

Guido R Van Der Werf

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

147
papers

31,958
citations

71
h-index

157
g-index

157
ext. papers

38,274
ext. citations

10.5
avg, IF

6.78
L-index

#	Paper	IF	Citations
147	Stable carbon isotopic composition of biomass burning emissions [Implications for estimating the contribution of C ₃ and C ₄ plants. <i>Atmospheric Chemistry and Physics</i> , 2022 , 22, 2871-2890	6.8	1
146	New land-use-change emissions indicate a declining CO airborne fraction.. <i>Nature</i> , 2022 , 603, 450-454	50.4	1
145	Global Carbon Budget 2021. <i>Earth System Science Data</i> , 2022 , 14, 1917-2005	10.5	47
144	The role of fire in global forest loss dynamics. <i>Global Change Biology</i> , 2021 , 27, 2377-2391	11.4	16
143	Opportunities and challenges for savanna burning emissions abatement in southern Africa. <i>Journal of Environmental Management</i> , 2021 , 288, 112414	7.9	15
142	Biomass burning combustion efficiency observed from space using measurements of CO and NO ₂ by the TROPOspheric Monitoring Instrument (TROPOMI). <i>Atmospheric Chemistry and Physics</i> , 2021 , 21, 597-616	6.8	10
141	Intraseasonal variability of greenhouse gas emission factors from biomass burning in the Brazilian Cerrado. <i>Biogeosciences</i> , 2021 , 18, 1375-1393	4.6	6
140	African burned area and fire carbon emissions are strongly impacted by small fires undetected by coarse resolution satellite data. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021 , 118,	11.5	52
139	Vast CO release from Australian fires in 2019-2020 constrained by satellite. <i>Nature</i> , 2021 , 597, 366-369	50.4	12
138	Instantaneous Pre-Fire Biomass and Fuel Load Measurements from Multi-Spectral UAS Mapping in Southern African Savannas. <i>Fire</i> , 2021 , 4, 2	2.4	3
137	The generation of gridded emissions data for CMIP6. <i>Geoscientific Model Development</i> , 2020 , 13, 461-482	2.3	35
136	Global Climate. <i>Bulletin of the American Meteorological Society</i> , 2020 , 101, S9-S128	6.1	26
135	The Global Methane Budget 2000-2017. <i>Earth System Science Data</i> , 2020 , 12, 1561-1623	10.5	463
134	Global Carbon Budget 2020. <i>Earth System Science Data</i> , 2020 , 12, 3269-3340	10.5	533
133	A comprehensive quantification of global nitrous oxide sources and sinks. <i>Nature</i> , 2020 , 586, 248-256	50.4	270
132	Forecasting Global Fire Emissions on Subseasonal to Seasonal (S2S) Time Scales. <i>Journal of Advances in Modeling Earth Systems</i> , 2020 , 12, e2019MS001955	7.1	4
131	Vegetation fires in the Anthropocene. <i>Nature Reviews Earth & Environment</i> , 2020 , 1, 500-515	30.2	135

