

Chris Gueymard

List of Publications by Year in descending order

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Version: 2024-02-01

224
papers

13,153
citations

19608

61
h-index

27345

106
g-index

232
all docs

232
docs citations

232
times ranked

7190
citing authors

#	ARTICLE	IF	CITATIONS
1	The sun's total and spectral irradiance for solar energy applications and solar radiation models. <i>Solar Energy</i> , 2004, 76, 423-453.	2.9	766
2	Parameterized transmittance model for direct beam and circumsolar spectral irradiance. <i>Solar Energy</i> , 2001, 71, 325-346.	2.9	698
3	Proposed reference irradiance spectra for solar energy systems testing. <i>Solar Energy</i> , 2002, 73, 443-467.	2.9	463
4	History and trends in solar irradiance and PV power forecasting: A preliminary assessment and review using text mining. <i>Solar Energy</i> , 2018, 168, 60-101.	2.9	338
5	REST2: High-performance solar radiation model for cloudless-sky irradiance, illuminance, and photosynthetically active radiation " Validation with a benchmark dataset. <i>Solar Energy</i> , 2008, 82, 272-285.	2.9	331
6	Energy Forecasting: A Review and Outlook. <i>IEEE Open Access Journal of Power and Energy</i> , 2020, 7, 376-388.	2.5	268
7	A review of validation methodologies and statistical performance indicators for modeled solar radiation data: Towards a better bankability of solar projects. <i>Renewable and Sustainable Energy Reviews</i> , 2014, 39, 1024-1034.	8.2	241
8	Clear-sky irradiance predictions for solar resource mapping and large-scale applications: Improved validation methodology and detailed performance analysis of 18 broadband radiative models. <i>Solar Energy</i> , 2012, 86, 2145-2169.	2.9	227
9	Direct solar transmittance and irradiance predictions with broadband models. Part I: detailed theoretical performance assessment. <i>Solar Energy</i> , 2003, 74, 355-379.	2.9	225
10	Direct and indirect uncertainties in the prediction of tilted irradiance for solar engineering applications. <i>Solar Energy</i> , 2009, 83, 432-444.	2.9	203
11	Extensive worldwide validation and climate sensitivity analysis of direct irradiance predictions from 1-min global irradiance. <i>Solar Energy</i> , 2016, 128, 1-30.	2.9	203
12	An anisotropic solar irradiance model for tilted surfaces and its comparison with selected engineering algorithms. <i>Solar Energy</i> , 1987, 38, 367-386.	2.9	198
13	Hourly solar irradiance time series forecasting using cloud cover index. <i>Solar Energy</i> , 2012, 86, 3531-3543.	2.9	193
14	WRF-Solar: Description and Clear-Sky Assessment of an Augmented NWP Model for Solar Power Prediction. <i>Bulletin of the American Meteorological Society</i> , 2016, 97, 1249-1264.	1.7	177
15	Critical analysis and performance assessment of clear sky solar irradiance models using theoretical and measured data. <i>Solar Energy</i> , 1993, 51, 121-138.	2.9	168
16	Automatic hourly solar forecasting using machine learning models. <i>Renewable and Sustainable Energy Reviews</i> , 2019, 105, 487-498.	8.2	167
17	Short-term solar irradiance forecasting using exponential smoothing state space model. <i>Energy</i> , 2013, 55, 1104-1113.	4.5	159
18	Solar radiation on inclined surfaces: Corrections and benchmarks. <i>Solar Energy</i> , 2016, 136, 288-302.	2.9	158

