Stefan Emeis

List of Publications by Year
in descending order

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167 papers	3,932 citations	101543 36 h-index	149698 56 g-index
205 all docs	205 docs citations	205 times ranked	3591 citing authors

#	Article	IF	Citations
1	Surface-based remote sensing of the mixing-layer height a review. Meteorologische Zeitschrift, 2008, 17, 621-630.	1.0	210
2	Application of a multiscale, coupled MM5/chemistry model to the complex terrain of the VOTALP valley campaign. Atmospheric Environment, 2000, 34, 1435-1453.	4.1	188
3	Atmospheric boundary-layer structure from simultaneous SODAR, RASS, and ceilometer measurements. Atmospheric Environment, 2004, 38, 273-286.	4.1	152
4	Secondary effects of urban heat island mitigation measures on air quality. Atmospheric Environment, 2016, 125, 199-211.	4.1	140
5	First in situ evidence of wakes in the far field behind offshore wind farms. Scientific Reports, 2018, 8, 2163.	3.3	124
6	Processâ€based modelling of isoprene emission by oak leaves. Plant, Cell and Environment, 2000, 23, 585-595.	5.7	104
7	Influence of mixing layer height upon air pollution in urban and sub-urban areas. Meteorologische Zeitschrift, 2006, 15, 647-658.	1.0	100
8	Remote Sensing Methods to Investigate Boundary-layer Structures relevant to Air Pollution in Cities. Boundary-Layer Meteorology, 2006, 121, 377-385.	2.3	99
9	Air Pollution Transport in an Alpine Valley: Results From Airborne and Ground-Based Observations. Boundary-Layer Meteorology, 2009, 131, 441-463.	2.3	93
10	The dependence of offshore turbulence intensity on wind speed. Journal of Wind Engineering and Industrial Aerodynamics, 2010, 98, 466-471.	3.9	91
11	Multiple atmospheric layering and mixing-layer height in the Inn valley observed by remote sensing. Meteorologische Zeitschrift, 2007, 16, 415-424.	1.0	88
12	Boundary-layer anemometry by optical remote sensing for wind energy applications. Meteorologische Zeitschrift, 2007, 16, 337-347.	1.0	85
13	A simple analytical wind park model considering atmospheric stability. Wind Energy, 2010, 13, 459-469.	4.2	79
14	Revisiting the Definition of the Drag Coefficient in the Marine Atmospheric Boundary Layer. Journal of Physical Oceanography, 2010, 40, 2325-2332.	1.7	79
15	Wind Energy Meteorology. Green Energy and Technology, 2018, , .	0.6	79
16	Measurement and simulation of the 16/17 April 2010 EyjafjallajÃ¶kull volcanic ash layer dispersion in the northern Alpine region. Atmospheric Chemistry and Physics, 2011, 11, 2689-2701.	4.9	78
17	Nocturnal secondary ozone concentration maxima analysed by sodar observations and surface measurements. Atmospheric Environment, 2000, 34, 4315-4329.	4.1	74
18	Wind Energy Meteorology. Green Energy and Technology, 2013, , .	0.6	73

