Oriol Jorba

List of Publications by Year
in descending order

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79 papers	3,699 citations	94433 37 h-index	149698 56 g-index
132 all docs	132 docs citations	132 times ranked	4129 citing authors

#	Article	IF	Citations
1	Online coupled regional meteorology chemistry models in Europe: current status and prospects. Atmospheric Chemistry and Physics, 2014, 14, 317-398.	4.9	271
2	Atmospheric dust modeling from meso to global scales with the online NMMB/BSC-Dust model â€“ Part 1: Model description, annual simulations and evaluation. Atmospheric Chemistry and Physics, 2011, 11, 13001-13027.	4.9	198
3	Evaluation of operational on-line-coupled regional air quality models over Europe and North America in the context of AQMEII phase 2. Part I: Ozone. Atmospheric Environment, 2015, 115, 404-420.	4.1	168
4	Cluster Analysis of 4-Day Back Trajectories Arriving in the Barcelona Area, Spain, from 1997 to 2002. Journal of Applied Meteorology and Climatology, 2004, 43, 887-901.	1.7	139
5	Evaluation of operational online-coupled regional air quality models over Europe and North America in the context of AQMEII phase 2. Part II: Particulate matter. Atmospheric Environment, 2015, 115, 421-441.	4.1	133
6	Meteorology-normalized impact of the COVID-19 lockdown upon NO₂ pollution in Spain. Atmospheric Chemistry and Physics, 2020, 20, 11119-11141.	4.9	107
7	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
8	Using NOAA AVHRR and SPOT VGT data to estimate surface parameters: application to a mesoscale meteorological model. International Journal of Remote Sensing, 2004, 25, 129-143.	2.9	90
9	Atmospheric dust modeling from meso to global scales with the online NMMB/BSC-Dust model â€“ Part 2: Experimental campaigns in Northern Africa. Atmospheric Chemistry and Physics, 2012, 12, 2933-2958.	4.9	87
10	Comparative analysis of meteorological performance of coupled chemistry-meteorology models in the context of AQMEII phase 2. Atmospheric Environment, 2015, 115, 470-498.	4.1	85
11	Mediterranean intense desert dust outbreaks and their vertical structure based on remote sensing data. Atmospheric Chemistry and Physics, 2016, 16, 8609-8642.	4.9	85
12	Time-resolved emission reductions for atmospheric chemistry modelling in Europe during the COVID-19 lockdowns. Atmospheric Chemistry and Physics, 2021, 21, 773-797.	4.9	84
13	An annual assessment of air quality with the CALIOPE modeling system over Spain. Science of the Total Environment, 2011, 409, 2163-2178.	8.0	82
14	Lessons from the COVID-19 air pollution decrease in Spain: Now what?. Science of the Total Environment, 2021, 779, 146380.	8.0	80
15	The use of a modelling system as a tool for air quality management: Annual high-resolution simulations and evaluation. Science of the Total Environment, 2008, 390, 323-340.	8.0	77
16	Development towards a global operational aerosol consensus: basic climatological characteristics of the International Cooperative for Aerosol Prediction Multi-Model Ensemble (ICAP-MME). Atmospheric Chemistry and Physics, 2015, 15, 335-362.	4.9	76
17	A full year evaluation of the CALIOPE-EU air quality modeling system over Europe for 2004. Atmospheric Environment, 2010, 44, 3322-3342.	4.1	72
18	Modeling and evaluation of the global sea-salt aerosol distribution: sensitivity to size-resolved and sea-surface temperature dependent emission schemes. Atmospheric Chemistry and Physics, 2013, 13, 11735-11755.	4.9	69