130	Historical (1700-2012) Global Multi-model Estimates of the Fire Emissions from the Fire Modeling Intercomparison Project (FireMIP) 2019 ,		2
129	Historical background and current developments for mapping burned area from satellite Earth observation. <i>Remote Sensing of Environment</i> , 2019 , 225, 45-64	13.2	152
128	Global fire emissions buffered by the production of pyrogenic carbon. <i>Nature Geoscience</i> , 2019 , 12, 742-747	14.7	81
127	Historical (1700-2012) global multi-model estimates of the fire emissions from the Fire Modeling Intercomparison Project (FireMIP). <i>Atmospheric Chemistry and Physics</i> , 2019 , 19, 12545-12567	6.8	29
126	Global Carbon Budget 2019. <i>Earth System Science Data</i> , 2019 , 11, 1783-1838	10.5	776
125	The Global Fire Atlas of individual fire size, duration, speed and direction. <i>Earth System Science Data</i> , 2019 , 11, 529-552	10.5	113
124	Modelling biomass burning emissions and the effect of spatial resolution: a case study for Africa based on the Global Fire Emissions Database (GFED). <i>Geoscientific Model Development</i> , 2019 , 12, 4681-4703	6.3	6
123	Advancing Scientific Understanding of the Global Methane Budget in Support of the Paris Agreement. <i>Global Biogeochemical Cycles</i> , 2019 , 33, 1475-1512	5.9	40
122	Fine Particle Emissions From Tropical Peat Fires Decrease Rapidly With Time Since Ignition. <i>Journal of Geophysical Research D: Atmospheres</i> , 2018 , 123, 5607-5617	4.4	15
121	Disentangling effects of key coarse woody debris fuel properties on its combustion, consumption and carbon gas emissions during experimental laboratory fire. <i>Forest Ecology and Management</i> , 2018 , 427, 275-288	3.9	3
120	Global Carbon Budget 2018. <i>Earth System Science Data</i> , 2018 , 10, 2141-2194	10.5	831
119	Global Carbon Budget 2017. <i>Earth System Science Data</i> , 2018 , 10, 405-448	10.5	614
118	Biological and geophysical feedbacks with fire in the Earth system. <i>Environmental Research Letters</i> , 2018 , 13, 033003	6.2	108
117	Satellite evidence of substantial rain-induced soil emissions of ammonia across the Sahel. <i>Atmospheric Chemistry and Physics</i> , 2018 , 18, 16713-16727	6.8	11
116	Monitoring emissions from the 2015 Indonesian fires using CO satellite data. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2018 , 373,	5.8	23
115	Fire and deforestation dynamics in Amazonia (1973-2014). <i>Global Biogeochemical Cycles</i> , 2017 , 31, 24-38	5.9	51
114	Historic global biomass burning emissions based on merging satellite observations with proxies and fire models (1750-2015) 2017 ,		4
113	Reviews and syntheses: An empirical spatiotemporal description of the global surface-atmosphere carbon fluxes: opportunities and data limitations. <i>Biogeosciences</i> , 2017 , 14, 3685-3703	4.6	37

112	Global fire emissions estimates during 1997-2016. <i>Earth System Science Data</i> , 2017 , 9, 697-720	10.5	693
111	A human-driven decline in global burned area. <i>Science</i> , 2017 , 356, 1356-1362	33.3	433
110	Denial of long-term issues with agriculture on tropical peatlands will have devastating consequences. <i>Global Change Biology</i> , 2017 , 23, 977-982	11.4	67
109	Precipitation-fire linkages in Indonesia (1997-2015). <i>Biogeosciences</i> , 2017 , 14, 3995-4008	4.6	24
108	Historic global biomass burning emissions for CMIP6 (BB4CMIP) based on merging satellite observations with proxies and fire models (1750-2015). <i>Geoscientific Model Development</i> , 2017 , 10, 3329-3357	6.3	212
107	A pan-tropical cascade of fire driven by El Niño/Southern Oscillation. <i>Nature Climate Change</i> , 2017 , 7, 906-911	21.4	74
106	Nine years of global hydrocarbon emissions based on source inversion of OMI formaldehyde observations. <i>Atmospheric Chemistry and Physics</i> , 2016 , 16, 10133-10158	6.8	77
105	Global Carbon Budget 2016. <i>Earth System Science Data</i> , 2016 , 8, 605-649	10.5	730
104	The global methane budget 2000-2012. <i>Earth System Science Data</i> , 2016 , 8, 697-751	10.5	641
103	Biomass burning fuel consumption dynamics in the tropics and subtropics assessed from satellite. <i>Biogeosciences</i> , 2016 , 13, 3717-3734	4.6	30
102	Nine years of global hydrocarbon emissions based on source inversion of OMI formaldehyde observations 2016 ,		1
101	Annual South American forest loss estimates based on passive microwave remote sensing (1990-2010). <i>Biogeosciences</i> , 2016 , 13, 609-624	4.6	22
100	The status and challenge of global fire modelling. <i>Biogeosciences</i> , 2016 , 13, 3359-3375	4.6	193
99	Variability of fire carbon emissions in equatorial Asia and its nonlinear sensitivity to El Niño. <i>Geophysical Research Letters</i> , 2016 , 43, 10,472-10,479	4.9	50
98	Indonesian fire activity and smoke pollution in 2015 show persistent nonlinear sensitivity to El Niño-induced drought. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016 , 113, 9204-9	11.5	178
97	Global vulnerability of peatlands to fire and carbon loss. <i>Nature Geoscience</i> , 2015 , 8, 11-14	18.3	357
96	Importance of transboundary transport of biomass burning emissions to regional air quality in Southeast Asia during a high fire event. <i>Atmospheric Chemistry and Physics</i> , 2015 , 15, 363-373	6.8	53
95	New fire diurnal cycle characterizations to improve fire radiative energy assessments made from MODIS observations. <i>Atmospheric Chemistry and Physics</i> , 2015 , 15, 8831-8846	6.8	28

