

Jose M Baldasano

List of Publications by Year in descending order

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118
papers

6,666
citations

50276

46
h-index

74163

75
g-index

123
all docs

123
docs citations

123
times ranked

7363
citing authors

#	ARTICLE	IF	CITATIONS
1	EC-Earth. Bulletin of the American Meteorological Society, 2010, 91, 1357-1364.	3.3	474
2	COVID-19 lockdown effects on air quality by NO ₂ in the cities of Barcelona and Madrid (Spain). Science of the Total Environment, 2020, 741, 140353.	8.0	318
3	Interactive dust-radiation modeling: A step to improve weather forecasts. Journal of Geophysical Research, 2006, 111, .	3.3	286
4	Online coupled regional meteorology chemistry models in Europe: current status and prospects. Atmospheric Chemistry and Physics, 2014, 14, 317-398.	4.9	271
5	Air quality data from large cities. Science of the Total Environment, 2003, 307, 141-165.	8.0	227
6	Aerosol characterization in Northern Africa, Northeastern Atlantic, Mediterranean Basin and Middle East from direct-sun AERONET observations. Atmospheric Chemistry and Physics, 2009, 9, 8265-8282.	4.9	199
7	Atmospheric dust modeling from meso to global scales with the online NMMB/BSC-Dust model " Part 1: Model description, annual simulations and evaluation. Atmospheric Chemistry and Physics, 2011, 11, 13001-13027.	4.9	198
8	Mixed-Layer Depth Determination in the Barcelona Coastal Area From Regular Lidar Measurements: Methods, Results and Limitations. Boundary-Layer Meteorology, 2006, 119, 135-157.	2.3	132
9	Sensitivity of boundary-layer variables to PBL schemes in the WRF model based on surface meteorological observations, lidar, and radiosondes during the HygrA-CD campaign. Atmospheric Research, 2016, 176-177, 185-201.	4.1	127
10	Optimizing CALIPSO Saharan dust retrievals. Atmospheric Chemistry and Physics, 2013, 13, 12089-12106.	4.9	120
11	Soil Dust Aerosols and Wind as Predictors of Seasonal Meningitis Incidence in Niger. Environmental Health Perspectives, 2014, 122, 679-686.	6.0	111
12	Presentation of the EURODELTA III intercomparison exercise " evaluation of the chemistry transport models' performance on criteria pollutants and joint analysis with meteorology. Atmospheric Chemistry and Physics, 2016, 16, 12667-12701.	4.9	109
13	Summertime re-circulations of air pollutants over the north-eastern Iberian coast observed from systematic EARLINET lidar measurements in Barcelona. Atmospheric Environment, 2004, 38, 3983-4000.	4.1	98
14	The association of air pollution and greenness with mortality and life expectancy in Spain: A small-area study. Environment International, 2017, 99, 170-176.	10.0	96
15	Life cycle assessment of two biowaste management systems for Barcelona, Spain. Resources, Conservation and Recycling, 2006, 49, 32-48.	10.8	93
16	A comprehensive assessment of PM emissions from paved roads: Real-world Emission Factors and intense street cleaning trials. Science of the Total Environment, 2010, 408, 4309-4318.	8.0	92
17	Atmospheric dust modeling from meso to global scales with the online NMMB/BSC-Dust model " Part 2: Experimental campaigns in Northern Africa. Atmospheric Chemistry and Physics, 2012, 12, 2933-2958.	4.9	87
18	Comparison of photochemical mechanisms for air quality modeling. Atmospheric Environment, 2003, 37, 4179-4194.	4.1	85