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19	A two-band model for the calculation of clear sky solar irradiance, illuminance, and photosynthetically active radiation at the earth's surface. <i>Solar Energy</i> , 1989, 43, 253-265.	2.9	155
20	Direct normal irradiance related definitions and applications: The circumsolar issue. <i>Solar Energy</i> , 2014, 110, 561-577.	2.9	150
21	Assessment of spatial and temporal variability in the US solar resource from radiometric measurements and predictions from models using ground-based or satellite data. <i>Solar Energy</i> , 2011, 85, 1068-1084.	2.9	147
22	Verification of deterministic solar forecasts. <i>Solar Energy</i> , 2020, 210, 20-37.	2.9	142
23	Short term solar irradiance forecasting using a mixed wavelet neural network. <i>Renewable Energy</i> , 2016, 90, 481-492.	4.3	137
24	Preliminary survey on site-adaptation techniques for satellite-derived and reanalysis solar radiation datasets. <i>Solar Energy</i> , 2016, 132, 25-37.	2.9	136
25	Direct solar transmittance and irradiance predictions with broadband models. Part II: validation with high-quality measurements. <i>Solar Energy</i> , 2003, 74, 381-395.	2.9	134
26	Worldwide validation of CAMS and MERRA-2 reanalysis aerosol optical depth products using 15 years of AERONET observations. <i>Atmospheric Environment</i> , 2020, 225, 117216.	1.9	131
27	Interdisciplinary applications of a versatile spectral solar irradiance model: A review. <i>Energy</i> , 2005, 30, 1551-1576.	4.5	126
28	Solar irradiance forecasting using spatial-temporal covariance structures and time-forward kriging. <i>Renewable Energy</i> , 2013, 60, 235-245.	4.3	126
29	Worldwide validation of 8 satellite-derived and reanalysis solar radiation products: A preliminary evaluation and overall metrics for hourly data over 27 years. <i>Solar Energy</i> , 2020, 210, 3-19.	2.9	115
30	Computing global and diffuse solar hourly irradiation on clear sky. Review and testing of 54 models. <i>Renewable and Sustainable Energy Reviews</i> , 2012, 16, 1636-1656.	8.2	114
31	Temporal variability in direct and global irradiance at various time scales as affected by aerosols. <i>Solar Energy</i> , 2012, 86, 3544-3553.	2.9	113
32	Prediction and Performance Assessment of Mean Hourly Global Radiation. <i>Solar Energy</i> , 2000, 68, 285-303.	2.9	112
33	A novel hybrid approach based on self-organizing maps, support vector regression and particle swarm optimization to forecast solar irradiance. <i>Energy</i> , 2015, 82, 570-577.	4.5	111
34	Forecasting of global horizontal irradiance by exponential smoothing, using decompositions. <i>Energy</i> , 2015, 81, 111-119.	4.5	110
35	Very short term irradiance forecasting using the lasso. <i>Solar Energy</i> , 2015, 114, 314-326.	2.9	105
36	Analysis of monthly average atmospheric precipitable water and turbidity in Canada and Northern United States. <i>Solar Energy</i> , 1994, 53, 57-71.	2.9	104

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37	Measurements and models for total solar irradiance on inclined surface in Athens, Greece. <i>Solar Energy</i> , 1994, 53, 177-185.	2.9	104
38	Evaluation of conventional and high-performance routine solar radiation measurements for improved solar resource, climatological trends, and radiative modeling. <i>Solar Energy</i> , 2009, 83, 171-185.	2.9	104
39	Turbidity Determination from Broadband Irradiance Measurements: A Detailed Multicoefficient Approach. <i>Journal of Applied Meteorology and Climatology</i> , 1998, 37, 414-435.	1.7	103
40	A Linear Identification of Diode Models from Single I_{sc} Characteristics of PV Panels. <i>IEEE Transactions on Industrial Electronics</i> , 2015, 62, 4181-4193.	5.2	103
41	Worldwide performance assessment of 75 global clear-sky irradiance models using Principal Component Analysis. <i>Renewable and Sustainable Energy Reviews</i> , 2019, 111, 550-570.	8.2	103
42	A guideline to solar forecasting research practice: Reproducible, operational, probabilistic or physically-based, ensemble, and skill (ROPES). <i>Journal of Renewable and Sustainable Energy</i> , 2019, 11, .	0.8	99
43	Mathematically integrable parameterization of clear-sky beam and global irradiances and its use in daily irradiation applications. <i>Solar Energy</i> , 1993, 50, 385-397.	2.9	92
44	A reevaluation of the solar constant based on a 42-year total solar irradiance time series and a reconciliation of spaceborne observations. <i>Solar Energy</i> , 2018, 168, 2-9.	2.9	91
45	Assessment of the Level-3 MODIS daily aerosol optical depth in the context of surface solar radiation and numerical weather modeling. <i>Atmospheric Chemistry and Physics</i> , 2013, 13, 675-692.	1.9	87
46	Operational solar forecasting for the real-time market. <i>International Journal of Forecasting</i> , 2019, 35, 1499-1519.	3.9	87
47	Accuracy analysis for fifty-four clear-sky solar radiation models using routine hourly global irradiance measurements in Romania. <i>Renewable Energy</i> , 2013, 55, 85-103.	4.3	82
48	Very short-term irradiance forecasting at unobserved locations using spatio-temporal kriging. <i>Solar Energy</i> , 2015, 122, 1266-1278.	2.9	82
49	Worldwide inter-comparison of clear-sky solar radiation models: Consensus-based review of direct and global irradiance components simulated at the earth surface. <i>Solar Energy</i> , 2018, 168, 10-29.	2.9	82
50	Choice of clear-sky model in solar forecasting. <i>Journal of Renewable and Sustainable Energy</i> , 2020, 12, .	0.8	78
51	Validation of direct normal irradiance predictions under arid conditions: A review of radiative models and their turbidity-dependent performance. <i>Renewable and Sustainable Energy Reviews</i> , 2015, 45, 379-396.	8.2	77
52	Satellite image analysis and a hybrid ESSS/ANN model to forecast solar irradiance in the tropics. <i>Energy Conversion and Management</i> , 2014, 79, 66-73.	4.4	76
53	The SMARTS spectral irradiance model after 25 years: New developments and validation of reference spectra. <i>Solar Energy</i> , 2019, 187, 233-253.	2.9	76
54	Prediction and validation of cloudless shortwave solar spectra incident on horizontal, tilted, or tracking surfaces. <i>Solar Energy</i> , 2008, 82, 260-271.	2.9	73