94	Relationships between burned area, forest cover loss, and land cover change in the Brazilian Amazon based on satellite data. <i>Biogeosciences</i> , 2015 , 12, 6033-6043	4.6	20
93	Global Carbon Budget 2015. <i>Earth System Science Data</i> , 2015 , 7, 349-396	10.5	513
92	Global carbon budget 2014. <i>Earth System Science Data</i> , 2015 , 7, 47-85	10.5	367
91	Contribution of semi-arid ecosystems to interannual variability of the global carbon cycle. <i>Nature</i> , 2014 , 509, 600-3	50.4	778
90	Using satellite based soil moisture to quantify the water driven variability in NDVI: A case study over mainland Australia. <i>Remote Sensing of Environment</i> , 2014 , 140, 330-338	13.2	174
89	Recent trends in African fires driven by cropland expansion and El Niño to La Niña transition. <i>Nature Climate Change</i> , 2014 , 4, 791-795	21.4	142
88	Satellite observations indicate substantial spatiotemporal variability in biomass burning NO _x emission factors for South America. <i>Atmospheric Chemistry and Physics</i> , 2014 , 14, 3929-3943	6.8	52
87	Global cropland monthly gross primary production in the year 2000. <i>Biogeosciences</i> , 2014 , 11, 3871-3880	4.6	20
86	Biomass burning fuel consumption rates: a field measurement database. <i>Biogeosciences</i> , 2014 , 11, 7305-7329	13.2	95
85	A full greenhouse gases budget of Africa: synthesis, uncertainties, and vulnerabilities. <i>Biogeosciences</i> , 2014 , 11, 381-407	4.6	134
84	Terrestrial cycling of ¹³ C/CO ₂ by photosynthesis, respiration, and biomass burning in SiBCASA. <i>Biogeosciences</i> , 2014 , 11, 6553-6571	4.6	34
83	Impact of the Atlantic Multidecadal Oscillation (AMO) on deriving anthropogenic warming rates from the instrumental temperature record. <i>Earth System Dynamics</i> , 2014 , 5, 375-382	4.8	11
82	Three decades of global methane sources and sinks. <i>Nature Geoscience</i> , 2013 , 6, 813-823	18.3	1293
81	Analysis of daily, monthly, and annual burned area using the fourth-generation global fire emissions database (GFED4). <i>Journal of Geophysical Research G: Biogeosciences</i> , 2013 , 118, 317-328	3.7	829
80	Natural land carbon dioxide exchanges in the ECMWF integrated forecasting system: Implementation and offline validation. <i>Journal of Geophysical Research D: Atmospheres</i> , 2013 , 118, 5923-5946	4.4	88
79	Long-term trends and interannual variability of forest, savanna and agricultural fires in South America. <i>Carbon Management</i> , 2013 , 4, 617-638	3.3	96
78	The global carbon budget 1959-2011. <i>Earth System Science Data</i> , 2013 , 5, 165-185	10.5	436
77	Dynamic biomass burning emission factors and their impact on atmospheric CO mixing ratios. <i>Journal of Geophysical Research D: Atmospheres</i> , 2013 , 118, 6797-6815	4.4	29

