Nicola Trivellin

List of Publications by Year
in descending order

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82	2,057	361388	243610
papers	citations	20	44
		h-index	g-index

83	83	83	2060
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	The 2018 GaN power electronics roadmap. Journal Physics D: Applied Physics, 2018, 51, 163001.	2.8	843
2	A combined electro-optical method for the determination of the recombination parameters in InGaN-based light-emitting diodes. Journal of Applied Physics, 2009, 106, .	2.5	113
3	Phosphors for LED-based light sources: Thermal properties and reliability issues. Microelectronics Reliability, 2012, 52, 2164-2167.	1.7	58
4	Investigation of the deep level involved in InGaN laser degradation by deep level transient spectroscopy. Applied Physics Letters, 2011, 99, .	3.3	56
5	Degradation Mechanisms of High-Power LEDs for Lighting Applications: An Overview. IEEE Transactions on Industry Applications, 2014, 50, 78-85.	4.9	53
6	Analysis of Diffusion-Related Gradual Degradation of InGaN-Based Laser Diodes. IEEE Journal of Quantum Electronics, 2012, 48, 1169-1176.	1.9	51
7	Chip and package-related degradation of high power white LEDs. Microelectronics Reliability, 2012, 52, 804-812.	1.7	50
8	Leakage current and reverse-bias luminescence in InGaN-based light-emitting diodes. Applied Physics Letters, 2009, 95, .	3.3	49
9	Laser-Based Lighting: Experimental Analysis and Perspectives. Materials, 2017, 10, 1166.	2.9	44
10	Degradation of InGaN-based laser diodes analyzed by means of electrical and optical measurements. Applied Physics Letters, 2010, 97, 263501.	3.3	41
11	Thermally Activated Degradation of Remote Phosphors for Application in LED Lighting. IEEE Transactions on Device and Materials Reliability, 2013, 13, 316-318.	2.0	40
12	Analysis of Defect-Related Localized Emission Processes in InGaN/GaN-Based LEDs. IEEE Transactions on Electron Devices, 2012, 59, 1416-1422.	3.0	36
13	Extensive Analysis of the Degradation of Blu-Ray Laser Diodes. IEEE Electron Device Letters, 2008, 29, 578-581.	3.9	33
14	UV-Based Technologies for SARS-CoV2 Inactivation: Status and Perspectives. Electronics (Switzerland), 2021, 10, 1703.	3.1	30
15	Defects and Reliability of GaNâ€Based LEDs: Review and Perspectives. Physica Status Solidi (A) Applications and Materials Science, 2022, 219, .	1.8	28
16	Reliability of Deep-UV Light-Emitting Diodes. IEEE Transactions on Device and Materials Reliability, 2008, 8, 248-254.	2.0	25
17	Degradation of InGaN/GaN laser diodes investigated by micro-cathodoluminescence and micro-photoluminescence. Applied Physics Letters, 2013, 103, .	3.3	25
18	CdTe solar cells: technology, operation and reliability. Journal Physics D: Applied Physics, 2021, 54, 333002.	2.8	25