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19	Current state of the global operational aerosol multiâ€model ensemble: An update from the International Cooperative for Aerosol Prediction (ICAP). Quarterly Journal of the Royal Meteorological Society, 2019, 145, 176-209.	2.7	66
20	Evaluation of MM5-EMICAT2000-CMAQ performance and sensitivity in complex terrain: High-resolution application to the northeastern Iberian Peninsula. Atmospheric Environment, 2006, 40, 5056-5072.	4.1	65
21	Status and future of numerical atmospheric aerosol prediction with a focus on data requirements. Atmospheric Chemistry and Physics, 2018, 18, 10615-10643.	4.9	64
22	Aerosols in the CALIOPE air quality modelling system: evaluation and analysis of PM levels, optical depths and chemical composition over Europe. Atmospheric Chemistry and Physics, 2012, 12, 3363-3392.	4.9	63
23	Spatio-temporal variability of concentrations and speciation of particulate matter across Spain in the CALIOPE modeling system. Atmospheric Environment, 2012, 46, 376-396.	4.1	59
24	Assessment of the MACC reanalysis and its influence as chemical boundary conditions for regional air quality modeling in AQMEII-2. Atmospheric Environment, 2015, 115, 371-388.	4.1	59
25	Estimating lockdown-induced European NO₂ changes using satellite and surface observations and air quality models. Atmospheric Chemistry and Physics, 2021, 21, 7373-7394.	4.9	55
26	Influence of the PBL scheme on high-resolution photochemical simulations in an urban coastal area over the Western Mediterranean. Atmospheric Environment, 2006, 40, 5274-5297.	4.1	52
27	Volcanic ash forecast â€“ application to the May 2008 ChaitÃ©n eruption. Natural Hazards and Earth System Sciences, 2008, 8, 927-940.	3.6	52
28	Effects of sources and meteorology on particulate matter in the Western Mediterranean Basin: An overview of the DAURE campaign. Journal of Geophysical Research D: Atmospheres, 2014, 119, 4978-5010.	3.3	49
29	Modeled deposition of nitrogen and sulfur in Europe estimated by 14 air quality model systems: evaluation, effects of changes in emissions and implications for habitat protection. Atmospheric Chemistry and Physics, 2018, 18, 10199-10218.	4.9	47
30	Contribution of Saharan dust in an integrated air quality system and its onâ€line assessment. Geophysical Research Letters, 2008, 35, .	4.0	46
31	Ozone source apportionment during peak summer events over southwestern Europe. Atmospheric Chemistry and Physics, 2019, 19, 5467-5494.	4.9	45
32	A Review of Element-Based Galerkin Methods for Numerical Weather Prediction: Finite Elements, Spectral Elements, and Discontinuous Galerkin. Archives of Computational Methods in Engineering, 2016, 23, 673-722.	10.2	44
33	Assimilation of MODIS Dark Target and Deep Blue observations in the dust aerosol component of NMMB-MONARCH version 1.0. Geoscientific Model Development, 2017, 10, 1107-1129.	3.6	44
34	Profiling of Saharan dust from the Caribbean to western Africa â€“ PartÂ2: Shipborne lidar measurements versus forecasts. Atmospheric Chemistry and Physics, 2017, 17, 14987-15006.	4.9	43
35	Potential significance of photoexcited NO₂ on global air quality with the NMMB/BSC chemical transport model. Journal of Geophysical Research, 2012, 117, .	3.3	42
36	Impact of HONO sources on the performance of mesoscale air quality models. Atmospheric Environment, 2012, 54, 168-176.	4.1	41

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37	Description and evaluation of the Multiscale Online Nonhydrostatic AtmospheRe CHemistry model (NMMB-MONARCH) version 1.0: gas-phase chemistry at global scale. Geoscientific Model Development, 2017, 10, 609-638.	3.6	41
38	Direct radiative effects during intense Mediterranean desert dust outbreaks. Atmospheric Chemistry and Physics, 2018, 18, 8757-8787.	4.9	41
39	Copernicus Atmosphere Monitoring Service TEMPOral profiles (CAMS-TEMPO): global and European emission temporal profile maps for atmospheric chemistry modelling. Earth System Science Data, 2021, 13, 367-404.	9.9	41
40	High Resolution Simulation of the Variability of Surface Energy Balance Fluxes Across Central London with Urban Zones for Energy Partitioning. Boundary-Layer Meteorology, 2013, 147, 493-523.	2.3	37
41	Mineral dust cycle in the Multiscale Online Nonhydrostatic AtmospheRe CHemistry model (MONARCH) Version 2.0. Geoscientific Model Development, 2021, 14, 6403-6444.	3.6	35
42	HERMESv3, a stand-alone multi-scale atmospheric emission modelling framework â€“ Part 2: The bottomâ€“up module. Geoscientific Model Development, 2020, 13, 873-903.	3.6	32
43	HERMESv3, a stand-alone multi-scale atmospheric emission modelling framework â€“ Part 1: global and regional module. Geoscientific Model Development, 2019, 12, 1885-1907.	3.6	31
44	A coupled macroscopic traffic and pollutant emission modelling system for Barcelona. Transportation Research, Part D: Transport and Environment, 2021, 92, 102725.	6.8	30
45	CALIOPE-Urban v1.0: coupling R-LINE with a mesoscale air quality modelling system for urban air quality forecasts over Barcelona city (Spain). Geoscientific Model Development, 2019, 12, 2811-2835.	3.6	28
46	Effect of High-Resolution Meteorological Forcing on Nearshore Wave and Current Model Performance. Journal of Atmospheric and Oceanic Technology, 2013, 30, 1021-1037.	1.3	27
47	To what extent the traffic restriction policies applied in Barcelona city can improve its air quality?. Science of the Total Environment, 2022, 807, 150743.	8.0	27
48	A variational multiscale stabilized finite element method for the solution of the Euler equations of nonhydrostatic stratified flows. Journal of Computational Physics, 2013, 236, 380-407.	3.8	23
49	Insights into the deterministic skill of air quality ensembles from the analysis of AQMEII data. Atmospheric Chemistry and Physics, 2016, 16, 15629-15652.	4.9	23
50	Influence of high-model grid resolution on photochemical modelling in very complex terrains. International Journal of Environment and Pollution, 2005, 24, 180.	0.2	20
51	Impact of chemical and meteorological boundary and initial conditions on air quality modeling: WRF-Chem sensitivity evaluation for a European domain. Meteorology and Atmospheric Physics, 2013, 119, 59-70.	2.0	20
52	Overview of the meteorology and transport patterns during the DAURE field campaign and their impact to PM observations. Atmospheric Environment, 2013, 77, 607-620.	4.1	20
53	On the evaluation of global sea-salt aerosol models at coastal/orographic sites. Atmospheric Environment, 2015, 101, 41-48.	4.1	20
54	Differential impact of government lockdown policies on reducing air pollution levels and related mortality in Europe. Scientific Reports, 2022, 12, 726.	3.3	20