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55	Solar irradiance forecasting using spatio-temporal empirical kriging and vector autoregressive models with parameter shrinkage. <i>Solar Energy</i> , 2014, 103, 550-562.	2.9	72
56	Spectral effects on the transmittance, solar heat gain, and performance rating of glazing systems. <i>Solar Energy</i> , 2009, 83, 940-953.	2.9	71
57	A critical look at recent interpretations of the Ångström approach and its future in global solar radiation prediction. <i>Solar Energy</i> , 1995, 54, 357-363.	2.9	68
58	Monthly average clear-sky broadband irradiance database for worldwide solar heat gain and building cooling load calculations. <i>Solar Energy</i> , 2009, 83, 1998-2018.	2.9	65
59	SolarData: An R package for easy access of publicly available solar datasets. <i>Solar Energy</i> , 2018, 171, A3-A12.	2.9	65
60	Reconciling solar forecasts: Geographical hierarchy. <i>Solar Energy</i> , 2017, 146, 276-286.	2.9	63
61	A simple parameterization of the short-wave aerosol optical properties for surface direct and diffuse irradiances assessment in a numerical weather model. <i>Geoscientific Model Development</i> , 2014, 7, 1159-1174.	1.3	62
62	A linear method to extract diode model parameters of solar panels from a single I-V curve. <i>Renewable Energy</i> , 2015, 76, 135-142.	4.3	60
63	Improving the separation of direct and diffuse solar radiation components using machine learning by gradient boosting. <i>Solar Energy</i> , 2017, 150, 558-569.	2.9	60
64	Importance of atmospheric turbidity and associated uncertainties in solar radiation and luminous efficacy modelling. <i>Energy</i> , 2005, 30, 1603-1621.	4.5	59
65	Cloud and albedo enhancement impacts on solar irradiance using high-frequency measurements from thermopile and photodiode radiometers. Part 1: Impacts on global horizontal irradiance. <i>Solar Energy</i> , 2017, 153, 755-765.	2.9	59
66	Surface albedo and reflectance: Review of definitions, angular and spectral effects, and intercomparison of major data sources in support of advanced solar irradiance modeling over the Americas. <i>Solar Energy</i> , 2019, 182, 194-212.	2.9	58
67	Optimal combination of gridded and ground-observed solar radiation data for regional solar resource assessment. <i>Solar Energy</i> , 2015, 112, 411-424.	2.9	57
68	Revised composite extraterrestrial spectrum based on recent solar irradiance observations. <i>Solar Energy</i> , 2018, 169, 434-440.	2.9	57
69	Post-processing in solar forecasting: Ten overarching thinking tools. <i>Renewable and Sustainable Energy Reviews</i> , 2021, 140, 110735.	8.2	57
70	A correct validation of the National Solar Radiation Data Base (NSRDB). <i>Renewable and Sustainable Energy Reviews</i> , 2018, 97, 152-155.	8.2	55
71	Can we gauge forecasts using satellite-derived solar irradiance?. <i>Journal of Renewable and Sustainable Energy</i> , 2019, 11, .	0.8	55
72	Making reference solar forecasts with climatology, persistence, and their optimal convex combination. <i>Solar Energy</i> , 2019, 193, 981-985.	2.9	54

