Carlos Borrego

List of Publications by Year
in descending order

166 papers	4,458 citations	81900 39 h-index	133252 59 g-index
172 all docs	172 docs citations	172 times ranked	5140 citing authors

#	Article	IF	Citations
1	Transport impacts on atmosphere and climate: Land transport. Atmospheric Environment, 2010, 44, 4772-4816.	4.1	285
2	CFD modelling of the aerodynamic effect of trees on urban air pollution dispersion. Science of the Total Environment, 2013, 461-462, 541-551.	8.0	186
3	How urban structure can affect city sustainability from an air quality perspective. Environmental Modelling and Software, 2006, 21, 461-467.	4.5	165
4	Integrating Health on Air Quality Assessmentâ€"Review Report on Health Risks of Two Major European Outdoor Air Pollutants: PM and NO₂. Journal of Toxicology and Environmental Health - Part B: Critical Reviews, 2014, 17, 307-340.	6.5	138
5	Fire activity in Portugal and its relationship to weather and the Canadian Fire Weather Index System. International Journal of Wildland Fire, 2008, 17, 328.	2.4	129
6	Emission and dispersion modelling of Lisbon air quality at local scale. Atmospheric Environment, 2003, 37, 5197-5205.	4.1	101
7	Procedures for estimation of modelling uncertainty in air quality assessment. Environment International, 2008, 34, 613-620.	10.0	96
8	The impact of spatial resolution on area burned and fire occurrence projections in Portugal under climate change. Climatic Change, 2010, 98, 177-197.	3.6	86
9	Current air quality plans in Europe designed to support air quality management policies. Atmospheric Pollution Research, 2015, 6, 434-443.	3.8	77
10	Long-term monitoring and seasonal analysis of polycyclic aromatic hydrocarbons (PAHs) measured over a decade in the ambient air of Porto, Portugal. Science of the Total Environment, 2016, 543, 439-448.	8.0	68
11	COST 732 in practice: the MUST model evaluation exercise. International Journal of Environment and Pollution, 2011, 44, 403.	0.2	67
12	Airways changes related to air pollution exposure in wheezing children. European Respiratory Journal, 2012, 39, 246-253.	6.7	67
13	Impact of land use on urban mobility patterns, emissions and air quality in a Portuguese medium-sized city. Science of the Total Environment, 2011, 409, 1154-1163.	8.0	66
14	Forest fires in a changing climate and their impacts on air quality. Atmospheric Environment, 2011, 45, 5545-5553.	4.1	66
15	Impact of harbour activities on local air quality: A review. Environmental Pollution, 2020, 257, 113542.	7.5	66
16	Influence of topography and land use on pollutants dispersion in the Atlantic coast of Iberian Peninsula. Atmospheric Environment, 2006, 40, 3969-3982.	4.1	63
17	Traffic-related particulate air pollution exposure in urban areas. Atmospheric Environment, 2006, 40, 7205-7214.	4.1	59
18	Contribution of residential wood combustion to PM10 levels in Portugal. Atmospheric Environment, 2010, 44, 642-651.	4.1	59

