Petri KÃ¤rhÃ¤

List of Publications by Year
in descending order

87 papers	1,039 citations	516561 16 h-index	526166 27 g-index
89 all docs	89 docs citations	89 times ranked	772 citing authors

#	Article	IF	Citations
1	Advantages of white LED lamps and new detector technology in photometry. Light: Science and Applications, 2015, 4, e332-e332.	7.7	161
2	Nonlinearity measurements of silicon photodetectors. Applied Optics, 1998, 37, 2716.	2.1	45
3	Development of a detector-based absolute spectral irradiance scale in the 380â€“900-nm spectral range. Applied Optics, 1997, 36, 8909.	2.1	43
4	Spectral reflectance of silicon photodiodes. Applied Optics, 1998, 37, 729.	2.1	43
5	Spectral irradiance measurements of tungsten lamps with filter radiometers in the spectral range 290 nm to 900 nm. Metrologia, 2000, 37, 305-312.	0.6	34
6	Measurement of the absolute linearity of photodetectors with a diode laser. Measurement Science and Technology, 1999, 10, 1075-1078.	1.4	32
7	Relationships between junction temperature, electroluminescence spectrum and ageing of light-emitting diodes. Metrologia, 2018, 55, S86-S95.	0.6	26
8	Radiometric realization of the candela with a trap detector. Metrologia, 1995, 32, 689-692.	0.6	25
9	Optical power and transmittance measurements and their use in detector-based realization of the luminous intensity scale. Optical Engineering, 1995, 34, 2611.	0.5	25
10	Characterization of a polarization-independent transmission trap detector. Applied Optics, 1997, 36, 2807.	2.1	25
11	Realization of the unit of luminous intensity at the HUT. Metrologia, 2000, 37, 131-140.	0.6	24
12	Method for analysing luminous intensity of light-emitting diodes. Measurement Science and Technology, 2007, 18, 223-229.	1.4	22
13	Spectral irradiance model for tungsten halogen lamps in 340â€“850â€‰nm wavelength range. Applied Optics, 2010, 49, 880.	2.1	21
14	Interpolation of the spectral responsivity of silicon photodetectors in the near ultraviolet. Applied Optics, 2000, 39, 9.	2.1	19
15	Characterizing a UV chamber with mercury lamps for assessment of comparability to natural UV conditions. Polymer Testing, 2009, 28, 57-65.	2.3	19
16	Characterisation of optical detectors using high-accuracy instruments. Analytica Chimica Acta, 1999, 380, 327-337.	2.6	17
17	Determination of distance offsets of diffusers for accurate radiometric measurements. Metrologia, 2006, 43, S120-S124.	0.6	16
18	Luminous efficacy measurement of solid-state lamps. Metrologia, 2012, 49, S135-S140.	0.6	16

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19	New source and detector technology for the realization of photometric units. Metrologia, 2014, 51, S276-S281.	0.6	16
20	Determination of the diffuser reference plane for accurate illuminance responsivity calibrations. Applied Optics, 2005, 44, 5894.	2.1	15
21	A temperature controller for high power light emitting diodes based on resistive heating and liquid cooling. Applied Thermal Engineering, 2014, 71, 317-323.	3.0	15
22	Filter radiometry based on direct utilization of trap detectors. Metrologia, 1998, 35, 255-259.	0.6	14
23	Intercomparison of lamp and detector-based UV-irradiance scales for solar UV radiometry. Journal of Geophysical Research, 2000, 105, 4821-4827.	3.3	14
24	Estimation of the optical receiving plane positions of solar spectroradiometers with spherical diffusers on the basis of spatial responsivity data. Optics Letters, 2009, 34, 3241.	1.7	14
25	Characterization of germanium photodiodes and trap detector. Measurement Science and Technology, 2006, 17, 908-912.	1.4	13
26	Measurements of fibre optic power using photodiodes with and without an integrating sphere. Metrologia, 2004, 41, 353-358.	0.6	12
27	A method for optimizing the cosine response of solar UV diffusers. Journal of Geophysical Research D: Atmospheres, 2013, 118, 7897-7904.	1.2	12
28	Natural and accelerated ageing of LED lamps. Lighting Research and Technology, 2016, 48, 930-942.	1.2	12
29	Detector-stabilized FEL lamps as transfer standards in an international comparison of spectral irradiance. Metrologia, 2000, 37, 441-444.	0.6	11
30	Modeling the spectral shape of InGaAlP-based red light-emitting diodes. Journal of Applied Physics, 2015, 118, .	1.1	11
31	Nonlinearity characterization of array spectroradiometers for the solar UV measurements. Applied Optics, 2017, 56, 3077.	2.1	11
32	Uncertainty analysis of total ozone derived from direct solar irradiance spectra in the presence of unknown spectral deviations. Atmospheric Measurement Techniques, 2018, 11, 3595-3610.	1.2	11
33	Spectrally adjustable quasi-monochromatic radiance source based on LEDs and its application for measuring spectral responsivity of a luminance meter. Measurement Science and Technology, 2013, 24, 115201.	1.4	10
34	Mathematical limitations of the CIE mesopic photometry system. Lighting Research and Technology, 2017, 49, 111-121.	1.2	10
35	Method for estimating effects of unknown correlations in spectral irradiance data on uncertainties of spectrally integrated colorimetric quantities. Metrologia, 2017, 54, 524-534.	0.6	10
36	Detector-Based Calibration Method for High-Accuracy Solar UV Measurements. Photochemistry and Photobiology, 1996, 64, 340-343.	1.3	9