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73	Fast short-term global solar irradiance forecasting with wrapper mutual information. <i>Renewable Energy</i> , 2019, 133, 1055-1065.	4.3	54
74	Reconciling solar forecasts: Temporal hierarchy. <i>Solar Energy</i> , 2017, 158, 332-346.	2.9	52
75	Worldwide performance assessment of 95 direct and diffuse clear-sky irradiance models using principal component analysis. <i>Renewable and Sustainable Energy Reviews</i> , 2021, 135, 110087.	8.2	50
76	A posteriori clear-sky identification methods in solar irradiance time series: Review and preliminary validation using sky imagers. <i>Renewable and Sustainable Energy Reviews</i> , 2019, 109, 412-427.	8.2	49
77	A universal benchmarking method for probabilistic solar irradiance forecasting. <i>Solar Energy</i> , 2019, 184, 410-416.	2.9	49
78	Determination of atmospheric turbidity from the diffuse-beam broadband irradiance ratio. <i>Solar Energy</i> , 1998, 63, 135-146.	2.9	48
79	Clear-sky solar luminous efficacy determination using artificial neural networks. <i>Solar Energy</i> , 2007, 81, 929-939.	2.9	48
80	On the impact of haze on the yield of photovoltaic systems in Singapore. <i>Renewable Energy</i> , 2016, 89, 389-400.	4.3	48
81	On post-processing day-ahead NWP forecasts using Kalman filtering. <i>Solar Energy</i> , 2019, 182, 179-181.	2.9	48
82	An atmospheric transmittance model for the calculation of the clear sky beam, diffuse and global photosynthetically active radiation. <i>Agricultural and Forest Meteorology</i> , 1989, 45, 215-229.	1.9	47
83	Uncertainties in Modeled Direct Irradiance Around the Sahara as Affected by Aerosols: Are Current Datasets of Bankable Quality?. <i>Journal of Solar Energy Engineering, Transactions of the ASME</i> , 2011, 133, .	1.1	45
84	A bankable method of assessing the performance of a CPV plant. <i>Applied Energy</i> , 2014, 118, 1-11.	5.1	45
85	Climate-specific and global validation of MODIS Aqua and Terra aerosol optical depth at 452 AERONET stations. <i>Solar Energy</i> , 2019, 183, 594-605.	2.9	45
86	Evaluation of transposition and decomposition models for converting global solar irradiance from tilted surface to horizontal in tropical regions. <i>Solar Energy</i> , 2013, 97, 369-387.	2.9	43
87	Minimum redundancy "Maximum relevance with extreme learning machines for global solar radiation forecasting: Toward an optimized dimensionality reduction for solar time series. <i>Solar Energy</i> , 2017, 158, 595-609.	2.9	43
88	Standard of reference in operational day-ahead deterministic solar forecasting. <i>Journal of Renewable and Sustainable Energy</i> , 2019, 11, .	0.8	43
89	Satellite-augmented diffuse solar radiation separation models. <i>Journal of Renewable and Sustainable Energy</i> , 2019, 11, .	0.8	42
90	Critical evaluation of precipitable water and atmospheric turbidity in Canada using measured hourly solar irradiance. <i>Solar Energy</i> , 1998, 62, 291-307.	2.9	41