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19	Mixing layer height over Munich, Germany: Variability and comparisons of different methodologies. Journal of Geophysical Research, 2006, 111, .	3.3	69
20	Simultaneous multicopter-based air sampling and sensing of meteorological variables. Atmospheric Measurement Techniques, 2017, 10, 2773-2784.	3.1	69
21	Current issues in wind energy meteorology. Meteorological Applications, 2014, 21, 803-819.	2.1	58
22	The surface energy balance and the mixing height in urban areasâ€"activities and recommendations of COST-Action 715. Boundary-Layer Meteorology, 2007, 124, 3-24.	2.3	57
23	Correlation of aerosol mass near the ground with aerosol optical depth during two seasons in Munich. Atmospheric Environment, 2008, 42, 4036-4046.	4.1	57
24	Offshore wind farm wake recovery: Airborne measurements and its representation in engineering models. Wind Energy, 2020, 23, 1249-1265.	4.2	51
25	The VOTALP Mesolcina Valley Campaign 1996 â€“ concept, background and some highlights. Atmospheric Environment, 2000, 34, 1395-1412.	4.1	50
26	Observation of the structure of the urban boundary layer with different ceilometers and validation by RASS data. Meteorologische Zeitschrift, 2009, 18, 149-154.	1.0	50
27	Reduction of horizontal wind speed in a boundary layer with obstacles. Boundary-Layer Meteorology, 1993, 64, 297-305.	2.3	49
28	The SCALEX Campaign: Scale-Crossing Land Surface and Boundary Layer Processes in the TERENO-preAlpine Observatory. Bulletin of the American Meteorological Society, 2017, 98, 1217-1234.	3.3	49
29	Surface-Based Remote Sensing of the Atmospheric Boundary Layer. Atmospheric and Oceanographic Sciences Library, 2011, , .	0.1	46
30	Influences of the 2010 EyjafjallajÃ¶kull volcanic plume on air quality in the northern Alpine region. Atmospheric Chemistry and Physics, 2011, 11, 8555-8575.	4.9	46
31	Frequency distributions of the mixing height over an urban area from SODAR data. Meteorologische Zeitschrift, 2004, 13, 361-367.	1.0	44
32	Micrometeorological impacts of offshore wind farms as seen in observations and simulations. Environmental Research Letters, 2018, 13, 124012.	5.2	44
33	Wind and turbulence in the urban boundary layer analysis from acoustic remote sensing data and fit to analytical relations. Meteorologische Zeitschrift, 2007, 16, 393-406.	1.0	43
34	Turbulent kinetic energy over large offshore wind farms observed and simulated by the mesoscale model WRF (3.8.1). Geoscientific Model Development, 2020, 13, 249-268.	3.6	42
35	Developing a Research Strategy to Better Understand, Observe, and Simulate Urban Atmospheric Processes at Kilometer to Subkilometer Scales. Bulletin of the American Meteorological Society, 2017, 98, ES261-ES264.	3.3	40
36	Modification of air flow over an escarpment ? Results from the Hjardemï¿½l experiment. Boundary-Layer Meteorology, 1995, 74, 131-161.	2.3	39

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37	Evaluation of a Wind Farm Parametrization for Mesoscale Atmospheric Flow Models with Aircraft Measurements. Meteorologische Zeitschrift, 2018, 27, 401-415.	1.0	36
38	Evaluation of the Interpretation of Ceilometer Data with RASS and Radiosonde Data. Boundary-Layer Meteorology, 2012, 143, 25-35.	2.3	35
39	Wind speed and shear associated with low-level jets over Northern Germany. Meteorologische Zeitschrift, 2014, 23, 295-304.	1.0	33
40	Vertical variation of frequency distributions of wind speed in and above the surface layer observed by sodar. Meteorologische Zeitschrift, 2001, 10, 141-149.	1.0	31
41	Long-range modifications of the wind field by offshore wind parksÂâ€“ results of the project WIPAFF. Meteorologische Zeitschrift, 2020, 29, 355-376.	1.0	30
42	Characteristics and sources of PM in seasonal perspective â€“ A case study from one year continuously sampling in Beijing. Atmospheric Pollution Research, 2016, 7, 235-248.	3.8	29
43	Remote sensing winds in complex terrainÂâ€“ a review. Meteorologische Zeitschrift, 2015, 24, 547-555.	1.0	28
44	Aerosol optical depth, aerosol composition and air pollution during summer and winter conditions in Budapest. Science of the Total Environment, 2007, 383, 141-163.	8.0	27
45	A Comparison Between Modelled and Measured Mixing-Layer Height Over Munich. Boundary-Layer Meteorology, 2009, 131, 425-440.	2.3	26
46	Chemical characteristics of PM2.5 during haze episodes in spring 2013 in Beijing. Urban Climate, 2017, 22, 51-63.	5.7	26
47	Urban Climate Under Change [UC]2Ââ€“ A National Research Programme for Developing a Building-Resolving Atmospheric Model for Entire City Regions. Meteorologische Zeitschrift, 2019, 28, 95-104.	1.0	26
48	Determination of mixing layer heights from ceilometer data. , 2004, 5571, 248.		24
49	Three-Dimensional Observation of Atmospheric Processes in Cities. Meteorologische Zeitschrift, 2019, 28, 121-138.	1.0	24
50	Vertical wind profiles over an urban area. Meteorologische Zeitschrift, 2004, 13, 353-359.	1.0	23
51	Waterspouts over the North and Baltic Seas: Observations and climatology, prediction and reporting. Meteorologische Zeitschrift, 2010, 19, 115-129.	1.0	23
52	High resolution climate projections to assess the future vulnerability of European urban areas to climatological extreme events. Theoretical and Applied Climatology, 2017, 127, 667-683.	2.8	23
53	Wind-driven wave heights in the German Bight. Ocean Dynamics, 2009, 59, 463-475.	2.2	21
54	Pressure drag and effective roughness length with neutral stratification. Boundary-Layer Meteorology, 1987, 39, 379-401.	2.3	20

