

Raymond L Langenfelds

List of Publications by Year in descending order

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46
papers

7,491
citations

218592

26
h-index

214721

47
g-index

53
all docs

53
docs citations

53
times ranked

8542
citing authors

#	ARTICLE	IF	CITATIONS
1	Three decades of global methane sources and sinks. <i>Nature Geoscience</i> , 2013, 6, 813-823.	5.4	1,649
2	The Global Methane Budget 2000–2017. <i>Earth System Science Data</i> , 2020, 12, 1561-1623.	3.7	1,199
3	The global methane budget 2000–2012. <i>Earth System Science Data</i> , 2016, 8, 697-751.	3.7	824
4	Saturation of the Southern Ocean CO ₂ Sink Due to Recent Climate Change. <i>Science</i> , 2007, 316, 1735-1738.	6.0	779
5	Weak Northern and Strong Tropical Land Carbon Uptake from Vertical Profiles of Atmospheric CO ₂ . <i>Science</i> , 2007, 316, 1732-1735.	6.0	775
6	Source attribution of the changes in atmospheric methane for 2006–2008. <i>Atmospheric Chemistry and Physics</i> , 2011, 11, 3689-3700.	1.9	252
7	Global CO ₂ fluxes estimated from GOSAT retrievals of total column CO ₂ . <i>Atmospheric Chemistry and Physics</i> , 2013, 13, 8695-8717.	1.9	251
8	Trends and seasonal cycles in the isotopic composition of nitrous oxide since 1940. <i>Nature Geoscience</i> , 2012, 5, 261-265.	5.4	220
9	Sulfur hexafluoride—A powerful new atmospheric tracer. <i>Atmospheric Environment</i> , 1996, 30, 1621-1629.	1.9	159
10	Variations in global methane sources and sinks during 1910–2010. <i>Atmospheric Chemistry and Physics</i> , 2015, 15, 2595-2612.	1.9	108
11	Estimating regional methane surface fluxes: the relative importance of surface and GOSAT mole fraction measurements. <i>Atmospheric Chemistry and Physics</i> , 2013, 13, 5697-5713.	1.9	94
12	Global and regional emissions estimates for N ₂ O. <i>Atmospheric Chemistry and Physics</i> , 2014, 14, 4617-4641.	1.9	91
13	On the consistency between global and regional methane emissions inferred from SCIAMACHY, TANSO-FTS, IASI and surface measurements. <i>Atmospheric Chemistry and Physics</i> , 2014, 14, 577-592.	1.9	91
14	Variability and quasi-decadal changes in the methane budget over the period 2000–2012. <i>Atmospheric Chemistry and Physics</i> , 2017, 17, 11135-11161.	1.9	85
15	Atmospheric verification of anthropogenic CO ₂ emission trends. <i>Nature Climate Change</i> , 2013, 3, 520-524.	8.1	84
16	Growth Rate, Seasonal, Synoptic, Diurnal Variations and Budget of Methane in the Lower Atmosphere. <i>Journal of the Meteorological Society of Japan</i> , 2009, 87, 635-663.	0.7	74
17	Exploring causes of interannual variability in the seasonal cycles of tropospheric nitrous oxide. <i>Atmospheric Chemistry and Physics</i> , 2011, 11, 3713-3730.	1.9	60
18	Nitrous oxide emissions 1999 to 2009 from a global atmospheric inversion. <i>Atmospheric Chemistry and Physics</i> , 2014, 14, 1801-1817.	1.9	59