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19	Urban Photochemical Pollution in the Iberian Peninsula: Lisbon and Barcelona Airsheds. Journal of the Air and Waste Management Association, 2003, 53, 347-359.	1.9	56
20	Climate-driven changes in air quality over Europe by the end of the 21st century, with special reference to Portugal. Environmental Science and Policy, 2010, 13, 445-458.	4.9	54
21	Impacts of green infrastructures on aerodynamic flow and air quality in Porto's urban area. Atmospheric Environment, 2018, 190, 317-330.	4.1	54
22	Monitoring of ambient air PCDD/F levels in Portugal. Chemosphere, 2007, 67, 1715-1721.	8.2	53
23	Air quality assessment for Portugal. Science of the Total Environment, 2007, 373, 22-31.	8.0	53
24	Emissions characterization from EURO 5 diesel/biodiesel passenger car operating under the new European driving cycle. Atmospheric Environment, 2014, 84, 339-348.	4.1	53
25	Impact of road traffic emissions on air quality of the Lisbon region. Atmospheric Environment, 2000, 34, 4683-4690.	4.1	52
26	Monitoring of firefighters exposure to smoke during fire experiments in Portugal. Environment International, 2010, 36, 736-745.	10.0	50
27	How bias-correction can improve air quality forecasts over Portugal. Atmospheric Environment, 2011, 45, 6629-6641.	4.1	50
28	Autonomous vehicles opportunities for cities air quality. Science of the Total Environment, 2020, 712, 136546.	8.0	50
29	Investigating a high ozone episode in a rural mountain site. Environmental Pollution, 2012, 162, 176-189.	7.5	49
30	Long-term assessment of particulate matter using CHIMERE model. Atmospheric Environment, 2007, 41, 7726-7738.	4.1	48
31	High ozone levels in the northeast of Portugal: Analysis and characterization. Atmospheric Environment, 2010, 44, 1020-1031.	4.1	48
32	Smoke measurements during Gestosa-2002 experimental field fires. International Journal of Wildland Fire, 2005, 14, 107.	2.4	48
33	Determination of background concentrations for air quality models using spectral analysis and filtering of monitoring data. Atmospheric Environment, 2010, 44, 106-114.	4.1	47
34	Long-term simulations of photo oxidant pollution over Portugal using the CHIMERE model. Atmospheric Environment, 2005, 39, 3089-3101.	4.1	46
35	Impact of forest fires on particulate matter and ozone levels during the 2003, 2004 and 2005 fire seasons in Portugal. Science of the Total Environment, 2012, 414, 53-62.	8.0	45
36	Assessment of potential improvements on regional air quality modelling related with implementation of a detailed methodology for traffic emission estimation. Science of the Total Environment, 2014, 470-471, 127-137.	8.0	45

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37	Urban scale air quality modelling using detailed traffic emissions estimates. Atmospheric Environment, 2016, 131, 341-351.	4.1	45
38	Fire weather risk assessment under climate change using a dynamical downscaling approach. Environmental Modelling and Software, 2011, 26, 1123-1133.	4.5	44
39	Evaluating strategies to reduce urban air pollution. Atmospheric Environment, 2016, 127, 196-204.	4.1	44
40	How important are maritime emissions for the air quality: At European and national scale. Environmental Pollution, 2018, 242, 565-575.	7.5	44
41	Wildland Smoke Exposure Values and Exhaled Breath Indicators in Firefighters. Journal of Toxicology and Environmental Health - Part A: Current Issues, 2012, 75, 831-843.	2.3	43
42	Forest fire emissions in Portugal: A contribution to global warming?. Environmental Pollution, 1994, 83, 121-123.	7.5	41
43	Frequency analysis of air quality time series for traffic related pollutants. Journal of Environmental Monitoring, 2010, 12, 544-550.	2.1	40
44	Numerical Model Inter-comparison for Wind Flow and Turbulence Around Single-Block Buildings. Environmental Modeling and Assessment, 2011, 16, 169-181.	2.2	40
45	Integrating road traffic externalities through a sustainability indicator. Science of the Total Environment, 2019, 691, 483-498.	8.0	38
46	Assessment of source contribution to air quality in an urban area close to a harbor: Case-study in Porto, Portugal. Science of the Total Environment, 2019, 662, 347-360.	8.0	38
47	Climate change and pollutant emissions impacts on air quality in 2050 over Portugal. Atmospheric Environment, 2016, 131, 209-224.	4.1	37
48	Seasonal patterns of Saharan dust over Cape Verde â€“ a combined approach using observations and modelling. Tellus, Series B: Chemical and Physical Meteorology, 2015, 67, 24410.	1.6	37
49	A comparative analysis of two highly spatially resolved European atmospheric emission inventories. Atmospheric Environment, 2013, 75, 43-57.	4.1	36
50	A cost-efficiency and health benefit approach to improve urban air quality. Science of the Total Environment, 2016, 569-570, 342-351.	8.0	35
51	Impact of forest biomass residues to the energy supply chain on regional air quality. Science of the Total Environment, 2015, 505, 640-648.	8.0	34
52	Meteorological driven changes on air quality over Portugal: a KZ filterÂapplication. Atmospheric Pollution Research, 2015, 6, 979-989.	3.8	33
53	Assessment of health benefits related to air quality improvement strategies in urban areas: An Impact Pathway Approach. Journal of Environmental Management, 2016, 183, 694-702.	7.8	33
54	Estimating emissions from tourism activities. Atmospheric Environment, 2020, 220, 117048.	4.1	33