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55	Assessing the meteorological conditions of a deep Italian Alpine valley system by means of a measuring campaign and simulations with two models during a summer smog episode. Atmospheric Environment, 2001, 35, 5441-5454.	4.1	20
56	Exploring the wakes of large offshore wind farms. Journal of Physics: Conference Series, 2016, 753, 092014.	0.4	18
57	Aerosol concentration measurements with a lidar ceilometer: results of a one year measuring campaign. , 2004, 5235, 486.		17
58	High-Resolution Observations of Transport and Exchange Processes in Mountainous Terrain. Atmosphere, 2018, 9, 457.	2.3	17
59	Flow over an embankment: Speed-up and pressure perturbation. Boundary-Layer Meteorology, 1993, 63, 163-182.	2.3	16
60	Atmospheric influences and local variability of air pollution close to a motorway in an Alpine valley during winter. Meteorologische Zeitschrift, 2008, 17, 297-309.	1.0	16
61	Detection of pollution transport events southeast of Mexico City using ground-based visible spectroscopy measurements of nitrogen dioxide. Atmospheric Chemistry and Physics, 2009, 9, 4827-4840.	4.9	16
62	InÂsitu airborne measurements of atmospheric and sea surface parameters related to offshore wind parks in the German Bight. Earth System Science Data, 2020, 12, 935-946.	9.9	16
63	How to bring urban and global climate studies together with urban planning and architecture?. Developments in the Built Environment, 2020, 4, 100023.	4.0	15
64	Evaluation of a simple analytical model for offshore wind farm wake recovery by in situ data and Weather Research and Forecasting simulations. Wind Energy, 2021, 24, 212-228.	4.2	15
65	Development of Emission Models and Improvement of Emission Data for Germany. Journal of Atmospheric Chemistry, 2002, 42, 179-206.	3.2	14
66	Examples for the determination of turbulent (sub-synoptic) fluxes with inverse methods. Meteorologische Zeitschrift, 2008, 17, 3-11.	1.0	14
67	A Method for Increasing the Turbulent Kinetic Energy in the Mellorâ€“Yamadaâ€“JanjiÄ‡ Boundary-Layer Parametrization. Boundary-Layer Meteorology, 2012, 145, 329-349.	2.3	14
68	Seasonal variability and source distribution of haze particles from a continuous one-year study in Beijing. Atmospheric Pollution Research, 2018, 9, 627-633.	3.8	14
69	Pressure Drag of Obstacles in the Atmospheric Boundary Layer. Journal of Applied Meteorology and Climatology, 1990, 29, 461-476.	1.7	14
70	The Role of Atmospheric Stability and Turbulence in Offshore Wind-Farm Wakes in the German Bight. Boundary-Layer Meteorology, 2022, 182, 441-469.	2.3	14
71	Long-term observations of the urban mixing-layer height with ceilometers. IOP Conference Series: Earth and Environmental Science, 2008, 1, 012027.	0.3	13
72	A measurement based analysis of the spatial distribution, temporal variation and chemical composition of particulate matter in Munich and Augsburg. Meteorologische Zeitschrift, 2011, 20, 47-57.	1.0	13