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19	Space shuttle based global CO measurements during April and October 1994, MAPS instrument, data reduction, and data validation. <i>Journal of Geophysical Research</i> , 1999, 104, 21443-21454.	3.3	56
20	Stratospheric influence on the seasonal cycle of nitrous oxide in the troposphere as deduced from aircraft observations and model simulations. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	43
21	Global methane emission estimates for 2000â€“2012 from CarbonTracker Europe-CH ₄ ; v1.0. <i>Geoscientific Model Development</i> , 2017, 10, 1261-1289.	1.3	40
22	Atmospheric histories and emissions of chlorofluorocarbons CFC-13 (CClF ₃), CFC-114 (C ₂ Cl ₂ F ₄) and CFC-115 (C ₂ ClF ₅). <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 979-1002.	1.4	17
23	Global modelling of H ₂ mixing ratios and isotopic compositions with the TM5 model. <i>Atmospheric Chemistry and Physics</i> , 2011, 11, 7001-7026.	1.9	35
24	Estimating regional fluxes of CO ₂ and CH ₄ using space-borne observations of XCH ₄ : XCO ₂ . <i>Atmospheric Chemistry and Physics</i> , 2014, 14, 12883-12895.	1.9	35
25	A trace-gas climatology above Zotino, central Siberia. <i>Tellus, Series B: Chemical and Physical Meteorology</i> , 2002, 54, 749-767.	0.8	28
26	Country-Scale Analysis of Methane Emissions with a High-Resolution Inverse Model Using GOSAT and Surface Observations. <i>Remote Sensing</i> , 2020, 12, 375.	1.8	28
27	Reassessing the variability in atmospheric H ₂ using the two-way nested TM5 model. <i>Journal of Geophysical Research D: Atmospheres</i> , 2013, 118, 3764-3780.	1.2	26
28	Atmospheric histories and global emissions of halons Hâ€“1211 (CBrClF ₂), Hâ€“1301 (CBrF ₃), and Hâ€“2402 (CBrF ₂ CBF ₂). <i>Journal of Geophysical Research D: Atmospheres</i> , 2016, 121, 3663-3686.	1.2	24
29	C ₂ F ₆ , C ₃ F ₈ , CHF ₃ , HFC-125, HFC-227ea and SF ₆ ; implications for the calculations of halocarbon lifetimes, fractional release factors and ozone depletion potentials. <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 1615-1630.	1.9	22
30	Influences of hydroxyl radicals (OH) on top-down estimates of the global and regional methane budgets. <i>Atmospheric Chemistry and Physics</i> , 2020, 20, 9525-9546.	1.9	19
31	Continued increase of CFC-113a (CCl ₃ CF ₃) mixing ratios in the global atmosphere: emissions, occurrence and potential sources. <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 4737-4751.	1.9	18
32	Aircraft-Based Observations of Ozone-Depleting Substances in the Upper Troposphere and Lower Stratosphere in and Above the Asian Summer Monsoon. <i>Journal of Geophysical Research D: Atmospheres</i> , 2021, 126, e2020JD033137.	1.2	17
33	Unexpected nascent atmospheric emissions of three ozone-depleting hydrochlorofluorocarbons. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	3.3	16
34	Concentrations and isotope ratios of helium and other noble gases in the Earth's atmosphere during 1978â€“2011. <i>Earth and Planetary Science Letters</i> , 2013, 366, 27-37.	1.8	15
35	Interannual variability in tropospheric nitrous oxide. <i>Geophysical Research Letters</i> , 2013, 40, 4426-4431.	1.5	15
36	Simulation of atmospheric N ₂ O with GEOS-Chem and its adjoint: evaluation of observational constraints. <i>Geoscientific Model Development</i> , 2015, 8, 3179-3198.	1.3	15

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37	Isotopic ordering in atmospheric O ₂ as a tracer of ozone photochemistry and the tropical atmosphere. <i>Journal of Geophysical Research D: Atmospheres</i> , 2016, 121, 12,541.	1.2	15
38	Seasonal changes in the tropospheric carbon monoxide profile over the remote Southern Hemisphere evaluated using multi-model simulations and aircraft observations. <i>Atmospheric Chemistry and Physics</i> , 2015, 15, 3217-3239.	1.9	14
39	No evidence for change of the atmospheric helium isotope composition since 1978 from re-analysis of the Cape Grim Air Archive. <i>Earth and Planetary Science Letters</i> , 2015, 428, 134-138.	1.8	14
40	Tropospheric observations of CFC-114 and CFC-114a with a focus on long-term trends and emissions. <i>Atmospheric Chemistry and Physics</i> , 2016, 16, 15347-15358.	1.9	14
41	First observations, trends, and emissions of CH_2ClF in the global atmosphere. <i>Geophysical Research Letters</i> , 2015, 42, 7817-7824.	1.5	12
42	Abrupt reversal in emissions and atmospheric abundance of HCFC-133a ($\text{CF}_3\text{C}_2\text{H}_5$) in the Northern Hemisphere. <i>Atmospheric Chemistry and Physics</i> , 2015, 15, 5427-5432.	1.5	12
43	H ₂ in Antarctic firn air: Atmospheric reconstructions and implications for anthropogenic emissions. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	3.3	9
44	Trends and emissions of six perfluorocarbons in the Northern Hemisphere and Southern Hemisphere. <i>Atmospheric Chemistry and Physics</i> , 2020, 20, 4787-4807.	1.9	5
45	Abundances, emissions, and loss processes of the long-lived and potent greenhouse gas octafluorooxolane (octafluorotetrahydrofuran, $\text{C}_4\text{F}_8\text{O}$) in the atmosphere. <i>Atmospheric Chemistry and Physics</i> , 2019, 19, 3481-3492.	1.9	4
46	Corrigendum to "Source attribution of the changes in atmospheric methane for 2006-2008" published in <i>Atmos. Chem. Phys.</i> , 11, 3689-3700, 2011. <i>Atmospheric Chemistry and Physics</i> , 2012, 12, 9381-9382.	1.9	0