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55	Influence of urban resilience measures in the magnitude and behaviour of energy fluxes in the city of Porto (Portugal) under a climate change scenario. Science of the Total Environment, 2016, 566-567, 1500-1510.	8.0	32
56	Impact of medical waste incineration in the atmospheric PCDD/F levels of Porto, Portugal. Science of the Total Environment, 2006, 362, 157-165.	8.0	28
57	Challenges for a New Air Quality Directive: The role of monitoring and modelling techniques. Urban Climate, 2015, 14, 328-341.	5.7	28
58	INTEGRATED MODELING OF ROAD TRAFFIC EMISSIONS: APPLICATION TO LISBON AIR QUALITY MANAGEMENT. Cybernetics and Systems, 2004, 35, 535-548.	2.5	27
59	Influence of Thermal Effects on the Wind Field Within the Urban Environment. Boundary-Layer Meteorology, 2009, 131, 223-243.	2.3	27
60	Bias Correction Techniques to Improve Air Quality Ensemble Predictions: Focus on O3 and PM Over Portugal. Environmental Modeling and Assessment, 2013, 18, 533-546.	2.2	27
61	Pedestrian Exposure to Air Pollution in Cities: Modeling the Effect of Roadside Trees. Advances in Meteorology, 2013, 2013, 1-7.	1.6	27
62	The impact of air quality on tourism: a systematic literature review. Journal of Tourism Futures, 2021, 7, 111-130.	3.9	27
63	Air pollution forecast in Portugal: a demand from the new air quality framework directive. International Journal of Environment and Pollution, 2005, 25, 4.	0.2	26
64	Forecasting human exposure to atmospheric pollutants in Portugal â€“ A modelling approach. Atmospheric Environment, 2009, 43, 5796-5806.	4.1	25
65	Trends in ozone concentrations in the Iberian Peninsula by quantile regression and clustering. Atmospheric Environment, 2012, 56, 184-193.	4.1	25
66	Effects of moisture content on wind erosion thresholds of biochar. Atmospheric Environment, 2015, 123, 121-128.	4.1	23
67	Assessing the importance of transportation activity data for urban emission inventories. Transportation Research, Part D: Transport and Environment, 2018, 62, 27-35.	6.8	22
68	Particulate Matter and Health Risk under a Changing Climate: Assessment for Portugal. Scientific World Journal, The, 2012, 2012, 1-10.	2.1	21
69	Air quality plan for ozone: an urgent need for North Portugal. Air Quality, Atmosphere and Health, 2016, 9, 447-460.	3.3	21
70	Pesticides in Esteros del Ibera (AR): evaluation of impacts and proposal of guidelines for water quality protection. Ecological Modelling, 2005, 186, 85-97.	2.5	20
71	EMISSION MODELLING OF HAZARDOUS AIR POLLUTANTS FROM ROAD TRANSPORT AT URBAN SCALE. Transport, 2012, 27, 299-306.	1.2	20
72	How economic crisis influence air quality over Portugal (Lisbon and Porto)?. Atmospheric Pollution Research, 2018, 9, 439-445.	3.8	20

