Holger Tost

List of Publications by Year in descending order

59 papers	5,740 citations	159358 30 h-index	138251 58 g-index
116 all docs	116 docs citations	116 times ranked	5119 citing authors

#	Article	IF	Citations
1	The atmospheric chemistry general circulation model ECHAM5/MESSy1: consistent simulation of ozone from the surface to the mesosphere. Atmospheric Chemistry and Physics, 2006, 6, 5067-5104.	1.9	528
2	Development cycle 2 of the Modular Earth Submodel System (MESSy2). Geoscientific Model Development, 2010, 3, 717-752.	1.3	398
3	The AeroCom evaluation and intercomparison of organic aerosol in global models. Atmospheric Chemistry and Physics, 2014, 14, 10845-10895.	1.9	363
4	Bacteria in the global atmosphere â€“ Part 2: Modeling of emissions and transport between different ecosystems. Atmospheric Chemistry and Physics, 2009, 9, 9281-9297.	1.9	284
5	Technical Note: The Modular Earth Submodel System (MESSy) - a new approach towards Earth System Modeling. Atmospheric Chemistry and Physics, 2005, 5, 433-444.	1.9	282
6	Technical note: A new comprehensive SCAVenging submodel for global atmospheric chemistry modelling. Atmospheric Chemistry and Physics, 2006, 6, 565-574.	1.9	265
7	Global distribution of the effective aerosol hygroscopicity parameter for CCN activation. Atmospheric Chemistry and Physics, 2010, 10, 5241-5255.	1.9	230
8	Technical Note: An implementation of the dry removal processes DRY DEPosition and SEDImentation in the Modular Earth Submodel System (MESSy). Atmospheric Chemistry and Physics, 2006, 6, 4617-4632.	1.9	216
9	Earth System Chemistry integrated Modelling (ESCiMo) with the Modular Earth Submodel System (MESSy) versionÂ2.51. Geoscientific Model Development, 2016, 9, 1153-1200.	1.3	208
10	Technical note: Implementation of prescribed (OFFLEM), calculated (ONLEM), and pseudo-emissions (TNUDGE) of chemical species in the Modular Earth Submodel System (MESSy). Atmospheric Chemistry and Physics, 2006, 6, 3603-3609.	1.9	198
11	Description and evaluation of GMXe: a new aerosol submodel for global simulations (v1). Geoscientific Model Development, 2010, 3, 391-412.	1.3	178
12	The role of carbonyl sulphide as a source of stratospheric sulphate aerosol and its impact on climate. Atmospheric Chemistry and Physics, 2012, 12, 1239-1253.	1.9	178
13	The Palaeoanthropocene â€“ The beginnings of anthropogenic environmental change. Anthropocene, 2013, 3, 83-88.	1.6	178
14	Lightning and convection parameterisations â€“ uncertainties in global modelling. Atmospheric Chemistry and Physics, 2007, 7, 4553-4568.	1.9	163
15	The atmospheric chemistry box model CAABA/MECCA-3.0. Geoscientific Model Development, 2011, 4, 373-380.	1.3	161
16	Intercomparison and evaluation of global aerosol microphysical properties among AeroCom models of a range of complexity. Atmospheric Chemistry and Physics, 2014, 14, 4679-4713.	1.9	148
17	Influence of different convection parameterisations in a GCM. Atmospheric Chemistry and Physics, 2006, 6, 5475-5493.	1.9	139
18	Distributions and regional budgets of aerosols and their precursors simulated with the EMAC chemistry-climate model. Atmospheric Chemistry and Physics, 2012, 12, 961-987.	1.9	130

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19	AOD trends during 2001â€“2010 from observations and model simulations. Atmospheric Chemistry and Physics, 2015, 15, 5521-5535.	1.9	123
20	Uncertainties in atmospheric chemistry modelling due to convection parameterisations and subsequent scavenging. Atmospheric Chemistry and Physics, 2010, 10, 1931-1951.	1.9	113
21	Stratospheric dryness: model simulations and satellite observations. Atmospheric Chemistry and Physics, 2007, 7, 1313-1332.	1.9	109
22	Global cloud and precipitation chemistry and wet deposition: tropospheric model simulations with ECHAM5/MESSy1. Atmospheric Chemistry and Physics, 2007, 7, 2733-2757.	1.9	104
23	Simulating organic species with the global atmospheric chemistry general circulation model ECHAM5/MESSy1: a comparison of model results with observations. Atmospheric Chemistry and Physics, 2007, 7, 2527-2550.	1.9	95
24	Effects of business-as-usual anthropogenic emissions on air quality. Atmospheric Chemistry and Physics, 2012, 12, 6915-6937.	1.9	76
25	Evaluation of observed and modelled aerosol lifetimes using radioactive tracers of opportunity and an ensemble of 19 global models. Atmospheric Chemistry and Physics, 2016, 16, 3525-3561.	1.9	75
26	Technical Note: Coupling of chemical processes with the Modular Earth Submodel System (MESSy) submodel TRACER. Atmospheric Chemistry and Physics, 2008, 8, 1677-1687.	1.9	65
27	Stratospheric sulfur and its implications for radiative forcing simulated by the chemistry climate model EMAC. Journal of Geophysical Research D: Atmospheres, 2015, 120, 2103-2118.	1.2	59
28	Distribution of hydrogen peroxide and formaldehyde over Central Europe during the HOOVER project. Atmospheric Chemistry and Physics, 2011, 11, 4391-4410.	1.9	55
29	A new radiation infrastructure for the Modular Earth Submodel System (MESSy, based on version) Tj ETQq1 1 0.784314 rgBT /Overlock	1.3	51
30	EMAC model evaluation and analysis of atmospheric aerosol properties and distribution with a focus on the Mediterranean region. Atmospheric Research, 2012, 114-115, 38-69.	1.8	48
31	Technical Note: Simulation of detailed aerosol chemistry on the global scale using MECCA-AERO. Atmospheric Chemistry and Physics, 2007, 7, 2973-2985.	1.9	37
32	Sensitivity of aerosol radiative effects to different mixing assumptions in the AEROPT 1.0 submodel of the EMAC atmospheric-chemistryâ€“climate model. Geoscientific Model Development, 2014, 7, 2503-2516.	1.3	35
33	Impact of mineral dust on cloud formation in a Saharan outflow region. Atmospheric Chemistry and Physics, 2012, 12, 11383-11393.	1.9	34
34	Global and regional impacts of HONO on the chemical composition of clouds and aerosols. Atmospheric Chemistry and Physics, 2014, 14, 1167-1184.	1.9	32
35	Sensitivity of transatlantic dust transport to chemical aging and related atmospheric processes. Atmospheric Chemistry and Physics, 2017, 17, 3799-3821.	1.9	31
36	Consistent simulation of bromine chemistry from the marine boundary layer to the stratosphere â€“ Part 1: Model description, sea salt aerosols and pH. Atmospheric Chemistry and Physics, 2008, 8, 5899-5917.	1.9	30