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37	Realizations of the units of luminance and spectral radiance at the HUT. Metrologia, 2000, 37, 527-530.	0.6	9
38	Uncertainty analysis of photometer quality factor f_1'. Metrologia, 2009, 46, 75-80.	0.6	9
39	Multifunctional integrating sphere setup for luminous flux measurements of light emitting diodes. Review of Scientific Instruments, 2010, 81, 023102.	0.6	9
40	Luminance meter for photopic and scotopic measurements in the mesopic range. Measurement Science and Technology, 2014, 25, 095001.	1.4	9
41	High-resolution setup for measuring wavelength sensitivity of photoyellowing of translucent materials. Review of Scientific Instruments, 2015, 86, 103103.	0.6	9
42	Temperature invariant energy value in LED spectra. Applied Physics Letters, 2016, 109, .	1.5	9
43	Photoyellowing revisited: Determination of an action spectrum of newspaper. Polymer Degradation and Stability, 2014, 99, 190-195.	2.7	8
44	Method for characterization of filter radiometers. Applied Optics, 1999, 38, 1709.	2.1	7
45	Realization of the scale of high fiber optic power at three national standards laboratories. Applied Optics, 2005, 44, 5013.	2.1	7
46	Flat-field calibration method for hyperspectral frame cameras. Metrologia, 2019, 56, 055001.	0.6	7
47	Determining the irradiance signal from an asymmetric source with directional detectors: application to calibrations of radiometers with diffusers. Applied Optics, 2008, 47, 4714.	2.1	6
48	Double-coiled tungsten filament lamps as absolute spectral irradiance reference sources. Metrologia, 2012, 49, S53-S58.	0.6	6
49	Out-of-Range Stray Light Characterization of Single-Monochromator Brewer Spectrophotometers. Atmosphere - Ocean, 2018, 56, 1-11.	0.6	6
50	Measurement setup for differential spectral responsivity of solar cells. Optical Review, 2020, 27, 195-204.	1.2	6
51	Portable detector-based primary scale of spectral irradiance. Journal of Geophysical Research, 2000, 105, 4803-4807.	3.3	5
52	Intercomparison of characterization techniques of filter radiometers in the ultraviolet region. Metrologia, 2003, 40, S50-S54.	0.6	5
53	Ageing of DXW-lamps. Metrologia, 2003, 40, S120-S123.	0.6	5
54	Adjusting timing of weathering test to account for seasonal variations in UV exposure. Polymer Degradation and Stability, 2007, 92, 675-683.	2.7	5