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91	Is the average photon energy a unique characteristic of the spectral distribution of global irradiance?. Solar Energy, 2017, 149, 32-43.	2.9	41
92	Reference luminous solar constant and solar luminance for illuminance calculations. Solar Energy, 2005, 79, 559-565.	2.9	40
93	Impact of on-site atmospheric water vapor estimation methods on the accuracy of local solar irradiance predictions. Solar Energy, 2014, 101, 74-82.	2.9	40
94	Reconciling solar forecasts: Sequential reconciliation. Solar Energy, 2019, 179, 391-397.	2.9	40
95	A historical weather forecast dataset from the European Centre for Medium-Range Weather Forecasts (ECMWF) for energy forecasting. Solar Energy, 2022, 232, 263-274.	2.9	39
96	Bidirectional irradiance transposition based on the Perez model. Solar Energy, 2014, 110, 768-780.	2.9	38
97	Proposal and evaluation of subordinate standard solar irradiance spectra for applications in solar energy systems. Solar Energy, 2018, 168, 30-43.	2.9	38
98	Post-processing of NWP forecasts using ground or satellite-derived data through kernel conditional density estimation. Journal of Renewable and Sustainable Energy, 2019, 11, .	0.8	38
99	Description and availability of the SMARTS spectral model for photovoltaic applications. , 2004, , .		35
100	Solar forecasting with hourly updated numerical weather prediction. Renewable and Sustainable Energy Reviews, 2022, 154, 111768.	8.2	35
101	A Concise Overview on Solar Resource Assessment and Forecasting. Advances in Atmospheric Sciences, 2022, 39, 1239-1251.	1.9	34
102	Can we justify producing univariate machine-learning forecasts with satellite-derived solar irradiance?. Applied Energy, 2020, 259, 114122.	5.1	33
103	Probabilistic solar forecasting benchmarks on a standardized dataset at Folsom, California. Solar Energy, 2020, 206, 628-639.	2.9	32
104	Bright-Sun: A globally applicable 1-min irradiance clear-sky detection model. Renewable and Sustainable Energy Reviews, 2020, 121, 109706.	8.2	32
105	Operational solar forecasting for grid integration: Standards, challenges, and outlook. Solar Energy, 2021, 224, 930-937.	2.9	32
106	Atmospheric turbidity of urban and desert areas of the Nile Basin in the aftermath of Mt. Pinatubo's eruption. Theoretical and Applied Climatology, 2001, 68, 89-108.	1.3	31
107	Reference solar spectra: Their evolution, standardization issues, and comparison to recent measurements. Advances in Space Research, 2006, 37, 323-340.	1.2	31
108	Day-Ahead Solar Irradiance Forecasting in a Tropical Environment. Journal of Solar Energy Engineering, Transactions of the ASME, 2015, 137, .	1.1	31

