

Jiajie Fan

List of Publications by Year in descending order

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79
papers

1,559
citations

361413

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345221

36
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82
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82
docs citations

82
times ranked

1049
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 1 | IoT-Based Prognostics and Systems Health Management for Industrial Applications. IEEE Access, 2016, 4, 3659-3670. | 4.2 | 177 |
| 2 | 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 |
| 3 | 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 |
| 4 | 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 |
| 5 | A Review of Prognostic Techniques for High-Power White LEDs. IEEE Transactions on Power Electronics, 2017, 32, 6338-6362. | 7.9 | 76 |
| 6 | Color Shift Investigations for LED Secondary Optical Designs: Comparison between BPA-PC and PMMA. Optical Materials, 2015, 45, 37-41. | 3.6 | 45 |
| 7 | Machine Learning and Digital Twin Driven Diagnostics and Prognostics of Light-Emitting Diodes. Laser and Photonics Reviews, 2020, 14, 2000254. | 8.7 | 43 |
| 8 | 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 |
| 9 | 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 |
| 10 | A novel lifetime prediction for integrated LED lamps by electronic-thermal simulation. Reliability Engineering and System Safety, 2017, 163, 14-21. | 8.9 | 35 |
| 11 | Effects of Voids on Mechanical and Thermal Properties of the Die Attach Solder Layer Used in High-Power LED Chip-Scale Packages. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2018, 8, 1254-1262. | 2.5 | 35 |
| 12 | Degradation of Microcellular PET reflective materials used in LED-based products. Optical Materials, 2015, 49, 79-84. | 3.6 | 31 |
| 13 | Prediction of Lumen Depreciation and Color Shift for Phosphor-Converted White Light-Emitting Diodes Based on A Spectral Power Distribution Analysis Method. IEEE Access, 2017, 5, 24054-24061. | 4.2 | 28 |
| 14 | A variable-order fractional model of tensile and shear behaviors for sintered nano-silver paste used in high power electronics. Mechanics of Materials, 2020, 145, 103391. | 3.2 | 27 |
| 15 | Lifetime Prediction of Ultraviolet Light-Emitting Diodes Using a Long Short-Term Memory Recurrent Neural Network. IEEE Electron Device Letters, 2020, 41, 1817-1820. | 3.9 | 24 |
| 16 | Color Shift Failure Prediction for Phosphor-Converted White LEDs by Modeling Features of Spectral Power Distribution with a Nonlinear Filter Approach. Materials, 2017, 10, 819. | 2.9 | 22 |
| 17 | Thermal/luminescence characterization and degradation mechanism analysis on phosphor-converted white LED chip scale packages. Microelectronics Reliability, 2017, 74, 179-185. | 1.7 | 21 |
| 18 | Lumen Degradation Lifetime Prediction for High-Power White LEDs Based on the Gamma Process Model. IEEE Photonics Journal, 2019, 11, 1-16. | 2.0 | 21 |

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 19 | 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 |
| 20 | 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 |
| 21 | Investigation of Mechanical Properties of Silicone/Phosphor Composite Used in Light Emitting Diodes Package. <i>Polymers</i> , 2018, 10, 195. | 4.5 | 20 |
| 22 | 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 |
| 23 | 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 |
| 24 | 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 |
| 25 | 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 |
| 26 | Investigation of Step-Stress Accelerated Degradation Test Strategy for Ultraviolet Light Emitting Diodes. <i>Materials</i> , 2019, 12, 3119. | 2.9 | 17 |
| 27 | 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 |
| 28 | 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 |
| 29 | Characterization and reconstruction for stochastically distributed void morphology in nano-silver sintered joints. <i>Materials and Design</i> , 2020, 196, 109079. | 7.0 | 16 |
| 30 | 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 |
| 31 | 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 |
| 32 | 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 |
| 33 | 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 |
| 34 | 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 |
| 35 | 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 |
| 36 | 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 |

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|----|---|-----|-----------|
| 37 | Experimental Investigation on the Sintering Kinetics of Nanosilver Particles Used in High-Power Electronic Packaging. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2020, 10, 1101-1109. | 2.5 | 12 |
| 38 | Thermal, optical and electrical analysis on phosphor-converted white LED Chip Scale Packages with both experiment and simulation. , 2016, , . | | 11 |
| 39 | A new hermetic sealing method for ceramic package using nanosilver sintering technology. Microelectronics Reliability, 2018, 81, 143-149. | 1.7 | 11 |
| 40 | Design of a Fan-Out Panel-Level SiC MOSFET Power Module Using Ant Colony Optimization-Back Propagation Neural Network. IEEE Transactions on Electron Devices, 2021, 68, 3460-3467. | 3.0 | 11 |
| 41 | Bayesian based lifetime prediction for high-power white LEDs. Expert Systems With Applications, 2021, 185, 115627. | 7.6 | 11 |
| 42 | High-temperature nanoindentation characterization of sintered nano-copper particles used in high power electronics packaging. Results in Physics, 2022, 33, 105168. | 4.1 | 11 |
| 43 | A Gamma process-based degradation testing of silicone encapsulant used in LED packaging. Polymer Testing, 2021, 96, 107090. | 4.8 | 10 |
| 44 | The interface adhesion of CaAlSiN ₃ : Eu ²⁺ phosphor/silicone used in light-emitting diode packaging: A first principles study. Applied Surface Science, 2020, 510, 145251. | 6.1 | 9 |
| 45 | The temperature-dependent fractional evolutionary model for sintered nanoscale silver films. European Journal of Mechanics, A/Solids, 2021, 90, 104359. | 3.7 | 8 |
| 46 | Dynamic prediction of optical and chromatic performances for a light-emitting diode array based on a thermal-electrical-spectral model. Optics Express, 2020, 28, 13921. | 3.4 | 8 |
| 47 | Anomaly detection for chromaticity shift of high power white LED with mahalanobis distance approach. , 2012, , . | | 7 |
| 48 | Color shift acceleration on mid-power LED packages. Microelectronics Reliability, 2017, 78, 294-298. | 1.7 | 7 |
| 49 | Degradation mechanism analysis for phosphor/silicone composites aged under high temperature and high humidity condition. , 2017, , . | | 7 |
| 50 | Effects of humidity and phosphor on silicone/phosphor composite in white light-emitting diode package. Journal of Materials Science: Materials in Electronics, 2019, 30, 20471-20478. | 2.2 | 7 |
| 51 | Random Voids Generation and Effect of Thermal Shock Load on Mechanical Reliability of Light-Emitting Diode Flip Chip Solder Joints. Materials, 2020, 13, 94. | 2.9 | 7 |
| 52 | Effects of silicone lens aging on degradation kinetics of light-emitting diode package in various accelerated testing. Optical Materials, 2020, 107, 110071. | 3.6 | 7 |
| 53 | High Temperature Performance Evaluation and Life Prediction for Titanium Modified Silicone Used in Light-Emitting Diodes Chip Scale Packages. Journal of Electronic Packaging, Transactions of the ASME, 2020, 142, . | 1.8 | 7 |
| 54 | Analysis of photoluminescence mechanisms and thermal quenching effects for multicolor phosphor films used in high color rendering white LEDs. , 2016, , . | | 6 |

