

Chris Gueymard

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/7354123/publications.pdf>

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	Calibration of deterministic NWP forecasts and its impact on verification. International Journal of Forecasting, 2023, 39, 981-991.	3.9	17
2	An Improved Algorithm for Estimating Surface Shortwave Radiation: Preliminary Evaluation With MODIS Products. IEEE Transactions on Geoscience and Remote Sensing, 2022, 60, 1-9.	2.7	2
3	Sub-minute probabilistic solar forecasting for real-time stochastic simulations. Renewable and Sustainable Energy Reviews, 2022, 153, 111736.	8.2	11
4	Solar forecasting with hourly updated numerical weather prediction. Renewable and Sustainable Energy Reviews, 2022, 154, 111768.	8.2	35
5	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
6	A Concise Overview on Solar Resource Assessment and Forecasting. Advances in Atmospheric Sciences, 2022, 39, 1239-1251.	1.9	34
7	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
8	Influences of atmospheric reanalysis on the accuracy of clear-sky irradiance estimates: Comparing MERRA-2 and CAMS. Atmospheric Environment, 2022, 277, 119080.	1.9	10
9	Verifying operational intra-day solar forecasts from ECMWF and NOAA. Solar Energy, 2022, 236, 743-755.	2.9	20
10	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. Renewable and Sustainable Energy Reviews, 2022, 159, 112195.	8.2	31
11	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
12	Benchmarks for solar radiation time series forecasting. Renewable Energy, 2022, 191, 747-762.	4.3	6
13	Correlogram, predictability error growth, and bounds of mean square error of solar irradiance forecasts. Renewable and Sustainable Energy Reviews, 2022, 167, 112736.	8.2	17
14	Worldwide performance assessment of 95 direct and diffuse clear-sky irradiance models using principal component analysis. Renewable and Sustainable Energy Reviews, 2021, 135, 110087.	8.2	50
15	Atmospheric water vapor radiative effects on shortwave radiation under clear skies: A global spatiotemporal analysis. Atmospheric Research, 2021, 251, 105418.	1.8	8
16	Experimental Evaluation of a Spectral Index to Characterize Temporal Variations in the Direct Normal Irradiance Spectrum. Applied Sciences (Switzerland), 2021, 11, 897.	1.3	4
17	Validation of the 5-min irradiance from the National Solar Radiation Database (NSRDB). Journal of Renewable and Sustainable Energy, 2021, 13, .	0.8	26
18	Post-processing in solar forecasting: Ten overarching thinking tools. Renewable and Sustainable Energy Reviews, 2021, 140, 110735.	8.2	57

#	ARTICLE	IF	CITATIONS
19	Operational solar forecasting for grid integration: Standards, challenges, and outlook. <i>Solar Energy</i> , 2021, 224, 930-937.	2.9	32
20	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
21	On predictability of solar irradiance. <i>Journal of Renewable and Sustainable Energy</i> , 2021, 13, .	0.8	12
22	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
23	Surface albedo spatial variability in North America: Gridded data vs. local measurements. <i>Solar Energy</i> , 2021, 227, 655-673.	2.9	4
24	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
25	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
26	Can we justify producing univariate machine-learning forecasts with satellite-derived solar irradiance?. <i>Applied Energy</i> , 2020, 259, 114122.	5.1	33
27	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
28	Reconciling solar forecasts: Probabilistic forecasting with homoscedastic Gaussian errors on a geographical hierarchy. <i>Solar Energy</i> , 2020, 210, 59-67.	2.9	22
29	Preface of progress in solar energy special issue: Grid integration. <i>Solar Energy</i> , 2020, 210, 1-2.	2.9	2
30	A simple estimation of UV irradiance under clear-sky conditions. , 2020, , 257-266.		0
31	Dirichlet downscaling model for synthetic solar irradiance time series. <i>Journal of Renewable and Sustainable Energy</i> , 2020, 12, 063702.	0.8	11
32	Reconciling solar forecasts: Probabilistic forecast reconciliation in a nonparametric framework. <i>Solar Energy</i> , 2020, 210, 49-58.	2.9	23
33	Ensemble model output statistics as a probabilistic site-adaptation tool for solar irradiance: A revisit. <i>Journal of Renewable and Sustainable Energy</i> , 2020, 12, .	0.8	8
34	Energy Forecasting: A Review and Outlook. <i>IEEE Open Access Journal of Power and Energy</i> , 2020, 7, 376-388.	2.5	268
35	Ensemble solar forecasting using data-driven models with probabilistic post-processing through CAMLSS. <i>Solar Energy</i> , 2020, 208, 612-622.	2.9	20
36	Clear-sky index space-time trajectories from probabilistic solar forecasts: Comparing promising copulas. <i>Journal of Renewable and Sustainable Energy</i> , 2020, 12, 026102.	0.8	7

