance Lifetime Prediction for Phosphor-converted White LEDs with a Wiener Process based Model. , 2018, , .		2
49	Study of ultraviolet assisted cure mechanism of the phosphor/silicone composites used in White LEDs. , 2018, , .		1
50	Fatigue Damage Assessment of LED Chip Scale Packages with Finite Element Simulation. , 2018, , .		0
51	Comparison of ultrasonic wire bonding process between gold and copper by nonlinear structure analysis. <i>Journal of Adhesion Science and Technology</i> , 2018, 32, 2007-2018.	2.6	3
52	Investigation of Mechanical Properties of Silicone/Phosphor Composite Used in Light Emitting Diodes Package. <i>Polymers</i> , 2018, 10, 195.	4.5	20
53	In-situ characterization of moisture absorption and hygroscopic swelling of silicone/phosphor composite film and epoxy mold compound in LED packaging. <i>Microelectronics Reliability</i> , 2018, 84, 208-214.	1.7	20
54	A novel lifetime prediction for integrated LED lamps by electronic-thermal simulation. <i>Reliability Engineering and System Safety</i> , 2017, 163, 14-21.	8.9	35

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55	Thermal/luminescence characterization and degradation mechanism analysis on phosphor-converted white LED chip scale packages. <i>Microelectronics Reliability</i> , 2017, 74, 179-185.	1.7	21
56	Prediction of Lumen Depreciation and Color Shift for Phosphor-Converted White Light-Emitting Diodes Based on A Spectral Power Distribution Analysis Method. <i>IEEE Access</i> , 2017, 5, 24054-24061.	4.2	28
57	Color shift acceleration on mid-power LED packages. <i>Microelectronics Reliability</i> , 2017, 78, 294-298.	1.7	7
58	Phosphor-silicone interaction effects in high power white light emitting diode packages. <i>Journal of Materials Science: Materials in Electronics</i> , 2017, 28, 17557-17569.	2.2	14
59	Overdriving reliability of chip scale packaged LEDs: Quantitatively analyzing the impact of component. <i>Microelectronics Reliability</i> , 2017, 78, 197-204.	1.7	3
60	Degradation mechanism analysis for phosphor/silicone composites aged under high temperature and high humidity condition. , 2017, , .		7
61	A Review of Prognostic Techniques for High-Power White LEDs. <i>IEEE Transactions on Power Electronics</i> , 2017, 32, 6338-6362.	7.9	76
62	Thermal-mechanical analysis of high power LED packaging during power cycling test. , 2017, , .		1
63	Color Shift Failure Prediction for Phosphor-Converted White LEDs by Modeling Features of Spectral Power Distribution with a Nonlinear Filter Approach. <i>Materials</i> , 2017, 10, 819.	2.9	22
64	Photometric and Colorimetric Assessment of LED Chip Scale Packages by Using a Step-Stress Accelerated Degradation Test (SSADT) Method. <i>Materials</i> , 2017, 10, 1181.	2.9	12
65	Thermal, optical and electrical analysis on phosphor-converted white LED Chip Scale Packages with both experiment and simulation. , 2016, , .		11
66	Analysis of photoluminescence mechanisms and thermal quenching effects for multicolor phosphor films used in high color rendering white LEDs. , 2016, , .		6
67	IoT-Based Prognostics and Systems Health Management for Industrial Applications. <i>IEEE Access</i> , 2016, 4, 3659-3670.	4.2	177
68	Degradation of Microcellular PET reflective materials used in LED-based products. <i>Optical Materials</i> , 2015, 49, 79-84.	3.6	31
69	A practical design of reliability and performance test for portable lithium-ion batteries. , 2015, , .		1
70	Optimal Design of Life Testing for High-Brightness White LEDs Using the Six Sigma DMAIC Approach. <i>IEEE Transactions on Device and Materials Reliability</i> , 2015, 15, 576-587.	2.0	20
71	Investigation of photoluminescence and thermal effect of phosphor films used in phosphor-converted white LEDs. , 2015, , .		5
72	Color Shift Investigations for LED Secondary Optical Designs: Comparison between BPA-PC and PMMA. <i>Optical Materials</i> , 2015, 45, 37-41.	3.6	45

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73	Predicting long-term lumen maintenance life of LED light sources using a particle filter-based prognostic approach. Expert Systems With Applications, 2015, 42, 2411-2420.	7.6	123
74	Prognostics of Chromaticity State for Phosphor-Converted White Light Emitting Diodes Using an Unscented Kalman Filter Approach. IEEE Transactions on Device and Materials Reliability, 2014, 14, 564-573.	2.0	39
75	Prognostics of lumen maintenance for High power white light emitting diodes using a nonlinear filter-based approach. Reliability Engineering and System Safety, 2014, 123, 63-72.	8.9	40
76	Comparison of statistical models for the lumen lifetime distribution of high power white LEDs. , 2012, , .		3
77	Anomaly detection for chromaticity shift of high power white LED with mahalanobis distance approach. , 2012, , .		7
78	Lifetime Estimation of High-Power White LED Using Degradation-Data-Driven Method. IEEE Transactions on Device and Materials Reliability, 2012, 12, 470-477.	2.0	148
79	Physics-of-Failure-Based Prognostics and Health Management for High-Power White Light-Emitting Diode Lighting. IEEE Transactions on Device and Materials Reliability, 2011, 11, 407-416.	2.0	96