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73	Influence of different complexity levels of road traffic models on air quality modelling at street scale. Air Quality, Atmosphere and Health, 2018, 11, 1217-1232.	3.3	20
74	Long-term monitoring of trace metals in PM10 and total gaseous mercury in the atmosphere of Porto, Portugal. Atmospheric Pollution Research, 2017, 8, 535-544.	3.8	19
75	Atmospheric impact assessment and monitoring of dioxin emissions of municipal solid waste incinerators in Portugal. Chemosphere, 1998, 37, 2119-2126.	8.2	18
76	Air quality assessment of Estarreja, an urban industrialized area, in a coastal region of Portugal. Environmental Monitoring and Assessment, 2013, 185, 5847-5860.	2.7	18
77	Long-time monitoring of polychlorinated dibenzo-p-dioxins and dibenzofurans over a decade in the ambient air of Porto, Portugal. Chemosphere, 2015, 137, 207-213.	8.2	18
78	Plans and programmes to improve air quality over Portugal: a numerical modelling approach. International Journal of Environment and Pollution, 2012, 48, 60.	0.2	17
79	Importance of handling organic atmospheric pollutants for assessing air quality. Journal of Chromatography A, 2000, 889, 271-279.	3.7	16
80	Numerical and physical assessment of control measures to mitigate fugitive dust emissions from harbor activities. Air Quality, Atmosphere and Health, 2018, 11, 493-504.	3.3	16
81	Lisbon air quality: evaluating traffic hot-spots. International Journal of Environment and Pollution, 2009, 39, 306.	0.2	15
82	Performance assessment of CHIMERE and EURAD-IMâ€™ dust modules. Atmospheric Pollution Research, 2019, 10, 1336-1346.	3.8	15
83	Air quality simulations for North America - MM5â€“CAMx modelling performance for main gaseous pollutants. Atmospheric Environment, 2012, 53, 212-224.	4.1	14
84	Air quality management in Portugal: example of needs and available tools. Environmental Pollution, 2002, 120, 115-123.	7.5	13
85	Reducing NO2 Pollution over Urban Areas: Air Quality Modelling as a Fundamental Management Tool. Water, Air, and Soil Pollution, 2012, 223, 5307-5320.	2.4	13
86	The ACCENT-protocol: a framework for benchmarking and model evaluation. Geoscientific Model Development, 2012, 5, 611-618.	3.6	12
87	Area burned in Portugal over recent decades: an extreme value analysis. International Journal of Wildland Fire, 2014, 23, 812.	2.4	12
88	Emissions from residential combustion sector: how to build a high spatially resolved inventory. Air Quality, Atmosphere and Health, 2018, 11, 259-270.	3.3	12
89	How healthy will be the air quality in 2050?. Air Quality, Atmosphere and Health, 2018, 11, 353-362.	3.3	12
90	Comparison of Methodologies for Assessing Desert Dust Contribution to Regional PM10 and PM2.5 Levels: A One-Year Study Over Portugal. Atmosphere, 2020, 11, 134.	2.3	12

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91	Local-scale modelling system to simulate smoke dispersion. International Journal of Wildland Fire, 2007, 16, 196.	2.4	12
92	Modelling the photochemical pollution over the metropolitan area of Porto Alegre, Brazil. Atmospheric Environment, 2010, 44, 370-380.	4.1	11
93	Ensemble Techniques to Improve Air Quality Assessment: Focus on O3 and PM. Environmental Modeling and Assessment, 2013, 18, 249-257.	2.2	11
94	Individual Exposure to Air Pollutants in a Portuguese Urban Industrialized Area. Journal of Toxicology and Environmental Health - Part A: Current Issues, 2014, 77, 888-899.	2.3	11
95	pollution and respiratory diseases: Perspectives from Angola, Brazil, Canada, Iran, Mozambique and Portugal. Pulmonology, 2022, 28, 376-395.	2.1	11
96	Application of SUEWS model forced with WRF: Energy fluxes validation in urban and suburban Portuguese areas. Urban Climate, 2020, 33, 100662.	5.7	10
97	Emission inventory for harbour-related activities: comparison of two distinct bottom-up methodologies. Air Quality, Atmosphere and Health, 2021, 14, 831-842.	3.3	10
98	Tourism and Air Quality during COVID-19 Pandemic: Lessons for the Future. Sustainability, 2021, 13, 3906.	3.2	10
99	Influence of Traffic Emissions Estimation Variability on Urban Air Quality Modelling. Water, Air and Soil Pollution, 2002, 2, 487-499.	0.8	9
100	Portuguese industry and the EU trade emissions directive: development and analysis of CO2 emission scenarios. Environmental Science and Policy, 2005, 8, 75-84.	4.9	9
101	Air quality impact due to scrap-metal handling on a sea port: A wind tunnel experiment. Atmospheric Environment, 2007, 41, 6396-6405.	4.1	9
102	The role of transboundary air pollution over Galicia and North Portugal area. Environmental Science and Pollution Research, 2013, 20, 2924-2936.	5.3	9
103	Annual and seasonal variability of greenhouse gases fluxes over coastal urban and suburban areas in Portugal: Measurements and source partitioning. Atmospheric Environment, 2020, 223, 117204.	4.1	9
104	Climate-Change Adaptation Framework for Multiple Urban Areas in Northern Portugal. Environmental Management, 2020, 66, 395-406.	2.7	9
105	Forest Fires Impact on Air Quality over Portugal. NATO Security Through Science Series C: Environmental Security, 2008, , 190-198.	0.1	9
106	Analysis of long-range transport of aerosols for Portugal using 3D chemical transport model and satellite measurements. Atmospheric Environment, 2013, 64, 229-241.	4.1	8
107	The EFFIS forest fire atmospheric emission model: Application to a major fire event in Portugal. Atmospheric Environment, 2014, 84, 355-362.	4.1	8
108	Assessing Douro Vineyards Exposure to Tropospheric Ozone. Atmosphere, 2021, 12, 200.	2.3	8

