# Thomas Rckmann

## List of Publications by Citations



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|---|---|---|---|
| 281 papers | 8,629 citations | 49 h-index | 80 g-index |
| 387 ext. papers | 9,877 ext. citations | 7.1 avg, IF | 6.18 L-index |

| # | Paper | IF | Citations |
|---|---|---|---|
| 281 | Methane emissions from terrestrial plants under aerobic conditions. *Nature*, **2006**, 439, 187-91 | 50.4 | 690 |
| 280 | Eemian interglacial reconstructed from a Greenland folded ice core. *Nature*, **2013**, 493, 489-94 | 50.4 | 474 |
| 279 | Methane Feedbacks to the Global Climate System in a Warmer World. *Reviews of Geophysics*, **2018**, 56, 207-250 | 23.1 | 200 |
| 278 | Iron-mediated anaerobic oxidation of methane in brackish coastal sediments. *Environmental Science & Technology*, **2015**, 49, 277-83 | 10.3 | 181 |
| 277 | Triple oxygen isotope analysis of nitrate using the denitrifier method and thermal decomposition of N2O. *Analytical Chemistry*, **2007**, 79, 599-607 | 7.8 | 174 |
| 276 | Dynamic processes governing lower-tropospheric HDO/H2O ratios as observed from space and ground. *Science*, **2009**, 325, 1374-7 | 33.3 | 166 |
| 275 | Isotope effects in the chemistry of atmospheric trace compounds. *Chemical Reviews*, **2003**, 103, 5125-6268.1 | | 162 |
| 274 | Methoxyl groups of plant pectin as a precursor of atmospheric methane: evidence from deuterium labelling studies. *New Phytologist*, **2008**, 178, 808-814 | 9.8 | 135 |
| 273 | Effect of UV radiation and temperature on the emission of methane from plant biomass and structural components. *Biogeosciences*, **2008**, 5, 937-947 | 4.6 | 124 |
| 272 | Mass-independent oxygen isotope fractionation in atmospheric CO as a result of the reaction CO + OH. *Science*, **1998**, 281, 544-6 | 33.3 | 116 |
| 271 | New insight into the atmospheric chloromethane budget gained using stable carbon isotope ratios. *Atmospheric Chemistry and Physics*, **2005**, 5, 2403-2411 | 6.8 | 108 |
| 270 | Oxygen isotope composition of stratospheric carbon dioxide. *Geophysical Research Letters*, **2002**, 29, 23-1 | 4.9 | 102 |
| 269 | The overwhelming role of soils in the global atmospheric hydrogen cycle. *Atmospheric Chemistry and Physics*, **2006**, 6, 1611-1625 | 6.8 | 98 |
| 268 | Reduced biomass burning emissions reconcile conflicting estimates of the post-2006 atmospheric methane budget. *Nature Communications*, **2017**, 8, 2227 | 17.4 | 97 |
| 267 | Natural and anthropogenic variations in methane sources during the past two millennia. *Nature*, **2012**, 490, 85-8 | 50.4 | 96 |
| 266 | Micro- and Nanoplastics in Alpine Snow: A New Method for Chemical Identification and (Semi)Quantification in the Nanogram Range. *Environmental Science & Technology*, **2020**, 54, 2353-2359 | 10.3 | 92 |
| 265 | Atmospheric constraints on global emissions of methane from plants. *Geophysical Research Letters*, **2006**, 33, | 4.9 | 88 |

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| 264 | Mass spectrometry of the intramolecular nitrogen isotope distribution of environmental nitrous oxide using fragment-ion analysis. *Rapid Communications in Mass Spectrometry*, **1999**, 13, 2028-33 | 2.2 | 86 |
| 263 | A multi-year methane inversion using SCIAMACHY, accounting for systematic errors using TCCON measurements. *Atmospheric Chemistry and Physics*, **2014**, 14, 3991-4012 | 6.8 | 84 |
| 262 | Source contributions to PM2.5 and PM10 at an urban background and a street location. *Atmospheric Environment*, **2013**, 71, 26-35 | 5.3 | 84 |
| 261 | Interpreting methane variations in the past two decades using measurements of CH<sub>4</sub> mixing ratio and isotopic composition. *Atmospheric Chemistry and Physics*, **2011**, 11, 9141-9153 | 6.8 | 83 |