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19	Performance of European chemistry transport models as function of horizontal resolution. <i>Atmospheric Environment</i> , 2015, 112, 90-105.	4.1	85
20	Mediterranean intense desert dust outbreaks and their vertical structure based on remote sensing data. <i>Atmospheric Chemistry and Physics</i> , 2016, 16, 8609-8642.	4.9	85
21	An annual assessment of air quality with the CALIOPE modeling system over Spain. <i>Science of the Total Environment</i> , 2011, 409, 2163-2178.	8.0	82
22	Emission inventory for greenhouse gases in the City of Barcelona, 1987–1996. <i>Atmospheric Environment</i> , 1999, 33, 3765-3775.	4.1	81
23	Overview of current regional and local scale air quality modelling practices: Assessment and planning tools in the EU. <i>Environmental Science and Policy</i> , 2016, 65, 13-21.	4.9	81
24	Modeling the ozone weekend effect in very complex terrains: a case study in the Northeastern Iberian Peninsula. <i>Atmospheric Environment</i> , 2005, 39, 429-444.	4.1	79
25	The use of a modelling system as a tool for air quality management: Annual high-resolution simulations and evaluation. <i>Science of the Total Environment</i> , 2008, 390, 323-340.	8.0	77
26	Development towards a global operational aerosol consensus: basic climatological characteristics of the International Cooperative for Aerosol Prediction Multi-Model Ensemble (ICAP-MME). <i>Atmospheric Chemistry and Physics</i> , 2015, 15, 335-362.	4.9	76
27	The MACC-II 2007–2008 reanalysis: atmospheric dust evaluation and characterization over northern Africa and the Middle East. <i>Atmospheric Chemistry and Physics</i> , 2015, 15, 3991-4024.	4.9	76
28	A methodology for investigating dust model performance using synergistic EARLINET/AERONET dust concentration retrievals. <i>Atmospheric Measurement Techniques</i> , 2015, 8, 3577-3600.	3.1	76
29	Development of a high-resolution (1km ² –1km, 1h) emission model for Spain: The High-Selective Resolution Modelling Emission System (HERMES). <i>Atmospheric Environment</i> , 2008, 42, 7215-7233.	4.1	73
30	Saharan Dust Deposition May Affect Phytoplankton Growth in the Mediterranean Sea at Ecological Time Scales. <i>PLoS ONE</i> , 2014, 9, e110762.	2.5	71
31	Stabilization/solidification of MSW incineration residues from facilities with different air pollution control systems. Durability of matrices versus carbonation. <i>Waste Management</i> , 2001, 21, 313-323.	7.4	69
32	Modeling and evaluation of the global sea-salt aerosol distribution: sensitivity to size-resolved and sea-surface temperature dependent emission schemes. <i>Atmospheric Chemistry and Physics</i> , 2013, 13, 11735-11755.	4.9	69
33	Contribution of atmospheric processes affecting the dynamics of air pollution in South-Western Europe during a typical summertime photochemical episode. <i>Atmospheric Chemistry and Physics</i> , 2009, 9, 849-864.	4.9	68
34	Evaluation of MM5-EMICAT2000-CMAQ performance and sensitivity in complex terrain: High-resolution application to the northeastern Iberian Peninsula. <i>Atmospheric Environment</i> , 2006, 40, 5056-5072.	4.1	65
35	Seasonal variability of aerosol optical properties observed by means of a Raman lidar at an EARLINET site over Northeastern Spain. <i>Atmospheric Chemistry and Physics</i> , 2011, 11, 175-190.	4.9	65
36	Assessing sensitivity regimes of secondary inorganic aerosol formation in Europe with the CALIOPE-EU modeling system. <i>Atmospheric Environment</i> , 2012, 51, 146-164.	4.1	64