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55	Comparison of two different sea-salt aerosol schemes as implemented in air quality models applied to the Mediterranean Basin. Atmospheric Chemistry and Physics, 2011, 11, 4833-4850.	4.9	18
56	Gas-phase evaluation of the online NMMB/BSC-CTM model over Europe for 2010 in the framework of the AQMEII-Phase2 project. Atmospheric Environment, 2015, 115, 657-669.	4.1	18
57	Simulations of moist convection by a variational multiscale stabilized finite element method. Journal of Computational Physics, 2013, 252, 195-218.	3.8	17
58	Volcanic ash modeling with the online NMMB-MONARCH-ASH v1.0 model: model description, case simulation, and evaluation. Atmospheric Chemistry and Physics, 2017, 17, 4005-4030.	4.9	16
59	Aerosol-radiation interaction in atmospheric models: Idealized sensitivity study of simulated short-wave direct radiative effects to particle microphysical properties. Journal of Aerosol Science, 2018, 115, 46-61.	3.8	16
60	On the impact of excess diesel NO_X emissions upon NO₂ pollution in a compact city. Environmental Research Letters, 2021, 16, 024024.	5.2	16
61	European primary emissions of criteria pollutants and greenhouse gases in 2020 modulated by the COVID-19 pandemic disruptions. Earth System Science Data, 2022, 14, 2521-2552.	9.9	15
62	Assessment of Kalman filter bias-adjustment technique to improve the simulation of ground-level ozone over Spain. Science of the Total Environment, 2012, 416, 329-342.	8.0	11
63	Impact of aerosol microphysical properties on mass scattering cross sections. Journal of Aerosol Science, 2017, 112, 68-82.	3.8	10
64	Measurement report: Characterization of the vertical distribution of airborne <i>Pinus</i> pollen in the atmosphere with lidar-derived profiles â€“ a modeling case study in the region of Barcelona, NE Spain. Atmospheric Chemistry and Physics, 2021, 21, 17807-17832.	4.9	10
65	Linking the advanced research WRF meteorological model with the CHIMERE chemistry-transport model. Environmental Modelling and Software, 2008, 23, 1092-1094.	4.5	6
66	Compliance with 2021 WHO air quality guidelines across Europe will require radical measures. Environmental Research Letters, 2022, 17, 021002.	5.2	5
67	Assimilating spaceborne lidar dust extinction can improve dust forecasts. Atmospheric Chemistry and Physics, 2022, 22, 535-560.	4.9	5
68	The MONARCH high-resolution reanalysis of desert dust aerosol over Northern Africa, the Middle East and Europe (2007â€“2016). Earth System Science Data, 2022, 14, 2785-2816.	9.9	5
69	Atmospheric dispersion of airborne pollen evidenced by near-surface and columnar measurements in Barcelona, Spain. , 2016, , .		4
70	Regional Circulations Within the Iberian Peninsula East Coast. , 2004, , 453-461.		4
71	High resolution modelling results of the wind flow over Canary Islands during the meteorological situation of the extratropical storm Delta (28â€“30 November 2005). Advances in Science and Research, 2008, 2, 81-87.	1.0	3
72	Chemistry Across Multiple Phases (CAMP) version 1.0: an integrated multiphase chemistry model. Geoscientific Model Development, 2022, 15, 3663-3689.	3.6	3

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73	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 Atmos. Chem. Phys., 15, 335â€“362, 2015. Atmospheric Chemistry and Physics, 2015, 15, 2533-2534.	4.9	2
74	Modelling of pollen dispersion in the atmosphere: evaluation with a continuous 1Î²+1Î´ lidar. EPJ Web of Conferences, 2018, 176, 05006.	0.3	2
75	Corrigendum to "Modeling and evaluation of the global sea-salt aerosol distribution: sensitivity to size-resolved and sea-surface temperature dependent emission schemes" published in Atmos. Chem. Phys., 13, 11735â€“11755, 2013. Atmospheric Chemistry and Physics, 2013, 13, 11985-11985.	4.9	1
76	Performance analysis of an online atmospheric-chemistry global model with Paraver: Identification of scaling limitations. , 2014, , .		1
77	Modelling of airborne pollen dispersion in the atmosphere in the Catalonia region, Spain: model description, emission scheme and evaluation of model performance for the case of Pinus. , 2019, , .		1
78	Chapter 4.8 Modelling the dynamics of air pollutants over the Iberian Peninsula under typical meteorological situations. Developments in Environmental Science, 2007, 6, 425-436.	0.5	0
79	Multiscale Air Quality with the NMMB/BSC Chemical Transport Model. NATO Science for Peace and Security Series C: Environmental Security, 2014, , 315-320.	0.2	0