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109	Intercomparison of two meso-meteorological models applied to the Lisbon region. Meteorology and Atmospheric Physics, 1995, 57, 21-29.	2.0	7
110	Atmospheric baseline levels of PCDD and PCDF in the region of Oporto. Chemosphere, 2001, 43, 497-500.	8.2	7
111	A Gaussian puff model with optimal interpolation for air pollution modelling assessment. International Journal of Environment and Pollution, 2008, 35, 111.	0.2	6
112	Analysis of regional economic metabolism through modeling. Energy Reports, 2020, 6, 102-107.	5.1	6
113	Re-Naturing Cities: Evaluating the effects on future air quality in the city of Porto. Atmospheric Environment, 2020, 222, 117123.	4.1	5
114	Detailed modelling of the wind comfort in a city avenue at the pedestrian level. , 2012, , .		5
115	Air Quality Modelling Application to Evaluate Effects of PM Air Concentrations on Urban Population Exposure.. Epidemiology, 2006, 17, S252-S253.	2.7	5
116	Water, air and soil pollution problems in Portugal. Science of the Total Environment, 1993, 129, 55-70.	8.0	4
117	Urban Structure and Air Quality. , 2012, , .		4
118	Improving the design of an open auditorium: On the relationship between flow dynamics and building arrangement. Sustainable Cities and Society, 2021, 64, 102513.	10.4	4
119	The role of PM10in air quality and exposure in urban areas. , 2008, , .		4
120	Air quality modelling as a tool for sustainable urban traffic management. WIT Transactions on Ecology and the Environment, 2010, , .	0.0	4
121	Impact of urban planning alternatives on air quality: URBAIR model application. , 2011, , .		4
122	How can the built environment affect the impact of autonomous vehiclesâ€™ operational behaviour on air quality?. Journal of Environmental Management, 2022, 315, 115154.	7.8	4
123	Introduction of terrain roughness effects into a Gaussian dispersion model. Science of the Total Environment, 1990, 99, 153-161.	8.0	3
124	Air Quality Plans for the Northern Region of Portugal: Improving Particulate Matter and Coping with Legislation. , 0, , .		3
125	Children's exposure to traffic-related pollution: assessment of CO exposure in a typical school day. International Journal of Environment and Pollution, 2014, 55, 104.	0.2	3
126	Adaptation to Climate Change at Local Scale: A CFD Study in Porto Urban Area. , 2018, , .		3