76	Fire Research: Linking Past, Present, and Future Data. <i>Eos</i> , 2013 , 94, 421-422	1.5	8
75	A global analysis of the impact of drought on net primary productivity. <i>Hydrology and Earth System Sciences</i> , 2013 , 17, 3885-3894	5.5	80
74	What could have caused pre-industrial biomass burning emissions to exceed current rates?. <i>Climate of the Past</i> , 2013 , 9, 289-306	3.9	44
73	Comparing optimized CO emission estimates using MOPITT or NOAA surface network observations. <i>Journal of Geophysical Research</i> , 2012 , 117, n/a-n/a		35
72	Interannual variability of carbon monoxide emission estimates over South America from 2006 to 2010. <i>Journal of Geophysical Research</i> , 2012 , 117, n/a-n/a		25
71	Global burned area and biomass burning emissions from small fires. <i>Journal of Geophysical Research</i> , 2012 , 117, n/a-n/a		446
70	Biomass burning emissions estimated with a global fire assimilation system based on observed fire radiative power. <i>Biogeosciences</i> , 2012 , 9, 527-554	4.6	677
69	The Impact of Uncertainties in African Biomass Burning Emission Estimates on Modeling Global Air Quality, Long Range Transport and Tropospheric Chemical Lifetimes. <i>Atmosphere</i> , 2012 , 3, 132-163	2.7	20
68	Carbon emissions from land use and land-cover change. <i>Biogeosciences</i> , 2012 , 9, 5125-5142	4.6	629
67	Optimal use of land surface temperature data to detect changes in tropical forest cover. <i>Journal of Geophysical Research</i> , 2011 , 116,		29
66	Evaluation of cropland maximum light use efficiency using eddy flux measurements in North America and Europe. <i>Geophysical Research Letters</i> , 2011 , 38, n/a-n/a	4.9	38
65	Drought and ecosystem carbon cycling. <i>Agricultural and Forest Meteorology</i> , 2011 , 151, 765-773	5.8	359
64	Spatial and temporal variability in the ratio of trace gases emitted from biomass burning. <i>Atmospheric Chemistry and Physics</i> , 2011 , 11, 3611-3629	6.8	89
63	Optimizing global CO emission estimates using a four-dimensional variational data assimilation system and surface network observations. <i>Atmospheric Chemistry and Physics</i> , 2011 , 11, 4705-4723	6.8	46
62	Daily and 3-hourly variability in global fire emissions and consequences for atmospheric model predictions of carbon monoxide. <i>Journal of Geophysical Research</i> , 2011 , 116, n/a-n/a		165
61	Evolution of anthropogenic and biomass burning emissions of air pollutants at global and regional scales during the 1980-2010 period. <i>Climatic Change</i> , 2011 , 109, 163-190	4.5	623
60	State of the Climate in 2010. <i>Bulletin of the American Meteorological Society</i> , 2011 , 92, S1-S236	6.1	114
59	The European carbon balance. Part 2: croplands. <i>Global Change Biology</i> , 2010 , 16, 1409-1428	11.4	165