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37	Modeling the aerosol chemical composition of the tropopause over the Tibetan Plateau during the Asian summer monsoon. Atmospheric Chemistry and Physics, 2019, 19, 11587-11612.	1.9	24
38	A machine learning examination of hydroxyl radical differences among model simulations for CCMI-1. Atmospheric Chemistry and Physics, 2020, 20, 1341-1361.	1.9	24
39	Urban emission hot spots as sources for remote aerosol deposition. Geophysical Research Letters, 2012, 39, .	1.5	23
40	Urban Trees and Their Impact on Local Ozone Concentrationâ€”A Microclimate Modeling Study. Atmosphere, 2019, 10, 154.	1.0	23
41	Uncertainties in future climate predictions due to convection parameterisations. Atmospheric Chemistry and Physics, 2014, 14, 5561-5576.	1.9	21
42	Chemistryâ€“climate interactions of aerosol nitrate from lightning. Atmospheric Chemistry and Physics, 2017, 17, 1125-1142.	1.9	20
43	A multi-model assessment of the impact of sea spray geoengineering on cloud droplet number. Atmospheric Chemistry and Physics, 2012, 12, 11647-11663.	1.9	19
44	Global aerosol modeling with MADE3 (v3.0) in EMAC (based on v2.53): model description and evaluation. Geoscientific Model Development, 2019, 12, 541-579.	1.3	17
45	Improvements of organic aerosol representations and their effects in large-scale atmospheric models. Atmospheric Chemistry and Physics, 2012, 12, 8687-8709.	1.9	16
46	The 1-way on-line coupled model system MECO(n) â€“ PartÂ4: Chemical evaluation (based on MESSyÂv2.52). Geoscientific Model Development, 2016, 9, 3545-3567.	1.3	14
47	Simulation of organics in the atmosphere: evaluation of EMACv2.54 with the Mainz Organic Mechanism (MOM) coupled to the ORACLE (v1.0) submodel. Geoscientific Model Development, 2022, 15, 2673-2710.	1.3	13
48	Implementation of a comprehensive ice crystal formation parameterization for cirrus and mixed-phase clouds in the EMAC model (based on MESSy 2.53). Geoscientific Model Development, 2018, 11, 4021-4041.	1.3	12
49	Including vegetation dynamics in an atmospheric chemistry-enabled general circulation model: linking LPJ-GUESS (v4.0) with the EMAC modelling system (v2.53). Geoscientific Model Development, 2020, 13, 1285-1309.	1.3	12
50	Implementation of the Community Earth System Model (CESM) version 1.2.1 as a new base model into version 2.50 of the MESSy framework. Geoscientific Model Development, 2016, 9, 125-135.	1.3	11
51	Profile information on CO from SCIAMACHY observations using cloud slicing and comparison with model simulations. Atmospheric Chemistry and Physics, 2014, 14, 1717-1732.	1.9	9
52	Aerosol pollution potential from major population centers. Atmospheric Chemistry and Physics, 2013, 13, 4203-4222.	1.9	8
53	Revision of the convective transport module CVTRANS 2.4 in the EMAC atmospheric chemistryâ€“climate model. Geoscientific Model Development, 2015, 8, 2435-2445.	1.3	7
54	Cold cloud microphysical process rates in a global chemistryâ€“climate model. Atmospheric Chemistry and Physics, 2021, 21, 1485-1505.	1.9	7

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55	In situ observation of new particle formation (NPF) in the tropical tropopause layer of the 2017 Asian monsoon anticyclone â€“ Part 2: NPF inside ice clouds. Atmospheric Chemistry and Physics, 2021, 21, 13455-13481.	1.9	5
56	A fast stratospheric chemistry solver: the E4CHEM submodel for the atmospheric chemistry global circulation model EMAC. Geoscientific Model Development, 2010, 3, 321-328.	1.3	2
57	Global simulation of semivolatile organic compounds â€“ development and evaluation of the MESSy submodel SVOC (v1.0). Geoscientific Model Development, 2019, 12, 3585-3607.	1.3	2
58	Evaluation of the coupled high-resolution atmospheric chemistry model system MECO(n) using in situ and MAX-DOAS NO₂ measurements. Atmospheric Measurement Techniques, 2021, 14, 5241-5269.	1.2	2
59	Superparameterised cloud effects in the EMAC general circulation model (v2.50) â€“ influences of model configuration. Geoscientific Model Development, 2020, 13, 2671-2694.	1.3	0