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19	Degradation mechanisms of high-power white LEDs activated by current and temperature. Microelectronics Reliability, 2011, 51, 1742-1746.	1.7	24
20	Inactivating SARS-CoV-2 Using 275 nm UV-C LEDs through a Spherical Irradiation Box: Design, Characterization and Validation. Materials, 2021, 14, 2315.	2.9	24
21	Current induced degradation study on state of the art DUV LEDs. Microelectronics Reliability, 2018, 88-90, 868-872.	1.7	20
22	Failures of LEDs in Real-World Applications: A Review. IEEE Transactions on Device and Materials Reliability, 2018, 18, 391-396.	2.0	20
23	Reliability of Commercial UVC LEDs: 2022 State-of-the-Art. Electronics (Switzerland), 2022, 11, 728.	3.1	20
24	Degradation processes of 280 nm high power DUV LEDs: impact on parasitic luminescence. Japanese Journal of Applied Physics, 2019, 58, SCCC19.	1.5	19
25	Degradation of InGaN-Based Laser Diodes Related to Nonradiative Recombination. IEEE Electron Device Letters, 2009, 30, 356-358.	3.9	18
26	Study and Development of a Fluorescence Based Sensor System for Monitoring Oxygen in Wine Production: The WOW Project. Sensors, 2018, 18, 1130.	3.8	17
27	A review on the reliability of GaN-based laser diodes. , 2010, , .		16
28	Thermally-activated degradation of InGaN-based laser diodes: Effect on threshold current and forward voltage. Microelectronics Reliability, 2014, 54, 2147-2150.	1.7	15
29	Effect of blue light at 410 and 455Ânm on Pseudomonas aeruginosa biofilm. Journal of Photochemistry and Photobiology B: Biology, 2020, 204, 111790.	3.8	14
30	A multiwavelength model to improve microalgal productivity and energetic conversion in a red-blue light emitting diodes (LEDs) continuous photobioreactor. Energy Conversion and Management, 2021, 243, 114330.	9.2	14
31	Extensive analysis of the degradation of phosphor-converted LEDs. Proceedings of SPIE, 2009, , .	0.8	13
32	Analysis of the Role of Current, Temperature, and Optical Power in the Degradation of InGaN-Based Laser Diodes. IEEE Transactions on Electron Devices, 2009, 56, 222-228.	3.0	13
33	Thermally activated degradation and package instabilities of low flux LEDS. , 2009, , .		13
34	Reliability issues in GaN-based light-emitting diodes: Effect of dc and PWM stress. Microelectronics Reliability, 2012, 52, 1621-1626.	1.7	10
35	Electroluminescence Analysis and Simulation of the Effects of Injection and Temperature on Carrier Distribution in InGaN-Based Light-Emitting Diodes with Color-Coded Quantum Wells. Japanese Journal of Applied Physics, 2013, 52, 08JG09.	1.5	10
36	Recoverable degradation of blue InGaN-based light emitting diodes submitted to 3â€‰MeV proton irradiation. Applied Physics Letters, 2014, 105, 213506.	3.3	10

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37	Photoinactivation of Pseudomonas aeruginosa Biofilm by Dicationic Diaryl-Porphyrin. International Journal of Molecular Sciences, 2021, 22, 6808.	4.1	10
38	Glass-ceramic composites for high-power white-light-emitting diodes. Ceramics International, 2021, 47, 17986-17992.	4.8	10
39	Spectral Changes by Dye Sensitized Solar Modules Influence the Pigment Composition and Productivity of Arthrospira maxima and Increase the Overall Energy Efficiency. Advanced Sustainable Systems, 2022, 6, .	5.3	9
40	Reliability evaluation for Blu-Ray laser diodes. Microelectronics Reliability, 2010, 50, 467-470.	1.7	8
41	Variations in junction capacitance and doping activation associated with electrical stress of InGaN/GaN laser diodes. Microelectronics Reliability, 2013, 53, 1534-1537.	1.7	8
42	Photodynamic Therapy by Diaryl-Porphyrins to Control the Growth of Candida albicans. Cosmetics, 2020, 7, 31.	3.3	8
43	Combined optical and electrical analysis of AlGaN-based deep-UV LEDs reliability. , 2008, , .		7
44	â€œHot-pluggingâ€•of LED modules: Electrical characterization and device degradation. Microelectronics Reliability, 2013, 53, 1524-1528.	1.7	7
45	ESD on GaN-based LEDs: An analysis based on dynamic electroluminescence measurements and current waveforms. Microelectronics Reliability, 2014, 54, 2138-2141.	1.7	7
46	Effects and exploitation of tunable white light for circadian rhythm and human-centric lighting. , 2015, , .		7
47	Autonomous IoT Monitoring Matching Spectral Artificial Light Manipulation for Horticulture. Sensors, 2022, 22, 4046.	3.8	7
48	Reliability analysis of InGaN Blu-Ray laser diode. Microelectronics Reliability, 2009, 49, 1236-1239.	1.7	6
49	Adaptive multi-wavelength LED star simulator for space life studies. , 2016, , .		6
50	Challenges towards the simulation of GaN-based LEDs beyond the semiclassical framework. Proceedings of SPIE, 2016, , .	0.8	6
51	Influence of CdTe solar cell properties on stability at high temperatures. Microelectronics Reliability, 2020, 114, 113847.	1.7	6
52	Full Optical Contactless Thermometry Based on LED Photoluminescence. IEEE Transactions on Instrumentation and Measurement, 2021, 70, 1-8.	4.7	6
53	Analysis of diffusion involved in degradation of InGaN-based laser diodes. , 2009, , .		5
54	Degradation of InGaNâ€based laser diodes due to increased nonâ€radiative recombination rate. Physica Status Solidi (A) Applications and Materials Science, 2010, 207, 41-44.	1.8	5