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37	Performance Evaluation of the Boundary-Layer Height from Lidar and the Weather Research and Forecasting Model at an Urban Coastal Site in the North-East Iberian Peninsula. <i>Boundary-Layer Meteorology</i> , 2015, 157, 265-292.	2.3	64
38	Aerosols in the CALIOPE air quality modelling system: evaluation and analysis of PM levels, optical depths and chemical composition over Europe. <i>Atmospheric Chemistry and Physics</i> , 2012, 12, 3363-3392.	4.9	63
39	Impact of WRF model PBL schemes on air quality simulations over Catalonia, Spain. <i>Science of the Total Environment</i> , 2016, 572, 98-113.	8.0	62
40	An improved system for modelling Spanish emissions: HERMESv2.0. <i>Atmospheric Environment</i> , 2013, 81, 209-221.	4.1	61
41	Urban Photochemical Pollution in the Iberian Peninsula: Lisbon and Barcelona Airsheds. <i>Journal of the Air and Waste Management Association</i> , 2003, 53, 347-359.	1.9	56
42	Multiscale modeling of air pollutants dynamics in the northwestern Mediterranean basin during a typical summertime episode. <i>Journal of Geophysical Research</i> , 2006, 111, .	3.3	54
43	EARLINET dust observations vs. BSC-DREAM8b modeled profiles: 12-year-long systematic comparison at Potenza, Italy. <i>Atmospheric Chemistry and Physics</i> , 2014, 14, 8781-8793.	4.9	53
44	Influence of the PBL scheme on high-resolution photochemical simulations in an urban coastal area over the Western Mediterranean. <i>Atmospheric Environment</i> , 2006, 40, 5274-5297.	4.1	52
45	Estimating the biogenic emissions of non-methane volatile organic compounds from the North Western Mediterranean vegetation of Catalonia, Spain. <i>Science of the Total Environment</i> , 2004, 329, 241-259.	8.0	51
46	Ozone response to precursor controls in very complex terrains: Use of photochemical indicators to assess O ₃ -NO _x -VOC sensitivity in the northeastern Iberian Peninsula. <i>Journal of Geophysical Research</i> , 2004, 109, .	3.3	51
47	Optical characteristics of desert dust over the East Mediterranean during summer: a case study. <i>Annales Geophysicae</i> , 2006, 24, 807-821.	1.6	51
48	Air pollution impacts of speed limitation measures in large cities: The need for improving traffic data in a metropolitan area. <i>Atmospheric Environment</i> , 2010, 44, 2997-3006.	4.1	50
49	Effects of sources and meteorology on particulate matter in the Western Mediterranean Basin: An overview of the DAURE campaign. <i>Journal of Geophysical Research D: Atmospheres</i> , 2014, 119, 4978-5010.	3.3	49
50	Aerosol characterization at the Saharan AERONET site Tamanrasset. <i>Atmospheric Chemistry and Physics</i> , 2014, 14, 11753-11773.	4.9	48
51	Caliope: an operational air quality forecasting system for the Iberian Peninsula, Balearic Islands and Canary Islands – first annual evaluation and ongoing developments. <i>Advances in Science and Research</i> , 2008, 2, 89-98.	1.0	48
52	Influence of initial and boundary conditions for ozone modeling in very complex terrains: A case study in the northeastern Iberian Peninsula. <i>Environmental Modelling and Software</i> , 2007, 22, 1294-1306.	4.5	47
53	Near-surface and columnar measurements with a micro pulse lidar of atmospheric pollen in Barcelona, Spain. <i>Atmospheric Chemistry and Physics</i> , 2016, 16, 6805-6821.	4.9	47
54	Contribution of Saharan dust in an integrated air quality system and its online assessment. <i>Geophysical Research Letters</i> , 2008, 35, .	4.0	46