| 260 | Methane formation in aerobic environments. *Environmental Chemistry*, **2009**, 6, 459 | 3.2 | 83 |
| 259 | The isotopic fingerprint of the pre-industrial and the anthropogenic N<sub>2</sub>O source. *Atmospheric Chemistry and Physics*, **2003**, 3, 315-323 | 6.8 | 80 |
| 258 | Aerosol analysis using a Thermal-Desorption Proton-Transfer-Reaction Mass Spectrometer (TD-PTR-MS): a new approach to study processing of organic aerosols. *Atmospheric Chemistry and Physics*, **2010**, 10, 2257-2267 | 6.8 | 77 |
| 257 | Four-dimensional variational data assimilation for inverse modeling of atmospheric methane emissions: Analysis of SCIAMACHY observations. *Journal of Geophysical Research*, **2008**, 113, | | 75 |
| 256 | Analysis of the chemical composition of organic aerosol at the Mt. Sonnblick observatory using a novel high mass resolution thermal-desorption proton-transfer-reaction mass-spectrometer (hr-TD-PTR-MS). *Atmospheric Chemistry and Physics*, **2010**, 10, 10111-10128 | 6.8 | 71 |
| 255 | Isotope analysis based source identification for atmospheric CH4 and CO sampled across Russia using the Trans-Siberian railroad. *Journal of Geophysical Research*, **1998**, 103, 8227-8235 | | 71 |
| 254 | Gas chromatography/isotope-ratio mass spectrometry method for high-precision position-dependent 15N and 18O measurements of atmospheric nitrous oxide. *Rapid Communications in Mass Spectrometry*, **2003**, 17, 1897-908 | 2.2 | 70 |
| 253 | Reconciliation of essential process parameters for an enhanced predictability of Arctic stratospheric ozone loss and its climate interactions (RECONCILE): activities and results. *Atmospheric Chemistry and Physics*, **2013**, 13, 9233-9268 | 6.8 | 69 |
| 252 | HESS Opinions "A perspective on isotope versus non-isotope approaches to determine the contribution of transpiration to total evaporation". *Hydrology and Earth System Sciences*, **2014**, 18, 2815-2827 | 5.5 | 68 |
| 251 | Complete and accurate mass spectrometric isotope analysis of tropospheric nitrous oxide. *Journal of Geophysical Research*, **2003**, 108, | | 67 |
| 250 | Iron oxide reduction in methane-rich deep Baltic Sea sediments. *Geochimica Et Cosmochimica Acta*, **2017**, 207, 256-276 | 5.5 | 63 |
| 249 | Newly detected ozone-depleting substances in the atmosphere. *Nature Geoscience*, **2014**, 7, 266-269 | 18.3 | 61 |
| 248 | Modelling the budget of middle atmospheric water vapour isotopes. *Atmospheric Chemistry and Physics*, **2006**, 6, 2073-2090 | 6.8 | 61 |
| 247 | Ultraviolet-radiation-induced methane emissions from meteorites and the Martian atmosphere. *Nature*, **2012**, 486, 93-6 | 50.4 | 57 |

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| 246 | Comparison of an isotopic atmospheric general circulation model with new quasi-global satellite measurements of water vapor isotopologues. *Journal of Geophysical Research*, **2011**, 116, | | 57 |
| 245 | Isotopic enrichment of nitrous oxide (15N14NO, 14N15NO, 14N14N18O) in the stratosphere and in the laboratory. *Journal of Geophysical Research*, **2001**, 106, 10403-10410 | | 56 |
| 244 | The stable isotope signature of methane emitted from plant material under UV irradiation. *Atmospheric Environment*, **2009**, 43, 5637-5646 | 5.3 | 55 |
| 243 | The origin of the anomalous or mass-independent oxygen isotope fractionation in tropospheric N2O. *Geophysical Research Letters*, **2001**, 28, 503-506 | 4.9 | 55 |
| 242 | Quantification of the SF6 lifetime based on mesospheric loss measured in the stratospheric polar vortex. *Journal of Geophysical Research D: Atmospheres*, **2017**, 122, 4626-4638 | 4.4 | 54 |