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127	Spatial analysis of aerosol optical depth obtained by air quality modelling and SEVIRI satellite observations over Portugal. Atmospheric Pollution Research, 2019, 10, 234-243.	3.8	3
128	Tourism and Air Quality: Factors Influencing the Role of Air Quality in Visitors Travel Planning. Tourism Planning and Development, 2024, 21, 20-40.	2.2	3
129	Numerical modelling of 2003 summer forest fire impacts on air quality over Portugal. , 2010, , .		3
130	Modelling of tree-induced effects on pedestrian exposure to road traffic pollution. WIT Transactions on the Built Environment, 2012, , .	0.0	3
131	Children exposure to PM levels in a typical school morning. , 2012, , .		2
132	How does the use of biodiesel affect urban air quality?. International Journal of Environment and Pollution, 2015, 58, 79.	0.2	2
133	The air pollution modelling system URBAIR: how to use a Gaussian model to accomplish high spatial and temporal resolutions. Air Quality, Atmosphere and Health, 0, , 1.	3.3	2
134	RISK AND EMERGENCY MODELLING FOR ENVIRONMENTAL SECURITY: GENERAL ASPECTS. , 2007, , 1-13.		2
135	Climate Change and Fire Weather Risk. , 2001, , 555-565.		2
136	Air Pollution and Health Effects. , 2014, , 1-13.		2
137	Effects of road traffic scenarios on human exposure to air pollution. , 2009, , .		2
138	Numerical modelling of the impact of wildland-urban interface fires on Coimbra air quality. , 2008, , .		2
139	Modelling the exposure of firefighters to smoke based on measured data. WIT Transactions on Ecology and the Environment, 2012, , .	0.0	2
140	A modelling system for air quality management. International Journal of Environment and Pollution, 2000, 14, 607.	0.2	1
141	Recommendations for the spatial assessment of air quality resulting from the FP6 EU project Air4EU. International Journal of Environment and Pollution, 2011, 44, 128.	0.2	1
142	High-Resolution Analysis of Wind Flow Behavior on Ship Stacks Configuration: A Portuguese Case Study. Atmosphere, 2021, 12, 303.	2.3	1
143	Air Quality Modelling to Support Decision-Making: Scenario and Optimization Approaches. Springer Proceedings in Complexity, 2016, , 161-165.	0.3	1
144	Health impact assessment of exposure to inhalable particles in Lisbon Metropolitan Area. WIT Transactions on Biomedicine and Health, 2009, , .	0.0	1

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145	Air pollution and child respiratory diseases: the Viseu case study, Portugal. WIT Transactions on Ecology and the Environment, 2007, , .	0.0	1
146	An operational dropping model towards efficient aerial firefighting. , 2008, , .		1
147	Costs and externalities of road transport in Portugal. WIT Transactions on the Built Environment, 2010, , .	0.0	1
148	Monitoring fire-fightersâ€™ smoke exposure and related health effects during Gestosa experimental fires. , 2010, , .		1
149	A contribution to air quality management in urban industrialized areas. , 2012, , .		1
150	Worldwide Evaluation of CAMS-EGG4 CO2 Data Re-Analysis at the Surface Level. Toxics, 2022, 10, 331.	3.7	1
151	Simulation of the plume emitted by a municipal waste incinerator in Madeira Island. International Journal of Environment and Pollution, 2005, 24, 218.	0.2	0
152	Chapter 5.6 Long-term aerosol simulation for Portugal using the CHIMERE model. Developments in Environmental Science, 2007, , 534-547.	0.5	0
153	Linking Urban Structure and Air Quality. , 2008, , .		0
154	Particulate Matter and Exposure Modelling in Europe. Handbook of Environmental Chemistry, 2012, , 259-273.	0.4	0
155	Case Studies: Modeling the Atmospheric Benefits of Urban Greening. Future City, 2017, , 89-99.	0.5	0
156	Modelling of Regional Economic Metabolism. Climate, 2020, 8, 52.	2.8	0
157	National emissions ceilings for 2005 and 2010 and their impact on Portuguese air quality. WIT Transactions on Ecology and the Environment, 2006, , .	0.0	0
158	Application of TAPM to predict photochemical air pollution over Portugal. WIT Transactions on Ecology and the Environment, 2007, , .	0.0	0
159	Photochemical Air Pollution Modeling. , 2009, , 269-285.		0
160	High Ozone Levels in a Rural Mountainous Area: Where Does It Come from?. NATO Science for Peace and Security Series C: Environmental Security, 2011, , 161-167.	0.2	0
161	Merging the Gap Between Meso and Micro Scales: Enhanced Inflow Boundary Conditions for CFD Modeling of Urban Air Quality. NATO Science for Peace and Security Series C: Environmental Security, 2014, , 637-641.	0.2	0
162	Air Quality Modelling and Its Applications. , 2014, , 45-56.		0

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163	Modelling the Effects of Urban Morphology, Traffic and Pedestrian Dynamics on Studentsâ€™ Exposure to Air Pollution. Springer Proceedings in Complexity, 2014, , 355-360.	0.3	0
164	Reducing Emissions of Atmospheric Pollutants. , 2014, , 469-478.		0
165	Introduction of a Forest Fire Effect in a Mesoscale Dispersion Model. , 1998, , 419-428.		0
166	Estimation of the Modelling Uncertainty Related with Stochastic Processes. NATO Security Through Science Series C: Environmental Security, 2008, , 461-469.	0.1	0