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55	Systematic lidar observations of Saharan dust layers over Athens, Greece in the frame of EARLINET project (2004–2006). <i>Annales Geophysicae</i> , 2009, 27, 3611-3620.	1.6	46
56	Circulatory Patterns of Air Pollutants within the Barcelona Air Basin in a Summertime situation: Lidar and Numerical Approaches. <i>Boundary-Layer Meteorology</i> , 2001, 98, 33-55.	2.3	41
57	Development of the high spatial resolution EMICAT2000 emission model for air pollutants from the north-eastern Iberian Peninsula (Catalonia, Spain). <i>Environmental Pollution</i> , 2006, 140, 200-219.	7.5	41
58	Implementation of resuspension from paved roads for the improvement of CALIOPE air quality system in Spain. <i>Atmospheric Environment</i> , 2011, 45, 802-807.	4.1	41
59	Aerosol radiative effects in the ultraviolet, visible, and near-infrared spectral ranges using long-term aerosol data series over the Iberian Peninsula. <i>Atmospheric Chemistry and Physics</i> , 2014, 14, 13497-13514.	4.9	41
60	Direct radiative effects during intense Mediterranean desert dust outbreaks. <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 8757-8787.	4.9	41
61	Large Scale Air Pollution Estimation Method Combining Land Use Regression and Chemical Transport Modeling in a Geostatistical Framework. <i>Environmental Science & Technology</i> , 2014, 48, 4452-4459.	10.0	39
62	EARLINET: potential operationality of a research network. <i>Atmospheric Measurement Techniques</i> , 2015, 8, 4587-4613.	3.1	39
63	Projections of temperature and precipitation extremes in the North Western Mediterranean Basin by dynamical downscaling of climate scenarios at high resolution (1971–2050). <i>Climatic Change</i> , 2014, 122, 567-582.	3.6	37
64	Seasonal patterns of Saharan dust over Cape Verde – a combined approach using observations and modelling. <i>Tellus, Series B: Chemical and Physical Meteorology</i> , 2015, 67, 24410.	1.6	37
65	Temporal patterns and trends of particulate matter over Portugal: a long-term analysis of background concentrations. <i>Air Quality, Atmosphere and Health</i> , 2018, 11, 397-407.	3.3	36
66	Ozone attributed to Madrid and Barcelona on-road transport emissions: Characterization of plume dynamics over the Iberian Peninsula. <i>Science of the Total Environment</i> , 2016, 543, 670-682.	8.0	35
67	Changes in particulate matter physical properties during Saharan advections over Rome (Italy): a four-year study, 2001–2004. <i>Atmospheric Chemistry and Physics</i> , 2013, 13, 7395-7404.	4.9	32
68	Forecasting the northern African dust outbreak towards Europe in April 2011: a model intercomparison. <i>Atmospheric Chemistry and Physics</i> , 2016, 16, 4967-4986.	4.9	32
69	An empirical equation to estimate mineral dust concentrations from visibility observations in Northern Africa. <i>Aeolian Research</i> , 2015, 16, 55-68.	2.7	31
70	High-resolution dust modelling over complex terrains in West Asia. <i>Aeolian Research</i> , 2016, 23, 37-50.	2.7	28
71	Operational Dust Prediction. , 2014, , 223-265.		28
72	Environmental performance review and cost analysis of MSW landfilling by baling-wrapping technology versus conventional system. <i>Waste Management</i> , 2003, 23, 795-806.	7.4	27