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73	A year of H₂ measurements at Weybourne Atmospheric Observatory, UK. Tellus, Series B: Chemical and Physical Meteorology, 2022, 64, 17771.	1.6	13
74	Impact of meteorological conditions on airborne fine particle composition and secondary pollutant characteristics in urban area during winter-time. Meteorologische Zeitschrift, 2016, 25, 267-279.	1.0	13
75	History of the Meteorologische Zeitschrift. Meteorologische Zeitschrift, 2008, 17, 685-693.	1.0	12
76	Development and validation of tools for the implementation of european air quality policy in Germany (Project VALIUM). Atmospheric Chemistry and Physics, 2006, 6, 3077-3083.	4.9	11
77	Observational techniques to assist the coupling of CWE/CFD models and meso-scale meteorological models. Journal of Wind Engineering and Industrial Aerodynamics, 2015, 144, 24-30.	3.9	11
78	Measurements of heat and humidity fluxes in the wake of offshore wind turbines. Journal of Renewable and Sustainable Energy, 2017, 9, 053304.	2.0	11
79	SODAR Messungen zur AtmosphÃrenforschung und UmweltÃ¼berwachung. Meteorologische Zeitschrift, 1998, 7, 11-14.	1.0	11
80	Field measurements within a quarter of a city including a street canyon to produce a validation data set. International Journal of Environment and Pollution, 2005, 25, 201.	0.2	10
81	Mixing layer height and air pollution levels in urban area. Proceedings of SPIE, 2012, , .	0.8	10
82	Upper limit for wind shear in stably stratified conditions expressed in terms of a bulk Richardson number. Meteorologische Zeitschrift, 2017, 26, 421-430.	1.0	10
83	Areal-averaged trace gas emission rates from long-range open-path measurements in stable boundary layer conditions. Atmospheric Measurement Techniques, 2012, 5, 1571-1583.	3.1	9
84	SensitivitÃt der Ozonbildung auf Emissionen von VOCs und NOx â€" Eine Fallstudie mit dem Boxmodell BAYROZON. Meteorologische Zeitschrift, 1997, 6, 60-72.	1.0	9
85	Surface pressure distribution and pressure drag on mountains. Meteorology and Atmospheric Physics, 1990, 43, 173-185.	2.0	8
86	Comparison of Logarithmic Wind Profiles and Power Law Wind Profiles and their Applicability for Offshore Wind Profiles. , 2007, , 61-64.		8
87	Adding confidence levels and error bars to mixing layer heights detected by ceilometer. Proceedings of SPIE, 2011, , .	0.8	8
88	Title is missing!. Water, Air and Soil Pollution, 2002, 2, 91-102.	0.8	7
89	Physics of Wind Parks. Green Energy and Technology, 2013, , 135-153.	0.6	7
90	Resistance law, effective roughness length, and deviation angle over hilly terrain. Boundary-Layer Meteorology, 1991, 55, 191-198.	2.3	6

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91	Observation of aerosol in the mixing layer by a ground-based lidar ceilometer. , 2003, , .		5
92	Parameterization of turbulent viscosity over orography. Meteorologische Zeitschrift, 2004, 13, 33-38.	1.0	5
93	Chapter 26 Applications in Meteorology. Developments in Soil Science, 2009, 33, 603-622.	0.5	5
94	AÃŸmann's development of aspiration psychrometers. Meteorologische Zeitschrift, 2012, 21, 431-435.	1.0	5
95	Combined evaluations of meteorological parameters, traffic noise and air pollution in an Alpine valley. Meteorologische Zeitschrift, 2010, 19, 47-61.	1.0	4
96	Half-Order Stable Boundary-Layer Parametrization Without the Eddy Viscosity Approach for Use in Numerical Weather Prediction. Boundary-Layer Meteorology, 2015, 154, 207-228.	2.3	4
97	The discovery of latent heat 250 years ago. Meteorologische Zeitschrift, 2004, 13, 329-333.	1.0	4
98	A diagnostic model for synoptic heat budgets. Archives for Meteorology, Geophysics and Bioclimatology, Series A, 1985, 33, 407-420.	0.4	3
99	Fusion of air pollution data in the region of Munich, Germany, by the ICAROS NET platform. , 2004, , .		3
100	Evaluation of mixing layer height monitoring by ceilometer with SODAR and microlight aircraft measurements. , 2005, , .		3
101	New results from continuous mixing layer height monitoring in urban atmosphere. , 2008, , .		3
102	Evaluation of continuous ceilometer-based mixing layer heights and correlations with PM 2.5 concentrations in Beijing. Proceedings of SPIE, 2009, , .	0.8	3
103	On a relation between particle size distribution and mixing layer height. , 2011, , .		3
104	Correlation equation for the marine drag coefficient and wave steepness. Ocean Dynamics, 2012, 62, 1323-1333.	2.2	3
105	Analysis of decadal precipitation changes at the northern edge of the Alps. Meteorologische Zeitschrift, 2021, 30, 285-293.	1.0	3
106	Physics of Wind Parks. Green Energy and Technology, 2018, , 157-182.	0.6	3
107	Report on the Research Project OWID â€“ Offshore Wind Design Parameter. , 2007, , 81-85.		3
108	SmartAQnet: remote and in-situ sensing of urban air quality. , 2017, , .		3