58	The European carbon balance. Part 3: forests. <i>Global Change Biology</i> , 2010 , 16, 1429-1450	11.4	206
57	Seven years of recent European net terrestrial carbon dioxide exchange constrained by atmospheric observations. <i>Global Change Biology</i> , 2010 , 16, 1317-1337	11.4	182
56	Nitrogen deposition in tropical forests from savanna and deforestation fires. <i>Global Change Biology</i> , 2010 , 16, 2024-2038	11.4	67
55	Assessing variability and long-term trends in burned area by merging multiple satellite fire products. <i>Biogeosciences</i> , 2010 , 7, 1171-1186	4.6	471
54	Global fire emissions and the contribution of deforestation, savanna, forest, agricultural, and peat fires (1997-2009). <i>Atmospheric Chemistry and Physics</i> , 2010 , 10, 11707-11735	6.8	2013
53	Modeling fire-driven deforestation potential in Amazonia under current and projected climate conditions. <i>Journal of Geophysical Research</i> , 2010 , 115,		24
52	A carbon cycle science update since IPCC AR-4. <i>Ambio</i> , 2010 , 39, 402-12	6.5	22
51	Estimates of fire emissions from an active deforestation region in the southern Amazon based on satellite data and biogeochemical modelling. <i>Biogeosciences</i> , 2009 , 6, 235-249	4.6	66
50	Vegetation fire emissions and their impact on air pollution and climate. <i>Atmospheric Environment</i> , 2009 , 43, 107-116	5.3	265
49	Human amplification of drought-induced biomass burning in Indonesia since 1960. <i>Nature Geoscience</i> , 2009 , 2, 185-188	18.3	270
48	Trends in the sources and sinks of carbon dioxide. <i>Nature Geoscience</i> , 2009 , 2, 831-836	18.3	1453
47	An aerosol boomerang: Rapid around-the-world transport of smoke from the December 2006 Australian forest fires observed from space. <i>Journal of Geophysical Research</i> , 2009 , 114,		76
46	Fire in the Earth system. <i>Science</i> , 2009 , 324, 481-4	33.3	1799
45	Global emissions of non-methane hydrocarbons deduced from SCIAMACHY formaldehyde columns through 2003-2006. <i>Atmospheric Chemistry and Physics</i> , 2009 , 9, 3663-3679	6.8	124
44	Evaluating the performance of pyrogenic and biogenic emission inventories against one decade of space-based formaldehyde columns. <i>Atmospheric Chemistry and Physics</i> , 2009 , 9, 1037-1060	6.8	167
43	SCIAMACHY CO over land and oceans: 2003-2007 interannual variability. <i>Atmospheric Chemistry and Physics</i> , 2009 , 9, 3799-3813	6.8	38
42	Agricultural intensification increases deforestation fire activity in Amazonia. <i>Global Change Biology</i> , 2008 , 14, 2262-2275	11.4	154
41	Early anthropogenic CH ₄ emissions and the variation of CH ₄ and ¹³ CH ₄ over the last millennium. <i>Global Biogeochemical Cycles</i> , 2008 , 22, n/a-n/a	5.9	36