#	ARTICLE	IF	CITATIONS
37	Probabilistic solar irradiance transposition models. <i>Renewable and Sustainable Energy Reviews</i> , 2020, 125, 109814.	8.2	19
38	Verification of deterministic solar forecasts. <i>Solar Energy</i> , 2020, 210, 20-37.	2.9	142
39	Probabilistic solar forecasting benchmarks on a standardized dataset at Folsom, California. <i>Solar Energy</i> , 2020, 206, 628-639.	2.9	32
40	Perspectives on the origin, derivation, meaning, and significance of the isotropic sky model. <i>Solar Energy</i> , 2020, 201, 8-12.	2.9	15
41	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
42	Ensemble model output statistics as a probabilistic site-adaptation tool for satellite-derived and reanalysis solar irradiance. <i>Journal of Renewable and Sustainable Energy</i> , 2020, 12, .	0.8	23
43	Bright-Sun: A globally applicable 1-min irradiance clear-sky detection model. <i>Renewable and Sustainable Energy Reviews</i> , 2020, 121, 109706.	8.2	32
44	Choice of clear-sky model in solar forecasting. <i>Journal of Renewable and Sustainable Energy</i> , 2020, 12, .	0.8	78
45	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
46	Letter to the Editor: On the Clear-Sky ASHRAE radiation model. <i>Energy Conversion and Management</i> , 2020, 214, 112822.	4.4	1
47	Solar Project Financing, Bankability, and Resource Assessment. <i>Green Energy and Technology</i> , 2020, , 179-211.	0.4	2
48	Quantifying the spatial scale mismatch between satellite-derived solar irradiance and in situ measurements: A case study using CERES synoptic surface shortwave flux and the Oklahoma Mesonet. <i>Journal of Renewable and Sustainable Energy</i> , 2020, 12, 056104.	0.8	10
49	The national solar radiation data base (NSRDB) for CSP applications. <i>AIP Conference Proceedings</i> , 2019, , .	0.3	4
50	Post-processing of NWP forecasts using ground or satellite-derived data through kernel conditional density estimation. <i>Journal of Renewable and Sustainable Energy</i> , 2019, 11, .	0.8	38
51	Producing high-quality solar resource maps by integrating high- and low-accuracy measurements using Gaussian processes. <i>Renewable and Sustainable Energy Reviews</i> , 2019, 113, 109260.	8.2	19
52	OpenSolar: Promoting the openness and accessibility of diverse public solar datasets. <i>Solar Energy</i> , 2019, 188, 1369-1379.	2.9	27
53	SolarData package update v1.1: R functions for easy access of Baseline Surface Radiation Network (BSRN). <i>Solar Energy</i> , 2019, 188, 970-975.	2.9	24
54	Standard of reference in operational day-ahead deterministic solar forecasting. <i>Journal of Renewable and Sustainable Energy</i> , 2019, 11, .	0.8	43

#	ARTICLE	IF	CITATIONS
55	Ultra-fast analog ensemble using kd-tree. <i>Journal of Renewable and Sustainable Energy</i> , 2019, 11, .	0.8	21
56	Making reference solar forecasts with climatology, persistence, and their optimal convex combination. <i>Solar Energy</i> , 2019, 193, 981-985.	2.9	54
57	From video games to solar energy: 3D shading simulation for PV using GPU. <i>Solar Energy</i> , 2019, 193, 962-980.	2.9	27
58	Direct normal irradiance modeling: Evaluating the impact on accuracy of worldwide gridded aerosol databases. <i>AIP Conference Proceedings</i> , 2019, , .	0.3	13
59	Fundamentals: Quantities, Definitions, and Units. <i>Green Energy and Technology</i> , 2019, , 1-14.	0.4	1
60	Clear-Sky Radiation Models and Aerosol Effects. <i>Green Energy and Technology</i> , 2019, , 137-182.	0.4	9
61	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
62	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
63	Operational solar forecasting for the real-time market. <i>International Journal of Forecasting</i> , 2019, 35, 1499-1519.	3.9	87
64	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
65	A universal benchmarking method for probabilistic solar irradiance forecasting. <i>Solar Energy</i> , 2019, 184, 410-416.	2.9	49
66	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
67	Satellite-augmented diffuse solar radiation separation models. <i>Journal of Renewable and Sustainable Energy</i> , 2019, 11, .	0.8	42
68	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
69	On post-processing day-ahead NWP forecasts using Kalman filtering. <i>Solar Energy</i> , 2019, 182, 179-181.	2.9	48
70	Can we gauge forecasts using satellite-derived solar irradiance?. <i>Journal of Renewable and Sustainable Energy</i> , 2019, 11, .	0.8	55
71	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
72	Automatic hourly solar forecasting using machine learning models. <i>Renewable and Sustainable Energy Reviews</i> , 2019, 105, 487-498.	8.2	167