| 241 | Comparison of CH4 inversions based on 15 months of GOSAT and SCIAMACHY observations. *Journal of Geophysical Research D: Atmospheres*, **2013**, 118, 11,807-11,823 | 4.4 | 54 |
| 240 | Eddy covariance methane measurements at a Ponderosa pine plantation in California. *Atmospheric Chemistry and Physics*, **2009**, 9, 8365-8375 | 6.8 | 54 |
| 239 | Probing stratospheric transport and chemistry with new balloon and aircraft observations of the meridional and vertical N<sub>2</sub>O isotope distribution. *Atmospheric Chemistry and Physics*, **2006**, 6, 3535-3556 | 6.8 | 54 |
| 238 | HDO measurements with MIPAS. *Atmospheric Chemistry and Physics*, **2007**, 7, 2601-2615 | 6.8 | 52 |
| 237 | Continuous-flow isotope ratio mass spectrometry method for carbon and hydrogen isotope measurements on atmospheric methane. *Atmospheric Measurement Techniques*, **2010**, 3, 1707-1721 | 4 | 51 |
| 236 | An introduction to the SCOUT-AMMA stratospheric aircraft, balloons and sondes campaign in West Africa, August 2006: rationale and roadmap. *Atmospheric Chemistry and Physics*, **2010**, 10, 2237-2256 | 6.8 | 51 |
| 235 | Heavy hydrogen in the stratosphere. *Atmospheric Chemistry and Physics*, **2003**, 3, 2015-2023 | 6.8 | 51 |
| 234 | In situ observations of the isotopic composition of methane at the Cabauw tall tower site. *Atmospheric Chemistry and Physics*, **2016**, 16, 10469-10487 | 6.8 | 49 |
| 233 | Vehicle emissions of greenhouse gases and related tracers from a tunnel study: CO : CO<sub>2</sub>, N<sub>2</sub>O : CO<sub>2</sub>, CH<sub>4</sub> : CO<sub>2</sub>, O<sub>2</sub> : CO<sub>2</sub> ratios, and the stable isotopes <sup>13</sup>C and | 6.8 | 49 |
| 232 | Anaerobic oxidation of methane alters sediment records of sulfur, iron and phosphorus in the Black Sea. *Biogeosciences*, **2016**, 13, 5333-5355 | 4.6 | 49 |
| 231 | Accelerating growth of HFC-227ea (1,1,1,2,3,3,3-heptafluoropropane) in the atmosphere. *Atmospheric Chemistry and Physics*, **2010**, 10, 5903-5910 | 6.8 | 47 |
| 230 | Optimizing global CO emission estimates using a four-dimensional variational data assimilation system and surface network observations. *Atmospheric Chemistry and Physics*, **2011**, 11, 4705-4723 | 6.8 | 46 |
| 229 | Methane airborne measurements and comparison to global models during BARCA. *Journal of Geophysical Research*, **2012**, 117, n/a-n/a | | 45 |

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| 228 | Principal factors determining the 18O/16O ratio of atmospheric CO as derived from observations in the southern hemispheric troposphere and lowermost stratosphere. *Journal of Geophysical Research*, **1997**, 102, 25477-25485 | | 45 |
| 227 | Tropical dehydration processes constrained by the seasonality of stratospheric deuterated water. *Nature Geoscience*, **2010**, 3, 262-266 | 18.3 | 44 |
| 226 | Stratospheric ozone isotope fractionations derived from collected samples. *Journal of Geophysical Research*, **2007**, 112, | | 44 |
| 225 | Using <sup>14</sup>C, <sup>13</sup>C, <sup>18</sup>O and <sup>17</sup>O isotopic variations to provide insights into the high northern latitude surface CO inventory. *Atmospheric Chemistry and Physics*, **2002**, 2, 147-159 | 6.8 | 44 |
| 224 | Wavelength dependence of isotope fractionation in N<sub>2</sub>O photolysis. *Atmospheric Chemistry and Physics*, **2003**, 3, 303-313 | 6.8 | 43 |
| 223 | Intramolecular 15N and 18O fractionation in the reaction of N2O with O(1D) and its implications for the stratospheric N2O isotope signature. *Journal of Geophysical Research*, **2002**, 107, ACH 16-1 | | 43 |