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| 55 | Investigation of photoluminescence and thermal effect of phosphor films used in phosphor-converted white LEDs. , 2015, , . | | 5 |
| 56 | A design and qualification of LED flip Chip-on-Board module with tunable color temperatures. Microelectronics Reliability, 2018, 84, 140-148. | 1.7 | 5 |
| 57 | Insights into the high-sulphur aging of sintered silver nanoparticles: An experimental and ReaxFF study. Corrosion Science, 2021, 192, 109846. | 6.6 | 5 |
| 58 | A Reliability Prediction Methodology for LED Arrays. IEEE Access, 2019, 7, 8127-8134. | 4.2 | 4 |
| 59 | The Effect of Light Distribution of LED Luminaire on Human Ocular Physiological Characteristics. IEEE Access, 2019, 7, 28478-28486. | 4.2 | 4 |
| 60 | Evaluating the moisture resistance of Y3Al5O12: Ce ³⁺ phosphor used in high power white LED packaging. Microelectronics Reliability, 2021, 121, 114130. | 1.7 | 4 |
| 61 | Luminous Performances Characterization of YAG: Ce ³⁺ Phosphor/Silicone Composites Using Both Reflective and Transmissive Laser Excitations. IEEE Photonics Journal, 2022, 14, 1-6. | 2.0 | 4 |
| 62 | Genetic Algorithm-Assisted Design of Redistribution Layer Vias for a Fan-Out Panel-Level SiC MOSFET Power Module Packaging. , 2022, , . | | 4 |
| 63 | Comparison of statistical models for the lumen lifetime distribution of high power white LEDs. , 2012, , . | | 3 |
| 64 | Overdriving reliability of chip scale packaged LEDs: Quantitatively analyzing the impact of component. Microelectronics Reliability, 2017, 78, 197-204. | 1.7 | 3 |
| 65 | Comparison of ultrasonic wire bonding process between gold and copper by nonlinear structure analysis. Journal of Adhesion Science and Technology, 2018, 32, 2007-2018. | 2.6 | 3 |
| 66 | A SPICE-based Transient Thermal-Electronic Model for LEDs. , 2019, , . | | 3 |
| 67 | Lifetime Prediction of Ultraviolet Light-emitting Diodes with Accelerated Wiener Degradation Process. , 2019, , . | | 3 |
| 68 | Prognostics of radiation power degradation lifetime for ultraviolet light-emitting diodes using stochastic data-driven models. Energy and AI, 2021, 4, 100066. | 10.6 | 3 |
| 69 | Prediction of mechanical solutions for a laminated LCEs system fusing an analytical model and neural networks. Journal of the Mechanical Behavior of Biomedical Materials, 2022, 125, 104918. | 3.1 | 3 |
| 70 | Sulfur-Rich Ageing Mechanism of Silicone Encapsulant Used in LED Packaging: An Experimental and Molecular Dynamic Simulation Study. Frontiers in Materials, 2022, 9, . | 2.4 | 3 |
| 71 | Fault Diagnostics and Lifetime Prognostics for Phosphor-Converted White LED Packages. Solid State Lighting Technology and Application Series, 2018, , 255-299. | 0.3 | 2 |
| 72 | Lumen Maintenance Lifetime Prediction for Phosphor-converted White LEDs with a Wiener Process based Model. , 2018, , . | | 2 |

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| 73 | A hybrid degradation modeling of light-emitting diode using permutation entropy and data-driven methods. , 2021, , . | | 2 |
| 74 | A practical design of reliability and performance test for portable lithium-ion batteries. , 2015, , . | | 1 |
| 75 | Thermal-mechanical analysis of high power LED packaging during power cycling test. , 2017, , . | | 1 |
| 76 | Study of ultraviolet assisted cure mechanism of the phosphor/silicone composites used in White LEDs. , 2018, , . | | 1 |
| 77 | A Better Photometric Index of Photo-Biological Effect on Visual Function of Human Eye: Illuminance or Luminance?. IEEE Access, 2019, 7, 165919-165927. | 4.2 | 1 |
| 78 | 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. Optical Materials, 2022, 128, 112384. | 3.6 | 1 |
| 79 | Fatigue Damage Assessment of LED Chip Scale Packages with Finite Element Simulation. , 2018, , . | | 0 |