#	ARTICLE	IF	CITATIONS
73	Ensemble kriging for environmental spatial processes. , 2019, , .		0
74	Multimodel ensemble approach for hourly global solar irradiation forecasting. European Physical Journal Plus, 2019, 134, 1.	1.2	10
75	Simulation and applications of cumulative anisotropic sky radiance patterns. Solar Energy, 2019, 178, 278-294.	2.9	14
76	Estimating Ultraviolet Radiation From Global Horizontal Irradiance. IEEE Journal of Photovoltaics, 2019, 9, 139-146.	1.5	18
77	Reconciling solar forecasts: Sequential reconciliation. Solar Energy, 2019, 179, 391-397.	2.9	40
78	Fast short-term global solar irradiance forecasting with wrapper mutual information. Renewable Energy, 2019, 133, 1055-1065.	4.3	54
79	Effect of Cloudiness on Solar Radiation Forecasting. , 2019, , .		0
80	Modeling water vapor impacts on the solar irradiance reaching the receiver of a solar tower plant by means of artificial neural networks. Solar Energy, 2018, 169, 34-39.	2.9	27
81	Intra-hour Forecasting of Direct Normal Solar Irradiance Using Variable Selection with Artificial Neural Networks. Lecture Notes in Networks and Systems, 2018, , 281-290.	0.5	1
82	Proposal and evaluation of subordinate standard solar irradiance spectra for applications in solar energy systems. Solar Energy, 2018, 168, 30-43.	2.9	38
83	A reevaluation of the solar constant based on a 42-year total solar irradiance time series and a reconciliation of spaceborne observations. Solar Energy, 2018, 168, 2-9.	2.9	91
84	History and trends in solar irradiance and PV power forecasting: A preliminary assessment and review using text mining. Solar Energy, 2018, 168, 60-101.	2.9	338
85	Comparison of two sensor technologies for solar irradiance measurement in a desert environment. Solar Energy, 2018, 161, 194-206.	2.9	17
86	Worldwide inter-comparison of clear-sky solar radiation models: Consensus-based review of direct and global irradiance components simulated at the earth surface. Solar Energy, 2018, 168, 10-29.	2.9	82
87	Estimation of visibility from spectral irradiance using artificial neural networks. AIP Conference Proceedings, 2018, , .	0.3	2
88	Performing literature review using text mining, Part III: Summarizing articles using TextRank. , 2018, , .		3
89	Characterization of a Low-Cost Multi-Parameter Sensor for Solar Resource Applications. , 2018, , .		1
90	Quality Control for Solar Irradiance Data. , 2018, , .		10