40	Climate controls on the variability of fires in the tropics and subtropics. <i>Global Biogeochemical Cycles</i> , 2008 , 22, n/a-n/a	5.9	193
39	Global AIRS and MOPITT CO measurements: Validation, comparison, and links to biomass burning variations and carbon cycle. <i>Journal of Geophysical Research</i> , 2008 , 113,		77
38	Contribution of ocean, fossil fuel, land biosphere, and biomass burning carbon fluxes to seasonal and interannual variability in atmospheric CO ₂ . <i>Journal of Geophysical Research</i> , 2008 , 113, n/a-n/a		63
37	Fire-related carbon emissions from land use transitions in southern Amazonia. <i>Geophysical Research Letters</i> , 2008 , 35,	4.9	32
36	Climate regulation of fire emissions and deforestation in equatorial Asia. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008 , 105, 20350-5	11.5	278
35	Global impacts of aerosols from particular source regions and sectors. <i>Journal of Geophysical Research</i> , 2007 , 112,		191
34	Scanning Imaging Absorption Spectrometer for Atmospheric Chartography carbon monoxide total columns: Statistical evaluation and comparison with chemistry transport model results. <i>Journal of Geophysical Research</i> , 2007 , 112,		35
33	Correction to Scanning Imaging Absorption Spectrometer for Atmospheric Chartography carbon monoxide total columns: Statistical evaluation and comparison with chemistry transport model results. <i>Journal of Geophysical Research</i> , 2007 , 112,		6
32	An atmospheric perspective on North American carbon dioxide exchange: CarbonTracker. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007 , 104, 18925-30	11.5	737
31	Time-dependent inversion estimates of global biomass-burning CO emissions using Measurement of Pollution in the Troposphere (MOPITT) measurements. <i>Journal of Geophysical Research</i> , 2006 , 111,		90
30	Evidence for long-range transport of carbon monoxide in the Southern Hemisphere from SCIAMACHY observations. <i>Geophysical Research Letters</i> , 2006 , 33,	4.9	63
29	Interannual variability in global biomass burning emissions from 1997 to 2004. <i>Atmospheric Chemistry and Physics</i> , 2006 , 6, 3423-3441	6.8	1383
28	Emissions of primary aerosol and precursor gases in the years 2000 and 1750 prescribed data-sets for AeroCom. <i>Atmospheric Chemistry and Physics</i> , 2006 , 6, 4321-4344	6.8	765
27	Global estimation of burned area using MODIS active fire observations. <i>Atmospheric Chemistry and Physics</i> , 2006 , 6, 957-974	6.8	448
26	Contribution of anthropogenic and natural sources to atmospheric methane variability. <i>Nature</i> , 2006 , 443, 439-43	50.4	762
25	Fire emissions from C3 and C4 vegetation and their influence on interannual variability of atmospheric CO ₂ and $\delta^{13}\text{C}_{\text{CO}_2}$. <i>Global Biogeochemical Cycles</i> , 2005 , 19, n/a-n/a	5.9	93
24	Continental-scale partitioning of fire emissions during the 1997 to 2001 El Niño/La Niña period. <i>Science</i> , 2004 , 303, 73-6	33.3	480
23	Top-down estimates of global CO sources using MOPITT measurements. <i>Geophysical Research Letters</i> , 2004 , 31,	4.9	91

22	Carbon emissions from fires in tropical and subtropical ecosystems. <i>Global Change Biology</i> , 2003 , 9, 547-562	348
21	The use of ATSR active fire counts for estimating relative patterns of biomass burning in a study from the boreal forest region. <i>Geophysical Research Letters</i> , 2003 , 30,	49 59
20	Global fire emissions and the contribution of deforestation, savanna, forest, agricultural, and peat fires (1997-2009)	71
19	Spatial and temporal variability in the ratio of trace gases emitted from biomass burning	3
18	Optimizing global CO emissions using a four-dimensional variational data assimilation system and surface network observations	2
17	Satellite observations indicate substantial spatiotemporal variability in biomass burning NO _x emission factors for South America	2
16	Importance of transboundary transport of biomass burning emissions to regional air quality in Southeast Asia	4
15	Evaluating the performance of pyrogenic and biogenic emission inventories against one decade of space-based formaldehyde columns	5
14	The full greenhouse gases budget of Africa: synthesis, uncertainties and vulnerabilities	7
13	Towards multi-tracer data-assimilation: biomass burning and carbon isotope exchange in SiBCASA	1
12	Biomass burning fuel consumption rates: a field measurement database	12
11	Annual South American forest loss estimates based on passive microwave remote sensing (1990-2010)	1
10	Relationships between burned area, forest cover loss and land use change in the Brazilian Amazon based on satellite data	3
9	Estimates of fire emissions from an active deforestation region in the southern Amazon based on satellite data and biogeochemical modelling	4
8	Assessing variability and long-term trends in burned area by merging multiple satellite fire products	7
7	Biomass burning emissions estimated with a global fire assimilation system based on observed fire radiative power	14
6	Chapter G2 Carbon emissions from land use and land-cover change	36
5	Global fire emissions estimates during 1997-2015	10

4	Global carbon budget 2014	121
3	A global analysis of the impact of drought on net primary productivity	3
2	New fire diurnal cycle characterizations to improve fire radiative energy assessments made from low-Earth orbit satellites sampling	2
1	What could have caused pre-industrial biomass burning emissions to exceed current rates?	1