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109	Cloud and albedo enhancement impacts on solar irradiance using high-frequency measurements from thermopile and photodiode radiometers. Part 2: Performance of separation and transposition models for global tilted irradiance. <i>Solar Energy</i> , 2017, 153, 766-779.	2.9	31
110	Ensemble model output statistics for the separation of direct and diffuse components from 1-min global irradiance. <i>Solar Energy</i> , 2020, 208, 591-603.	2.9	31
111	Estimating 1-min beam and diffuse irradiance from the global irradiance: A review and an extensive worldwide comparison of latest separation models at 126 stations. <i>Renewable and Sustainable Energy Reviews</i> , 2022, 159, 112195.	8.2	31
112	Analyzing big time series data in solar engineering using features and PCA. <i>Solar Energy</i> , 2017, 153, 317-328.	2.9	30
113	Analysis of monthly average solar radiation and bright sunshine for different thresholds at Cape Canaveral, Florida. <i>Solar Energy</i> , 1993, 51, 139-145.	2.9	29
114	The Impact of Haze on Performance Ratio and Short-Circuit Current of PV Systems in Singapore. <i>IEEE Journal of Photovoltaics</i> , 2014, 4, 1585-1592.	1.5	29
115	Solar irradiance time series derived from high-quality measurements, satellite-based models, and reanalyses at a near-equatorial site in Brazil. <i>Renewable and Sustainable Energy Reviews</i> , 2020, 117, 109478.	8.2	29
116	Worldwide impact of aerosolâ€™s time scale on the predicted long-term concentrating solar power potential. <i>Scientific Reports</i> , 2016, 6, 30546.	1.6	28
117	Mean daily averages of beam radiation received by tilted surfaces as affected by the atmosphere. <i>Solar Energy</i> , 1986, 37, 261-267.	2.9	27
118	Daily spectral effects on concentrating PV solar cells as affected by realistic aerosol optical depth and other atmospheric conditions. , 2009, , .		27
119	On adding and removing sensors in a solar irradiance monitoring network for areal forecasting and PV system performance evaluation. <i>Solar Energy</i> , 2017, 155, 1417-1430.	2.9	27
120	Modeling water vapor impacts on the solar irradiance reaching the receiver of a solar tower plant by means of artificial neural networks. <i>Solar Energy</i> , 2018, 169, 34-39.	2.9	27
121	OpenSolar: Promoting the openness and accessibility of diverse public solar datasets. <i>Solar Energy</i> , 2019, 188, 1369-1379.	2.9	27
122	From video games to solar energy: 3D shading simulation for PV using GPU. <i>Solar Energy</i> , 2019, 193, 962-980.	2.9	27
123	Ultra-fast preselection in lasso-type spatio-temporal solar forecasting problems. <i>Solar Energy</i> , 2018, 176, 788-796.	2.9	26
124	Validation of the 5-min irradiance from the National Solar Radiation Database (NSRDB). <i>Journal of Renewable and Sustainable Energy</i> , 2021, 13, .	0.8	26
125	Accuracy and sensitivity analysis for 54 models of computing hourly diffuse solar irradiation on clear sky. <i>Theoretical and Applied Climatology</i> , 2013, 111, 379-399.	1.3	25
126	A multi-model benchmarking of direct and global clear-sky solar irradiance predictions at arid sites using a reference physical radiative transfer model. <i>Solar Energy</i> , 2018, 171, 447-465.	2.9	25

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127	Kriging for NSRDB PSM version 3 satellite-derived solar irradiance. Solar Energy, 2018, 171, 876-883.	2.9	24
128	Editorial: Submission of Data Article is now open. Solar Energy, 2018, 171, A1-A2.	2.9	24
129	SolarData package update v1.1: R functions for easy access of Baseline Surface Radiation Network (BSRN). Solar Energy, 2019, 188, 970-975.	2.9	24
130	Irradiance-to-power conversion based on physical model chain: An application on the optimal configuration of multi-energy microgrid in cold climate. Renewable and Sustainable Energy Reviews, 2022, 161, 112356.	8.2	24
131	Do spaceborne aerosol observations limit the accuracy of modeled surface solar irradiance?. Geophysical Research Letters, 2015, 42, 605-612.	1.5	23
132	Reconciling solar forecasts: Probabilistic forecast reconciliation in a nonparametric framework. Solar Energy, 2020, 210, 49-58.	2.9	23
133	Ensemble model output statistics as a probabilistic site-adaptation tool for satellite-derived and reanalysis solar irradiance. Journal of Renewable and Sustainable Energy, 2020, 12, .	0.8	23
134	Reconciling solar forecasts: Probabilistic forecasting with homoscedastic Gaussian errors on a geographical hierarchy. Solar Energy, 2020, 210, 59-67.	2.9	22
135	Solar Radiation Measurement: Progress in Radiometry for Improved Modeling. , 0, , 1-27.		21
136	Spatial Load Forecasting With Communication Failure Using Time-Forward Kriging. IEEE Transactions on Power Systems, 2014, 29, 2875-2882.	4.6	21
137	Ultra-fast analog ensemble using kd-tree. Journal of Renewable and Sustainable Energy, 2019, 11, .	0.8	21
138	Estimation and Applications of Clear Sky Global Horizontal Irradiance at the Equator. Journal of Solar Energy Engineering, Transactions of the ASME, 2014, 136, .	1.1	20
139	Solar irradiance monitoring network design using the variance quadtree algorithm. Renewables: Wind, Water, and Solar, 2015, 2, .	2.5	20
140	Ensemble solar forecasting using data-driven models with probabilistic post-processing through GAMLSS. Solar Energy, 2020, 208, 612-622.	2.9	20
141	Verifying operational intra-day solar forecasts from ECMWF and NOAA. Solar Energy, 2022, 236, 743-755.	2.9	20
142	Validation and Ranking Methodologies for Solar Radiation Models. , 0, , 479-510.		19
143	Spatial prediction using kriging ensemble. Solar Energy, 2018, 171, 977-982.	2.9	19
144	Producing high-quality solar resource maps by integrating high- and low-accuracy measurements using Gaussian processes. Renewable and Sustainable Energy Reviews, 2019, 113, 109260.	8.2	19