#	ARTICLE	IF	CITATIONS
91	Ultra-fast preselection in lasso-type spatio-temporal solar forecasting problems. Solar Energy, 2018, 176, 788-796.	2.9	26
92	Sunbelt spectra comparison with standard ASTM G173: The Chilean case. AIP Conference Proceedings, 2018, , .	0.3	5
93	Reducing Uncertainties in Large-Scale Solar Resource Data: The Impact of Aerosols. IEEE Journal of Photovoltaics, 2018, 8, 1732-1737.	1.5	10
94	SolarData: An R package for easy access of publicly available solar datasets. Solar Energy, 2018, 171, A3-A12.	2.9	65
95	A correct validation of the National Solar Radiation Data Base (NSRDB). Renewable and Sustainable Energy Reviews, 2018, 97, 152-155.	8.2	55
96	Kriging for NSRDB PSM version 3 satellite-derived solar irradiance. Solar Energy, 2018, 171, 876-883.	2.9	24
97	A multi-model benchmarking of direct and global clear-sky solar irradiance predictions at arid sites using a reference physical radiative transfer model. Solar Energy, 2018, 171, 447-465.	2.9	25
98	Revised composite extraterrestrial spectrum based on recent solar irradiance observations. Solar Energy, 2018, 169, 434-440.	2.9	57
99	Editorial: Submission of Data Article is now open. Solar Energy, 2018, 171, A1-A2.	2.9	24
100	Spatial prediction using kriging ensemble. Solar Energy, 2018, 171, 977-982.	2.9	19
101	Progress in Sky Radiance and Luminance Modeling Using Circumsolar Radiation and Sky View Factors. , 2018, , .		7
102	Is the average photon energy a unique characteristic of the spectral distribution of global irradiance?. Solar Energy, 2017, 149, 32-43.	2.9	41
103	Cloud and albedo enhancement impacts on solar irradiance using high-frequency measurements from thermopile and photodiode radiometers. Part 1: Impacts on global horizontal irradiance. Solar Energy, 2017, 153, 755-765.	2.9	59
104	Improving the separation of direct and diffuse solar radiation components using machine learning by gradient boosting. Solar Energy, 2017, 150, 558-569.	2.9	60
105	Reconciling solar forecasts: Geographical hierarchy. Solar Energy, 2017, 146, 276-286.	2.9	63
106	Reconstruction of historical aerosol optical depth time series over Romania during summertime. International Journal of Climatology, 2017, 37, 4720-4732.	1.5	8
107	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. Solar Energy, 2017, 153, 766-779.	2.9	31
108	Analyzing big time series data in solar engineering using features and PCA. Solar Energy, 2017, 153, 317-328.	2.9	30

#	ARTICLE	IF	CITATIONS
109	Is conversion efficiency still relevant to qualify advanced multi-junction solar cells?. Progress in Photovoltaics: Research and Applications, 2017, 25, 242-254.	4.4	18
110	Atmospheric transmission loss in mirror-to-tower slant ranges due to water vapor. AIP Conference Proceedings, 2017, , .	0.3	9
111	Minimum redundancy â€œ Maximum relevance with extreme learning machines for global solar radiation forecasting: Toward an optimized dimensionality reduction for solar time series. Solar Energy, 2017, 158, 595-609.	2.9	43
112	Reconciling solar forecasts: Temporal hierarchy. Solar Energy, 2017, 158, 332-346.	2.9	52
113	On adding and removing sensors in a solar irradiance monitoring network for areal forecasting and PV system performance evaluation. Solar Energy, 2017, 155, 1417-1430.	2.9	27
114	Worldwide multi-model intercomparison of clear-sky solar irradiance predictions. AIP Conference Proceedings, 2017, , .	0.3	4
115	Gaussian process with linear discriminant analysis for predicting hourly global horizontal irradiance in Tamanrasset, Algeria. , 2017, , .		1
116	Long-Term Variability of Aerosol Optical Depth, Dust Episodes, and Direct Normal Irradiance Over Kuwait for CSP Applications. , 2017, , .		3
117	Evaluation of Solar Energy Losses for the Heliostat-To-Receiver Path of a Tower Solar Plant for Different Aerosol Models. , 2017, , .		3
118	VISIBILITY ESTIMATES FROM ATMOSPHERIC AND RADIOMETRIC VARIABLES USING ARTIFICIAL NEURAL NETWORKS. WIT Transactions on Ecology and the Environment, 2017, , .	0.0	2
119	Forecast UPC-level FMCG demand, Part III: Grouped reconciliation. , 2016, , .		2
120	Spatial data dimension reduction using quadtree: A case study on satellite-derived solar radiation. , 2016, , .		5
121	Worldwide impact of aerosolâ€™s time scale on the predicted long-term concentrating solar power potential. Scientific Reports, 2016, 6, 30546.	1.6	28
122	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. Solar Energy, 2016, 137, 608-620.	2.9	17
123	Solar radiation on inclined surfaces: Corrections and benchmarks. Solar Energy, 2016, 136, 288-302.	2.9	158
124	Bias induced by the AOD representation time scale in long-term solar radiation calculations. Part 2: Impact on long-term solar irradiance predictions. Solar Energy, 2016, 135, 625-632.	2.9	13
125	Short term solar irradiance forecasting using a mixed wavelet neural network. Renewable Energy, 2016, 90, 481-492.	4.3	137
126	Preliminary survey on site-adaptation techniques for satellite-derived and reanalysis solar radiation datasets. Solar Energy, 2016, 132, 25-37.	2.9	136