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55	Reducing thickness variation of hot rolled steel strip by non-circular back-up roll geometry. Ironmaking and Steelmaking, 2009, 36, 133-140.	1.1	5
56	A novel facility for ageing materials with narrow-band ultraviolet radiation exposure. Review of Scientific Instruments, 2011, 82, 023107.	0.6	5
57	Uncertainty analysis of photometer directional response indexf₂using Monte Carlo simulation. Metrologia, 2012, 49, 727-736.	0.6	5
58	Effect of correlations in fitting spectral irradiance data. Metrologia, 2004, 41, 246-250.	0.6	4
59	Characterization of GaAsP trap detector for radiometric measurements in ultraviolet wavelength region. Review of Scientific Instruments, 2005, 76, 033110.	0.6	4
60	Uncertainty evaluation for linking a bilateral key comparison with the corresponding CIPM key comparison. Metrologia, 2009, 46, 397-403.	0.6	4
61	25 years of spectral UV measurements at SodankylÃ. AIP Conference Proceedings, 2017, , .	0.3	4
62	UV exposure in artificial and natural weathering: A comparative study. AIP Conference Proceedings, 2017, , .	0.3	4
63	Optical Characterization of III-V Multijunction Solar Cells for Temperature-Independent Band Gap Features. IEEE Journal of Photovoltaics, 2019, 9, 1631-1636.	1.5	4
64	Comparison of luminous-intensity scales based on trap detectors and incandescent lamps. Metrologia, 1995, 32, 681-684.	0.6	3
65	Fiber-optic radar calibration. IEEE Aerospace and Electronic Systems Magazine, 2005, 20, 30-33.	2.3	3
66	Calibration of broadband ultraviolet detectors by measurement of spectral irradiance responsivity. Review of Scientific Instruments, 2006, 77, 063110.	0.6	3
67	Simple active method for reducing magnetic interference in a thermoelectrically cooled photomultiplier tube. Review of Scientific Instruments, 2008, 79, 043102.	0.6	3
68	Comparison of the radiation temperature scales between MIKES and PTB. Measurement: Journal of the International Measurement Confederation, 2010, 43, 183-189.	2.5	3
69	Monte Carlo analysis of uncertainty of total atmospheric ozone derived from measured spectra. AIP Conference Proceedings, 2017, , .	0.3	3
70	Key comparison CCPR-K1.a as an interlaboratory comparison of correlated color temperature. Journal of Physics: Conference Series, 2018, 972, 012012.	0.3	3
71	Increased detector response in optical overfilled measurements due to gas lens formation by nitrogen flow through the entrance aperture. Metrologia, 2021, 58, 055008.	0.6	3
72	Methods for decreasing uncertainties in LED photometry. , 2015, , .		3

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73	Investigation of comparison methods for UVA irradiance responsivity calibration facilities. Metrologia, 2006, 43, S27-S30.	0.6	2
74	Filter Radiometers as a Tool for Quality Assurance of Temperature Measurements with Linear Pyrometers. International Journal of Thermophysics, 2008, 29, 1084-1093.	1.0	2
75	Optical temperature measurements of silicon microbridge emitters. Applied Optics, 2010, 49, 1489.	2.1	2
76	Improved diffusers for solar UV spectroradiometers. AIP Conference Proceedings, 2013, , .	0.3	2
77	A portable field calibrator for solar ultraviolet measurements. Metrologia, 2003, 40, S17-S20.	0.6	1
78	Evaluation of calibration methods of a photometer measuring maritime light-emitting diode buoy lanterns. Optical Engineering, 2004, 43, 170.	0.5	1
79	Influence of smart lighting control on the lifetime of high power LED luminaires. IOP Conference Series: Earth and Environmental Science, 2019, 352, 012043.	0.2	1
80	FAILING MECHANISMS OF LED LAMPS. , 2019, , .		1
81	Comparison of spectral irradiance scales between the NIST and the HUT. Metrologia, 2002, 39, 399-402.	0.6	0
82	Optical Temperature Measurement Method for Glowing Microcomponents. International Journal of Thermophysics, 2010, 31, 1762-1770.	1.0	0
83	Two decades of spectral UV measurements at Sodankylaˆ. , 2013, , .		0
84	Variability of daily UV index in Jokioinen, Finland, in 1995-2015. AIP Conference Proceedings, 2017, , .	0.3	0
85	Facility for determining action spectra of UV photodegradation. AIP Conference Proceedings, 2017, , .	0.3	0
86	LED based reference for wavelength and relative intensity. Journal of Physics: Conference Series, 2018, 972, 012010.	0.3	0
87	Optical power scale realization using the predictable quantum efficient detector. Journal of Physics: Conference Series, 2022, 2149, 012006.	0.3	0