| 222 | Continuous-flow isotope analysis of the deuterium/hydrogen ratio in atmospheric hydrogen. *Rapid Communications in Mass Spectrometry*, **2004**, 18, 299-306 | 2.2 | 42 |
| 221 | Measurement of the isotopic fractionation of 15N14N16O, 14N15N16O and 14N14N18O in the UV photolysis of nitrous oxide. *Geophysical Research Letters*, **2000**, 27, 1399-1402 | 4.9 | 42 |
| 220 | Trace Gas Measurements Between Moscow and Vladivostok Using the Trans-Siberian Railroad. *Journal of Atmospheric Chemistry*, **1998**, 29, 179-194 | 3.2 | 41 |
| 219 | Rapid Sediment Accumulation Results in High Methane Effluxes from Coastal Sediments. *PLoS ONE*, **2016**, 11, e0161609 | 3.7 | 41 |
| 218 | Observation-based assessment of stratospheric fractional release, lifetimes, and ozone depletion potentials of ten important source gases. *Atmospheric Chemistry and Physics*, **2013**, 13, 2779-2791 | 6.8 | 39 |
| 217 | High-precision determination of the changing isotopic composition of atmospheric N2O from 1990 to 2002. *Journal of Geophysical Research*, **2005**, 110, | | 39 |
| 216 | Constraints on N<sub>2</sub>O budget changes since pre-industrial time from new firn air and ice core isotope measurements. *Atmospheric Chemistry and Physics*, **2006**, 6, 493-503 | 6.8 | 39 |
| 215 | Contribution of mass-dependent fractionation to the oxygen isotope anomaly of atmospheric nitrous oxide. *Journal of Geophysical Research*, **2004**, 109, n/a-n/a | | 39 |
| 214 | Review of progress in isotope studies of atmospheric carbon monoxide. *Chemosphere*, **1999**, 1, 33-52 | | 38 |
| 213 | Long-term tropospheric trend of octafluorocyclobutane (c-C<sub>4</sub>F<sub>8</sub> or PFC-318). *Atmospheric Chemistry and Physics*, **2012**, 12, 261-269 | 6.8 | 37 |
| 212 | Atmospheric CH4 along the Trans-Siberian railroad (TROICA) and river Ob: Source identification using stable isotope analysis. *Atmospheric Environment*, **2006**, 40, 5617-5628 | 5.3 | 37 |
| 211 | Soil carbon content and relative abundance of high affinity H2-oxidizing bacteria predict atmospheric H2 soil uptake activity better than soil microbial community composition. *Soil Biology and Biochemistry*, **2015**, 85, 1-9 | 7.5 | 36 |

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| 210 | The isotopic composition of methane in the stratosphere: high-altitude balloon sample measurements. *Atmospheric Chemistry and Physics*, **2011**, 11, 13287-13304 | 6.8 | 36 |
| 209 | Early anthropogenic CH4 emissions and the variation of CH4 and 13CH4 over the last millennium. *Global Biogeochemical Cycles*, **2008**, 22, n/a-n/a | 5.9 | 36 |
| 208 | What can <sup>14</sup>CO measurements tell us about OH?. *Atmospheric Chemistry and Physics*, **2008**, 8, 5033-5044 | 6.8 | 36 |
| 207 | Methane emissions from floodplains in the Amazon Basin: challenges in developing a process-based model for global applications. *Biogeosciences*, **2014**, 11, 1519-1558 | 4.6 | 35 |
| 206 | Comparing optimized CO emission estimates using MOPITT or NOAA surface network observations. *Journal of Geophysical Research*, **2012**, 117, n/a-n/a | | 35 |
| 205 | Simultaneous stable isotope analysis of methane and nitrous oxide on ice core samples. *Atmospheric Measurement Techniques*, **2011**, 4, 2607-2618 | 4 | 35 |
| 204 | Relative tropospheric photolysis rates of HCHO and HCDO measured at the European Photoreactor Facility. *Journal of Physical Chemistry A*, **2007**, 111, 9034-46 | 2.8 | 35 |
| 203 | High-precision isotope measurements of H<sub>2</sub><sup>16</sup>O, H<sub>2</sub><sup>17</sup>O, H<sub>2</sub><sup>18</sup>O, and the  <sup>17</sup>O-anomaly of water vapor in the southern lowermost stratosphere. | 6.8 | 35 |