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55	Degradation of InGaN lasers: Role of non-radiative recombination and injection efficiency. Microelectronics Reliability, 2011, 51, 1747-1751.	1.7	5
56	GaN-based LEDs: State of the art and reliability-limiting mechanisms. , 2014, , .		4
57	Analysis of the role of current in the degradation of InGaN-based laser diodes. Physica Status Solidi C: Current Topics in Solid State Physics, 2009, 6, S844-S847.	0.8	3
58	ESD degradation and robustness of RGB LEDs and modules: An investigation based on combined electrical and optical measurements. Microelectronics Reliability, 2014, 54, 1143-1149.	1.7	3
59	Efficiency and Catastrophic Failure of High-Power Blue GaN LEDs During Extremely High Temperature and Current Stress. IEEE Transactions on Device and Materials Reliability, 2020, 20, 429-435.	2.0	3
60	Control software for the Multi-Channel Led starlight simulator. , 2018, , .		3
61	Benefits and Risks of the Technological Creep of LED Light Technologies Applied to the Purse Seine Fishery. Biology, 2022, 11, 48.	2.8	3
62	Reliability of InGaNâ€based LEDs submitted to reverseâ€bias stress. Physica Status Solidi C: Current Topics in Solid State Physics, 2010, 7, 2208-2210.	0.8	2
63	Recent results on the physical origin of the degradation of GaN-based LEDs and lasers. Proceedings of SPIE, 2011, , .	0.8	2
64	A tunable integrated system to simulate colder stellar radiation. , 2015, , .		2
65	GaN HEMTs with p-GaN gate: field- and time-dependent degradation. , 2017, , .		2
66	UV LED reliability: degradation mechanisms and challenges. , 2022, , .		2
67	Electro-thermally activated degradation of blu-ray gan-based laser diodes. , 2008, , .		1
68	Role of non-radiative recombination in the degradation of InGaN-based laser diodes. , 2008, , .		1
69	A study on the reverse-bias and ESD instabilities of InGaN-based green LEDs. , 2010, , .		1
70	Investigation of the time-dependent failure of InGaN-based LEDs submitted to reverse-bias stress. Proceedings of SPIE, 2017, , .	0.8	1
71	Analysis and Reliability Study of Luminescent Materials for White Lighting. Proceedings (mdpi), 2018, 2, .	0.2	1
72	Ageing mechanisms of 420 nm GaN HBLED. Physica Status Solidi C: Current Topics in Solid State Physics, 2011, 8, 2360-2362.	0.8	0

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73	Innovative methodology for testing the reliability of LED based systems. Proceedings of SPIE, 2012, , .	0.8	0
74	Microscopic-scale investigation of the degradation of InGaN-based laser diodes submitted to electrical stress. , 2014, , .		0
75	Defects in GaN-based LEDs: impact on internal quantum efficiency and on reliability. Proceedings of SPIE, 2015, , .	0.8	0
76	Aging behavior, reliability, and failure physics of GaN-based optoelectronic components. Proceedings of SPIE, 2016, , .	0.8	0
77	White-light sources based on GaN laser diodes: analysis and application study. , 2018, , .		0
78	Defect-related degradation of III-V/Silicon 1.55 Âµm DBR laser diodes. , 2018, , .		0
79	Challenges for highly-reliable GaN-based LEDs. , 2019, , .		0
80	Current crowding as a major cause for InGaN LED degradation at extreme high current density. , 2021, , .		0
81	Analysis and design of SARS-CoV-2 disinfection chambers based on UVC LEDs. , 2022, , .		0
82	On the performance and reliability of state-of-the-art commercial UV-C LEDs for disinfection purposes. , 2022, , .		0