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73	Effect of High-Resolution Meteorological Forcing on Nearshore Wave and Current Model Performance. <i>Journal of Atmospheric and Oceanic Technology</i> , 2013, 30, 1021-1037.	1.3	27
74	Vertically Resolved Precipitation Intensity Retrieved through a Synergy between the Ground-Based NASA MPLNET Lidar Network Measurements, Surface Disdrometer Datasets and an Analytical Model Solution. <i>Remote Sensing</i> , 2018, 10, 1102.	4.0	27
75	Profiling of aerosol microphysical properties at several EARLINET/AERONET sites during the July 2012 ChArMEx/EMEP campaign. <i>Atmospheric Chemistry and Physics</i> , 2016, 16, 7043-7066.	4.9	26
76	Seasonal to yearly assessment of temperature and precipitation trends in the North Western Mediterranean Basin by dynamical downscaling of climate scenarios at high resolution (1971–2050). <i>Climatic Change</i> , 2014, 122, 243-256.	3.6	25
77	A model-based analysis of SO ₂ and NO ₂ dynamics from coal-fired power plants under representative synoptic circulation types over the Iberian Peninsula. <i>Science of the Total Environment</i> , 2016, 541, 701-713.	8.0	25
78	Circulation-type classification derived on a climatic basis to study air quality dynamics over the Iberian Peninsula. <i>International Journal of Climatology</i> , 2015, 35, 2877-2897.	3.5	24
79	Air quality forecasts on a kilometer-scale grid over complex Spanish terrains. <i>Geoscientific Model Development</i> , 2014, 7, 1979-1999.	3.6	22
80	Air quality models sensitivity to on-road traffic speed representation: Effects on air quality of 80 km h ⁻¹ speed limit in the Barcelona Metropolitan area. <i>Atmospheric Environment</i> , 2008, 42, 8389-8402.	4.1	21
81	Air quality plan for ozone: an urgent need for North Portugal. <i>Air Quality, Atmosphere and Health</i> , 2016, 9, 447-460.	3.3	21
82	2005–2017 ozone trends and potential benefits of local measures as deduced from air quality measurements in the north of the Barcelona metropolitan area. <i>Atmospheric Chemistry and Physics</i> , 2019, 19, 7445-7465.	4.9	21
83	Influence of high-model grid resolution on photochemical modelling in very complex terrains. <i>International Journal of Environment and Pollution</i> , 2005, 24, 180.	0.2	20
84	Inter-comparison between HERMESv2.0 and TNO-MACC-II emission data using the CALIOPE air quality system (Spain). <i>Atmospheric Environment</i> , 2014, 98, 134-145.	4.1	20
85	Integrated assessment of air pollution using observations and modelling in Santa Cruz de Tenerife (Canary Islands). <i>Science of the Total Environment</i> , 2014, 473-474, 576-588.	8.0	20
86	Comprehensive air quality planning for the Barcelona Metropolitan Area through traffic management. <i>Atmospheric Pollution Research</i> , 2011, 2, 255-266.	3.8	19
87	Emissions variation in urban areas resulting from the introduction of natural gas vehicles: Application to Barcelona and Madrid Greater Areas (Spain). <i>Science of the Total Environment</i> , 2009, 407, 3269-3281.	8.0	18
88	Comparison of two different sea-salt aerosol schemes as implemented in air quality models applied to the Mediterranean Basin. <i>Atmospheric Chemistry and Physics</i> , 2011, 11, 4833-4850.	4.9	18
89	Parallel software for retrieval of aerosol distribution from LIDAR data in the framework of EARLINET-ASOS. <i>Computer Physics Communications</i> , 2009, 180, 2095-2102.	7.5	17
90	Fuzzy approach to life cycle impact assessment. <i>International Journal of Life Cycle Assessment</i> , 2007, 12, 488-496.	4.7	15