#	ARTICLE	IF	CITATIONS
127	On the impact of haze on the yield of photovoltaic systems in Singapore. <i>Renewable Energy</i> , 2016, 89, 389-400.	4.3	48
128	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
129	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
130	Day-Ahead Solar Irradiance Forecasting in a Tropical Environment. <i>Journal of Solar Energy Engineering, Transactions of the ASME</i> , 2015, 137, .	1.1	31
131	Do spaceborne aerosol observations limit the accuracy of modeled surface solar irradiance?. <i>Geophysical Research Letters</i> , 2015, 42, 605-612.	1.5	23
132	Forecast UPC-level FMCG demand, Part I: Exploratory analysis and visualization. , 2015, , .		6
133	Forecast UPC-level FMCG demand, Part II: Hierarchical reconciliation. , 2015, , .		5
134	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
135	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
136	A Linear Identification of Diode Models from Single $I-V$ Characteristics of PV Panels. <i>IEEE Transactions on Industrial Electronics</i> , 2015, 62, 4181-4193.	5.2	103
137	Forecasting of global horizontal irradiance by exponential smoothing, using decompositions. <i>Energy</i> , 2015, 81, 111-119.	4.5	110
138	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
139	Solar irradiance monitoring network design using the variance quadtree algorithm. <i>Renewables: Wind, Water, and Solar</i> , 2015, 2, .	2.5	20
140	Very short term irradiance forecasting using the lasso. <i>Solar Energy</i> , 2015, 114, 314-326.	2.9	105
141	On the correct use of the Gueymard diffuse radiation model for tilted surfaces. <i>Energy Conversion and Management</i> , 2015, 101, 787-788.	4.4	3
142	Solar Resource for High-Concentrator Photovoltaic Applications. <i>Green Energy and Technology</i> , 2015, , 261-302.	0.4	8
143	Very short-term irradiance forecasting at unobserved locations using spatio-temporal kriging. <i>Solar Energy</i> , 2015, 122, 1266-1278.	2.9	82
144	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

#	ARTICLE	IF	CITATIONS
145	Solar Resource Assessment over Kuwait: Validation of Satellite-derived Data and Reanalysis Modeling. , 2015, , .		5
146	Performance of Separation Models to Predict Direct Irradiance at High Frequency: Validation over Arid Areas. , 2015, , .		8
147	A simple parameterization of the short-wave aerosol optical properties for surface direct and diffuse irradiances assessment in a numerical weather model. Geoscientific Model Development, 2014, 7, 1159-1174.	1.3	62
148	Bidirectional irradiance transposition based on the Perez model. Solar Energy, 2014, 110, 768-780.	2.9	38
149	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
150	A review of validation methodologies and statistical performance indicators for modeled solar radiation data: Towards a better bankability of solar projects. Renewable and Sustainable Energy Reviews, 2014, 39, 1024-1034.	8.2	241
151	The Impact of Haze on Performance Ratio and Short-Circuit Current of PV Systems in Singapore. IEEE Journal of Photovoltaics, 2014, 4, 1585-1592.	1.5	29
152	Satellite image analysis and a hybrid ESSS/ANN model to forecast solar irradiance in the tropics. Energy Conversion and Management, 2014, 79, 66-73.	4.4	76
153	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
154	Spatial Load Forecasting With Communication Failure Using Time-Forward Kriging. IEEE Transactions on Power Systems, 2014, 29, 2875-2882.	4.6	21
155	Direct normal irradiance related definitions and applications: The circumsolar issue. Solar Energy, 2014, 110, 561-577.	2.9	150
156	Solar irradiance forecasting using spatio-temporal empirical kriging and vector autoregressive models with parameter shrinkage. Solar Energy, 2014, 103, 550-562.	2.9	72
157	A bankable method of assessing the performance of a CPV plant. Applied Energy, 2014, 118, 1-11.	5.1	45
158	Accuracy analysis for fifty-four clear-sky solar radiation models using routine hourly global irradiance measurements in Romania. Renewable Energy, 2013, 55, 85-103.	4.3	82
159	Solar irradiance forecasting using spatial-temporal covariance structures and time-forward kriging. Renewable Energy, 2013, 60, 235-245.	4.3	126
160	Evaluation of transposition and decomposition models for converting global solar irradiance from tilted surface to horizontal in tropical regions. Solar Energy, 2013, 97, 369-387.	2.9	43
161	Short-term solar irradiance forecasting using exponential smoothing state space model. Energy, 2013, 55, 1104-1113.	4.5	159
162	Accuracy and sensitivity analysis for 54 models of computing hourly diffuse solar irradiation on clear sky. Theoretical and Applied Climatology, 2013, 111, 379-399.	1.3	25