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109	Who created RÃ©aumurâ€™s thermometer scale?. Meteorologische Zeitschrift, 2000, 9, 185-187.	1.0	3
110	Air quality and engine emission at Paris CDG airport during AIRPUR field campaigns. WIT Transactions on Ecology and the Environment, 2006, , .	0.0	3
111	The five main influencing factors for lidar errors in complex terrain. Wind Energy Science, 2022, 7, 413-431.	3.3	3
112	<title>Measuring the emissions of trace compounds from a livestock building</title>. , 1997, 3106, 137.		2
113	Athens airport air quality study by remote sensing with DOAS, FTIR, and ceilometer. , 2008, , .		2
114	Meteorological Aspects of Wind Park Design. Green, 2011, 1, .	0.4	2
115	Investigation of boundary layer dynamics, dust and volcanic ash clouds with laser ceilometer. Proceedings of SPIE, 2013, , .	0.8	2
116	Assessment of air pollution in the vicinity of major alpine routes. Alliance for Global Sustainability Bookseries, 2007, , 203-214.	0.2	2
117	Pilot Actions in European Cities â€“ Stuttgart. , 2016, , 281-303.		2
118	Analysis of Some Major Limitations of Analytical Top-Down Wind-Farm Models. Boundary-Layer Meteorology, 2023, 187, 423-435.	2.3	2
119	<title>Numerical dispersion models for emission monitoring by spectroscopic remote sensing methods</title>. , 1997, 3106, 120.		1
120	Airport air quality and emission studies by remote sensing and inverse dispersion modelling. , 2006, 6362, 352.		1
121	Continuous monitoring of multiple layering by ceilometer in the Inn valley. , 2006, , .		1
122	Long-term monitoring of layering of lower atmosphere in urban environments by ceilometer. , 2007, 6745, 214.		1
123	ISARS 13 Special issues. Meteorologische Zeitschrift, 2007, 16, 323-324.	1.0	1
124	Improved near-range performance of a low-cost one lens lidar scanning the boundary layer. Proceedings of SPIE, 2009, , .	0.8	1
125	Determination of mixing layer heights by ceilometer and influences upon air quality at Mexico City airport. Proceedings of SPIE, 2009, , .	0.8	1
126	ISARS 2008 special issues. Meteorologische Zeitschrift, 2009, 18, 123-124.	1.0	1

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127	Temporal and spatial structure of a volcanic ash cloud: ground-based remote sensing and numerical modeling. , 2010, , .		1
128	Application of continuous remote sensing of mixing layer height for assessment of airport air quality. , 2010, , .		1
129	Comparison of different remote sensing methods for mixing layer height monitoring. , 2010, , .		1
130	Comparison of continuous detection of mixing layer heights by ceilometer with radiosonde observations. Proceedings of SPIE, 2011, , .	0.8	1
131	20th anniversary of the Meteorologische Zeitschrift. Meteorologische Zeitschrift, 2012, 21, 3-7.	1.0	1
132	Vertical Profiles Over Flat Terrain. Green Energy and Technology, 2013, , 23-73.	0.6	1
133	Long-term study of air urban quality together with mixing layer height. , 2013, , .		1
134	Wind Data Sources. Green Energy and Technology, 2018, , 183-230.	0.6	1
135	Vertical Profiles Over Flat Terrain. Green Energy and Technology, 2018, , 31-89.	0.6	1
136	Three-Dimensional Ground-Based Measurements of Urban Air Quality to Evaluate Satellite Derived Interpretations for Urban Air Pollution. , 2002, , 91-102.		1
137	Urban Atmospheric Boundary-Layer Structure in Complex Topography: An Empirical 3D Case Study for Stuttgart, Germany. Frontiers in Earth Science, 2022, 10, .	1.8	1
138	The BAYSOFI Campaign. Meteorologische Zeitschrift, 2001, 10, 163-164.	1.0	0
139	VOC emission source strengths of tankers during refuelling activities determined by spectroscopic remote sensing and inverse dispersion modeling. , 2002, 4539, 247.		0
140	PM10, PM2.5, and PM1 spatial distribution in the region of Munich determined by satellite images on the basis of the ICAROS NET platform. , 2005, , .		0
141	Highway emission study by DOAS within the Inn valley near Innsbruck. , 2006, , .		0
142	Special issue on METTOOLSVI. Meteorologische Zeitschrift, 2008, 17, 227-228.	1.0	0
143	Comparative study of wintertime NO and NO 2 measured by DOAS near a motorway in the Inn Valley. Proceedings of SPIE, 2008, , .	0.8	0
144	Emission rates with the boundary layer budget method supported by acoustic remote sensing. IOP Conference Series: Earth and Environmental Science, 2008, 1, 012055.	0.3	0