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145	Probabilistic solar irradiance transposition models. <i>Renewable and Sustainable Energy Reviews</i> , 2020, 125, 109814.	8.2	19
146	Generalized spectral performance evaluation of multijunction solar cells using a multicore, parallelized version of SMARTS. <i>AIP Conference Proceedings</i> , 2012, , .	0.3	18
147	Is conversion efficiency still relevant to qualify advanced multi-junction solar cells?. <i>Progress in Photovoltaics: Research and Applications</i> , 2017, 25, 242-254.	4.4	18
148	Estimating Ultraviolet Radiation From Global Horizontal Irradiance. <i>IEEE Journal of Photovoltaics</i> , 2019, 9, 139-146.	1.5	18
149	Une paramétrisation de la luminance énergétique du ciel clair en fonction de la turbidité. <i>Atmosphere - Ocean</i> , 1986, 24, 1-15.	0.6	17
150	Bias induced by the AOD representation time scale in long-term solar radiation calculations. Part 1: Sensitivity of the AOD distribution to the representation time scale. <i>Solar Energy</i> , 2016, 137, 608-620.	2.9	17
151	Comparison of two sensor technologies for solar irradiance measurement in a desert environment. <i>Solar Energy</i> , 2018, 161, 194-206.	2.9	17
152	Temporal-resolution cascade model for separation of 1-min beam and diffuse irradiance. <i>Journal of Renewable and Sustainable Energy</i> , 2021, 13, .	0.8	17
153	Calibration of deterministic NWP forecasts and its impact on verification. <i>International Journal of Forecasting</i> , 2023, 39, 981-991.	3.9	17
154	Correlogram, predictability error growth, and bounds of mean square error of solar irradiance forecasts. <i>Renewable and Sustainable Energy Reviews</i> , 2022, 167, 112736.	8.2	17
155	Perspectives on the origin, derivation, meaning, and significance of the isotropic sky model. <i>Solar Energy</i> , 2020, 201, 8-12.	2.9	15
156	Constructing a gridded direct normal irradiance dataset in China during 1981–2014. <i>Renewable and Sustainable Energy Reviews</i> , 2020, 131, 110004.	8.2	15
157	Probabilistic post-processing of gridded atmospheric variables and its application to site adaptation of shortwave solar radiation. <i>Solar Energy</i> , 2021, 225, 427-443.	2.9	15
158	Spectral Circumsolar Radiation Contribution To CPV. <i>AIP Conference Proceedings</i> , 2010, , .	0.3	14
159	Simulation and applications of cumulative anisotropic sky radiance patterns. <i>Solar Energy</i> , 2019, 178, 278-294.	2.9	14
160	Total NO ₂ column amount over Athens, Greece in 1996–97. <i>Atmospheric Research</i> , 2001, 57, 1-8.	1.8	13
161	Editorial: Journal's performance and publication criteria. <i>Solar Energy</i> , 2009, 83, 1.	2.9	13
162	Bias induced by the AOD representation time scale in long-term solar radiation calculations. Part 2: Impact on long-term solar irradiance predictions. <i>Solar Energy</i> , 2016, 135, 625-632.	2.9	13

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163	Direct normal irradiance modeling: Evaluating the impact on accuracy of worldwide gridded aerosol databases. AIP Conference Proceedings, 2019, , .	0.3	13
164	Ensemble solar forecasting and post-processing using dropout neural network and information from neighboring satellite pixels. Renewable and Sustainable Energy Reviews, 2022, 155, 111909.	8.2	13
165	Theoretical evaluation of errors in aerosol optical depth retrievals from ground-based direct-sun measurements due to circumsolar and related effects. Atmospheric Environment, 2011, 45, 1050-1058.	1.9	12
166	On predictability of solar irradiance. Journal of Renewable and Sustainable Energy, 2021, 13, .	0.8	12
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