#	ARTICLE	IF	CITATIONS
163	Assessment of the Level-3 MODIS daily aerosol optical depth in the context of surface solar radiation and numerical weather modeling. Atmospheric Chemistry and Physics, 2013, 13, 675-692.	1.9	87
164	Solar Radiation Spectrum. , 2013, , 1-32.		4
165	Generalized spectral performance evaluation of multijunction solar cells using a multicore, parallelized version of SMARTS. AIP Conference Proceedings, 2012, ,	0.3	18
166	Temporal variability in direct and global irradiance at various time scales as affected by aerosols. Solar Energy, 2012, 86, 3544-3553.	2.9	113
167	Clear-sky irradiance predictions for solar resource mapping and large-scale applications: Improved validation methodology and detailed performance analysis of 18 broadband radiative models. Solar Energy, 2012, 86, 2145-2169.	2.9	227
168	Hourly solar irradiance time series forecasting using cloud cover index. Solar Energy, 2012, 86, 3531-3543.	2.9	193
169	Aerosol size distribution retrievals from sunphotometer measurements: Theoretical evaluation of errors due to circumsolar and related effects. Atmospheric Environment, 2012, 51, 131-139.	1.9	2
170	Computing global and diffuse solar hourly irradiation on clear sky. Review and testing of 54 models. Renewable and Sustainable Energy Reviews, 2012, 16, 1636-1656.	8.2	114
171	Comments on "Visibility, aerosol conditions, and irradiance attenuation close to the ground" by Christian A. Gueymard, Solar Energy (2012). Solar Energy, 2012, 86, 1669-1670.	2.9	0
172	Visibility, aerosol conditions, and irradiance attenuation close to the ground"Comments on "Solar radiation attenuation in solar tower plants" by J. Ballestrin and A. Marzo, Solar Energy (2012). Solar Energy, 2012, 86, 1667-1668.	2.9	9
173	Solar Radiation solar radiation , Introduction. , 2012, , 9740-9744.		3
174	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
175	Assessment of spatial and temporal variability in the US solar resource from radiometric measurements and predictions from models using ground-based or satellite data. Solar Energy, 2011, 85, 1068-1084.	2.9	147
176	Comments on: "Solar energy estimation using REST model for PV-ECS based distributed power generating system" by M. Rizwan et al., vol. 94, 1324"1328. Solar Energy Materials and Solar Cells, 2011, 95, 804.	3.0	0
177	Uncertainties in Modeled Direct Irradiance Around the Sahara as Affected by Aerosols: Are Current Datasets of Bankable Quality?. Journal of Solar Energy Engineering, Transactions of the ASME, 2011, 133, .	1.1	45
178	Spectral Circumsolar Radiation Contribution To CPV. AIP Conference Proceedings, 2010, , .	0.3	14
179	Daily spectral effects on concentrating PV solar cells as affected by realistic aerosol optical depth and other atmospheric conditions. , 2009, , .		27
180	Editorial: Journal's performance and publication criteria. Solar Energy, 2009, 83, 1.	2.9	13