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91	High resolution modeling of the effects of alternative fuels use on urban air quality: Introduction of natural gas vehicles in Barcelona and Madrid Greater Areas (Spain). <i>Science of the Total Environment</i> , 2009, 407, 776-790.	8.0	15
92	Modelling wind resources in climate change scenarios in complex terrains. <i>Renewable Energy</i> , 2015, 76, 670-678.	8.9	15
93	Implementation of plume rise and its impacts on emissions and air quality modelling. <i>Atmospheric Environment</i> , 2014, 99, 618-629.	4.1	14
94	Remote Sensing of Three-dimensional Winds with Elastic Lidar: Explanation of Maximum Cross-correlation Method. <i>Boundary-Layer Meteorology</i> , 2001, 101, 305-327.	2.3	12
95	Trends and patterns of air quality in Santa Cruz de Tenerife (Canary Islands) in the period 2011â€“2015. <i>Air Quality, Atmosphere and Health</i> , 2017, 10, 939-954.	3.3	12
96	Comparison of Methodologies for Assessing Desert Dust Contribution to Regional PM10 and PM2.5 Levels: A One-Year Study Over Portugal. <i>Atmosphere</i> , 2020, 11, 134.	2.3	12
97	Assessment of Kalman filter bias-adjustment technique to improve the simulation of ground-level ozone over Spain. <i>Science of the Total Environment</i> , 2012, 416, 329-342.	8.0	11
98	Evaluation of the CALIOPE air quality forecasting system for epidemiological research: The example of NO2 in the province of Girona (Spain). <i>Atmospheric Environment</i> , 2013, 72, 134-141.	4.1	11
99	Estimation of future emission scenarios for analysing the impact of traffic mobility on a large Mediterranean conurbation in the Barcelona Metropolitan Area (Spain). <i>Atmospheric Pollution Research</i> , 2013, 4, 22-32.	3.8	10
100	Determination of the mixing layer height from regular lidar measurements in the Barcelona area. , 2004, , .		9
101	EARLINET correlative measurements for CALIPSO. , 2007, , .		9
102	Estimation of atmospheric emissions from maritime activity in the Veracruz port, Mexico. <i>Journal of the Air and Waste Management Association</i> , 2021, 71, 934-948.	1.9	9
103	Atmospheric Emissions in Ports Due to Maritime Traffic in Mexico. <i>Journal of Marine Science and Engineering</i> , 2021, 9, 1186.	2.6	8
104	Review of Top-Down Method to Determine Atmospheric Emissions in Port. Case of Study: Port of Veracruz, Mexico. <i>Journal of Marine Science and Engineering</i> , 2022, 10, 96.	2.6	8
105	Relative humidity vertical profiling using lidar-based synergistic methods in the framework of the Hygra-CD campaign. <i>Annales Geophysicae</i> , 2018, 36, 213-229.	1.6	7
106	<title>Confirmation of a multilayer arrangement of aerosols in the Barcelona air basin using two independent lidar systems</title>. , 1998, , .		6
107	Control of Ozone Precursors in a Complex Industrial Terrain by Using Multiscale-Nested Air Quality Models with Fine Spatial Resolution (1 km2). <i>Journal of the Air and Waste Management Association</i> , 2005, 55, 1085-1099.	1.9	6
108	Linking the advanced research WRF meteorological model with the CHIMERE chemistry-transport model. <i>Environmental Modelling and Software</i> , 2008, 23, 1092-1094.	4.5	6

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109	Mapping air pollutants at municipality level in Italy and Spain in support to health impact evaluations. <i>Air Quality, Atmosphere and Health</i> , 2018, 11, 69-82.	3.3	5
110	Atmospheric dispersion of airborne pollen evidenced by near-surface and columnar measurements in Barcelona, Spain. , 2016, , .		4
111	Regional Circulations Within the Iberian Peninsula East Coast. , 2004, , 453-461.		4
112	On the Application of Meteorological Models and Lidar Techniques for Air Quality Studies at a Regional Scale. , 1998, , 591-600.		3
113	High resolution modelling results of the wind flow over Canary Islands during the meteorological situation of the extratropical storm Delta (28â€“30 November 2005). <i>Advances in Science and Research</i> , 2008, 2, 81-87.	1.0	3
114	Corrigendum to "Development towards a global operational aerosol consensus: basic climatological characteristics of the International Cooperative for Aerosol Prediction Multi-Model Ensemble (ICAP-MME)" published in <i>Atmos. Chem. Phys.</i> , 15, 335â€“362, 2015. <i>Atmospheric Chemistry and Physics</i> , 2015, 15, 2533-2534.	4.9	2
115	Modelling of pollen dispersion in the atmosphere: evaluation with a continuous $1\hat{1}^2+1\hat{1}$ lidar. <i>EPJ Web of Conferences</i> , 2018, 176, 05006.	0.3	2
116	Planet Boundary Layer Parameterization in Weather Research and Forecasting (WRFv3.5): Assessment of Performance in High Spatial Resolution Simulations in Complex Topography of Mexico. <i>Computacion Y Sistemas</i> , 2017, 21, .	0.3	2
117	First Forecasts of Airborne Platanus and Pinus Pollen in Catalonia, NE Spain: Use of a Ground-Based Lidar to Estimate the Model Score. , 2018, , .		0
118	Assessing Sensitivity Regimes of Secondary Inorganic Aerosol Formation in Europe with the CALIOPE-EU Modelling System. <i>NATO Science for Peace and Security Series C: Environmental Security</i> , 2014, , 523-527.	0.2	0