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145	ISARS 2008 special issues. Meteorologische Zeitschrift, 2009, 18, 235-236.	1.0	0
146	Application of open-path spectroscopic measurement techniques (FTIR) for the up-scaling of greenhouse gas emissions from soils. , 2009, , .		0
147	Front Matter: Volume 7827. , 2010, , .		0
148	Detection of the temporal and spatial structure of a volcanic plume by ground-based remote sensing. Proceedings of SPIE, 2011, , .	0.8	0
149	Basic Principles of Surface-Based Remote Sensing. Atmospheric and Oceanographic Sciences Library, 2011, , 33-71.	0.1	0
150	Weitreichender Windschatten. Physik in Unserer Zeit, 2011, 42, 228-233.	0.0	0
151	Results from long-term detection of mixing layer height: ceilometer and comparison with Radio-Acoustic Sounding System. , 2012, , .		0
152	A Vision for a new electronic journal based on a long tradition. Meteorologische Zeitschrift, 2013, 22, 3-4.	1.0	0
153	Kerbside DOAS measurements of air pollutants. , 2014, , .		0
154	ISARS 2014 special issue. Meteorologische Zeitschrift, 2015, 24, 545-546.	1.0	0
155	Standards â€“ An Important Step for the (Public) Use of Lidars. EPJ Web of Conferences, 2016, 119, 23023.	0.3	0
156	Methane distributions and transports in the nocturnal boundary layer at a rural station. Proceedings of SPIE, 2016, , .	0.8	0
157	Apportionment of emission source strengths using optical remote sensing and dispersion modeling. , 2004, , .		0
158	Derivation of Vertical Wind and Turbulence Profiles, the Mixing-Layer Height, and the Vertical Turbulent Exchange Coefficient from Sodar and Ceilometer Soundings in Urban Measurement Campaigns. , 2009, , 133-141.		0
159	Analytical Description and Vertical Structure of the Atmospheric Boundary Layer. Atmospheric and Oceanographic Sciences Library, 2011, , 9-32.	0.1	0
160	Enhancing the Simulation of Turbulent Kinetic Energy in the Marine Atmospheric Boundary Layer. Springer Proceedings in Physics, 2012, , 163-166.	0.2	0
161	Urban Climateâ€”Impact and Interaction of Air Quality and Global Change. , 2013, , 345-354.		0
162	Cool Citiesâ€”Clean Cities? Secondary Impacts of Urban Heat Island Mitigation Strategies on Urban Air Quality. Springer Proceedings in Complexity, 2016, , 371-375.	0.3	0

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163	Wind Regimes. Green Energy and Technology, 2018, , 11-30.	0.6	0
164	Offshore Winds. Green Energy and Technology, 2018, , 113-155.	0.6	0
165	Smart Air Quality Network for spatial high-resolution monitoring in urban area. , 2018, , .		0
166	Assessment of three-dimensional, fine-granular measurement of particulate matter by a smart air quality network in urban area. , 2019, , .		0
167	Air Pollution Assessment in an Alpine Valley. NATO Security Through Science Series C: Environmental Security, 2008, , 723-724.	0.1	0