| 202 | A rapid method for the preparation of O2 from CO2 for mass spectrometric measurement of 17O/16O ratios **1998**, 12, 479-483 | | 34 |
| 201 | Real-time analysis of <i></i><sup>13</sup>C- and <i></i>D-CH<sub>4</sub> in ambient air with laser spectroscopy: method development and first intercomparison results. *Atmospheric Measurement Techniques*, **2016**, 9, 263-280 | 4 | 34 |
| 200 | Enhanced methane emissions from tropical wetlands during the 2011 La Ni. *Scientific Reports*, **2017**, 7, 45759 | 4.9 | 33 |
| 199 | Evaluating the performance of commonly used gas analysers for methane eddy covariance flux measurements: the InGOS inter-comparison field experiment. *Biogeosciences*, **2014**, 11, 3163-3186 | 4.6 | 33 |
| 198 | Russian doll type cryogenic traps: improved design and isotope separation effects. *Analytical Chemistry*, **1996**, 68, 3050-3 | 7.8 | 33 |
| 197 | The origin of methane in the East Siberian Arctic Shelf unraveled with triple isotope analysis. *Biogeosciences*, **2017**, 14, 2283-2292 | 4.6 | 32 |
| 196 | Ultra-violet absorption cross sections of isotopically substituted nitrous oxide species: <sup>14</sup>N<sup>14</sup>NO, <sup>15</sup>N<sup>14</sup>NO, <sup>14</sup>N<sup>15</sup>NO and | 6.8 | 32 |
| 195 | Methane flux, vertical gradient and mixing ratio measurements in a tropical forest. *Atmospheric Chemistry and Physics*, **2011**, 11, 7943-7953 | 6.8 | 30 |
| 194 | Effect of UV radiation and temperature on the emission of methane from plant biomass and structural components | | 30 |
| 193 | Sources and formation mechanisms of carbonaceous aerosol at a regional background site in the Netherlands: insights from a year-long radiocarbon study. *Atmospheric Chemistry and Physics*, **2017**, 17, 3233-3251 | 6.8 | 27 |

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| 192 | Methyl chloride and C2–5 hydrocarbon emissions from dry leaf litter and their dependence on temperature. *Atmospheric Environment*, **2011**, 45, 3112-3119 | 5.3 | 27 |
| 191 | Ozonolysis of nonmethane hydrocarbons as a source of the observed mass independent oxygen isotope enrichment in tropospheric CO. *Journal of Geophysical Research*, **1998**, 103, 1463-1470 | | 27 |
| 190 | The contribution of fossil sources to the organic aerosol in the Netherlands. *Atmospheric Environment*, **2013**, 74, 169-176 | 5.3 | 26 |
| 189 | A consistent molecular hydrogen isotope chemistry scheme based on an independent bond approximation. *Atmospheric Chemistry and Physics*, **2009**, 9, 8503-8529 | 6.8 | 26 |
| 188 | Hydrogen isotope fractionation in the photolysis of formaldehyde. *Atmospheric Chemistry and Physics*, **2008**, 8, 1353-1366 | 6.8 | 26 |
| 187 | Mass spectrometric method for the absolute calibration of the intramolecular nitrogen isotope distribution in nitrous oxide. *Analytical and Bioanalytical Chemistry*, **2004**, 378, 256-69 | 4.4 | 26 |
| 186 | Reconstruction of Northern Hemisphere 1950–2010 atmospheric non-methane hydrocarbons. *Atmospheric Chemistry and Physics*, **2014**, 14, 1463-1483 | 6.8 | 25 |
| 185 | Estimation of aerosol water and chemical composition from AERONET Sun–sky radiometer measurements at Cabauw, the Netherlands. *Atmospheric Chemistry and Physics*, **2014**, 14, 5969-5987 | 6.8 | 25 |
| 184 | Interannual variability of carbon monoxide emission estimates over South America from 2006 to 2010. *Journal of Geophysical Research*, **2012**, 117, n/a-n/a | | 25 |
| 183 | Distributions, long term trends and emissions of four perfluorocarbons in remote parts of the atmosphere and firn air. *Atmospheric Chemistry and Physics*, **2012**, 12, 4081-4090 | 6.8 | 25 |