#	ARTICLE	IF	CITATIONS
181	Evaluation of conventional and high-performance routine solar radiation measurements for improved solar resource, climatological trends, and radiative modeling. Solar Energy, 2009, 83, 171-185.	2.9	104
182	Direct and indirect uncertainties in the prediction of tilted irradiance for solar engineering applications. Solar Energy, 2009, 83, 432-444.	2.9	203
183	Spectral effects on the transmittance, solar heat gain, and performance rating of glazing systems. Solar Energy, 2009, 83, 940-953.	2.9	71
184	Monthly average clear-sky broadband irradiance database for worldwide solar heat gain and building cooling load calculations. Solar Energy, 2009, 83, 1998-2018.	2.9	65
185	Optical engineering application of modeled photosynthetically active radiation (PAR) for high-speed digital camera dynamic range optimization. , 2009, , .		2
186	Prediction and validation of cloudless shortwave solar spectra incident on horizontal, tilted, or tracking surfaces. Solar Energy, 2008, 82, 260-271.	2.9	73
187	REST2: High-performance solar radiation model for cloudless-sky irradiance, illuminance, and photosynthetically active radiation " Validation with a benchmark dataset. Solar Energy, 2008, 82, 272-285.	2.9	331
188	Fixed or tracking solar collectors? Helping the decision process with the Solar Resource Enhancement Factor. , 2008, , .		7
189	Technical Note: Improved total atmospheric water vapour amount determination from near-infrared filter measurements with sun photometers. Atmospheric Chemistry and Physics, 2007, 7, 4613-4623.	1.9	10
190	Spectral effects on latitude-tilt and vertical PV modules as affected by latitude, air mass, and climate. Proceedings of SPIE, 2007, , .	0.8	2
191	Clear-sky solar luminous efficacy determination using artificial neural networks. Solar Energy, 2007, 81, 929-939.	2.9	48
192	Reference solar spectra: Their evolution, standardization issues, and comparison to recent measurements. Advances in Space Research, 2006, 37, 323-340.	1.2	31
193	Reference luminous solar constant and solar luminance for illuminance calculations. Solar Energy, 2005, 79, 559-565.	2.9	40
194	Interdisciplinary applications of a versatile spectral solar irradiance model: A review. Energy, 2005, 30, 1551-1576.	4.5	126
195	Importance of atmospheric turbidity and associated uncertainties in solar radiation and luminous efficacy modelling. Energy, 2005, 30, 1603-1621.	4.5	59
196	The sun's total and spectral irradiance for solar energy applications and solar radiation models. Solar Energy, 2004, 76, 423-453.	2.9	766
197	Description and availability of the SMARTS spectral model for photovoltaic applications. , 2004, , .		35
198	Direct solar transmittance and irradiance predictions with broadband models. Part I: detailed theoretical performance assessment. Solar Energy, 2003, 74, 355-379.	2.9	225

#	ARTICLE	IF	CITATIONS
199	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
200	Revising and Validating Spectral Irradiance Reference Standards for Photovoltaic Performance Evaluation. , 2002, , 367.		5
201	Proposed reference irradiance spectra for solar energy systems testing. <i>Solar Energy</i> , 2002, 73, 443-467.	2.9	463
202	Total NO ₂ column amount over Athens, Greece in 1996-1997. <i>Atmospheric Research</i> , 2001, 57, 1-8.	1.8	13
203	Atmospheric turbidity of urban and desert areas of the Nile Basin in the aftermath of Mt. Pinatubo's eruption. <i>Theoretical and Applied Climatology</i> , 2001, 68, 89-108.	1.3	31
204	Parameterized transmittance model for direct beam and circumsolar spectral irradiance. <i>Solar Energy</i> , 2001, 71, 325-346.	2.9	698
205	Prediction and Performance Assessment of Mean Hourly Global Radiation. <i>Solar Energy</i> , 2000, 68, 285-303.	2.9	112
206	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
207	Determination of atmospheric turbidity from the diffuse-beam broadband irradiance ratio. <i>Solar Energy</i> , 1998, 63, 135-146.	2.9	48
208	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
209	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
210	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
211	Measurements and models for total solar irradiance on inclined surface in Athens, Greece. <i>Solar Energy</i> , 1994, 53, 177-185.	2.9	104
212	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
213	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
214	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
215	A simplified model for the computation of radiation transmission through a series of semi-transparent plates. <i>Solar Energy</i> , 1989, 42, 433-440.	2.9	5
216	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

#	ARTICLE	IF	CITATIONS
217	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
218	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
219	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
220	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
221	Comments on "POTSOL: Model to predict extraterrestrial and clear sky solar radiation" and "Ground level solar radiation prediction model including cloud cover effects". <i>Solar Energy</i> , 1986, 37, 319-321.	2.9	3
222	Further comments on "Study of the corrective factor involved when measuring the diffuse solar radiation by use of the ring method". <i>Solar Energy</i> , 1986, 37, 79-80.	2.9	4
223	Solar Radiation Measurement: Progress in Radiometry for Improved Modeling. , 0, , 1-27.		21
224	Validation and Ranking Methodologies for Solar Radiation Models. , 0, , 479-510.		19