| 182 | Stable isotopic compositions of carbon monoxide from biomass burning experiments. *Atmospheric Environment*, **1999**, 33, 4357-4362 | 5.3 | 25 |
| 181 | On the interference of Kr during carbon isotope analysis of methane using continuous-flow combustion–isotope ratio mass spectrometry. *Atmospheric Measurement Techniques*, **2013**, 6, 1425-1445 | 4 | 24 |
| 180 | The impact of anthropogenic chlorine emissions, stratospheric ozone change and chemical feedbacks on stratospheric water. *Atmospheric Chemistry and Physics*, **2004**, 4, 693-699 | 6.8 | 24 |
| 179 | CO2+O(1 D) isotopic exchange: Laboratory and modeling studies. *Journal of Geophysical Research*, **2000**, 105, 15213-15229 | | 24 |
| 178 | Interlaboratory comparison of <i></i><sup>13</sup>C and <i></i>D measurements of atmospheric CH<sub>4</sub> for combined use of data sets from different laboratories. *Atmospheric Measurement Techniques*, **2018**, 11, 1207-1231 | 4 | 24 |
| 177 | Sensitivity of PARASOL multi-angle photopolarimetric aerosol retrievals to cloud contamination. *Atmospheric Measurement Techniques*, **2015**, 8, 1287-1301 | 4 | 23 |
| 176 | Inverse modeling of GOSAT-retrieved ratios of total column CH<sub>4</sub> and CO<sub>2</sub> for 2009 and 2010. *Atmospheric Chemistry and Physics*, **2016**, 16, 5043-5062 | 6.8 | 23 |
| 175 | Methyl chloride emissions from halophyte leaf litter: dependence on temperature and chloride content. *Chemosphere*, **2012**, 87, 483-9 | 8.4 | 23 |

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| 174 | Emissions of H2 and CO from leaf litter of Sequoiadendron giganteum, and their dependence on UV radiation and temperature. *Atmospheric Environment*, **2011**, 45, 7520-7524 | 5.3 | 23 |
| 173 | Molecular hydrogen (H<sub>2</sub>) emissions and their isotopic signatures (H/D) from a motor vehicle: implications on atmospheric H<sub>2</sub>. *Atmospheric Chemistry and Physics*, **2010**, 10, 5707-5718 | 6.8 | 23 |
| 172 | Temperature dependence of isotope fractionation in N2O photolysis. *Physical Chemistry Chemical Physics*, **2002**, 4, 4420-4430 | 3.6 | 23 |
| 171 | Measurements of stable carbon and oxygen isotopic compositions of CO in automobile exhausts and ambient air from semi-urban Mainz, Germany.. *Geochemical Journal*, **1999**, 33, 73-77 | 0.9 | 23 |
| 170 | East Siberian Arctic inland waters emit mostly contemporary carbon. *Nature Communications*, **2020**, 11, 1627 | 17.4 | 22 |
| 169 | Global modelling of H<sub>2</sub> mixing ratios and isotopic compositions with the TM5 model. *Atmospheric Chemistry and Physics*, **2011**, 11, 7001-7026 | 6.8 | 22 |
| 168 | Comparison of HDO measurements from Envisat/MIPAS with observations by Odin/SMR and SCISAT/ACE-FTS. *Atmospheric Measurement Techniques*, **2011**, 4, 1855-1874 | 4 | 22 |
| 167 | Correction of mass spectrometric isotope ratio measurements for isobaric isotopologues of O2, CO, CO2, N2O and SO2. *Rapid Communications in Mass Spectrometry*, **2008**, 22, 3997-4008 | 2.2 | 22 |
| 166 | Influence of flooding on delta15N, delta18O, 1delta15N and 2delta15N signatures of N2O released from estuarine soils--a laboratory experiment using tidal flooding chambers. *Rapid Communications in Mass Spectrometry*, **2004**, 18, 1561-8 | 2.2 | 22 |
| 165 | Absolute measurement of the abundance of atmospheric carbon monoxide. *Journal of Geophysical Research*, **2001**, 106, 10003-10010 | | 22 |
| 164 | Statistical clumped isotope signatures. *Scientific Reports*, **2016**, 6, 31947 | 4.9 | 22 |
| 163 | Investigations of the photochemical isotope equilibrium between O<sub>2</sub>, CO<sub>2</sub> and O<sub>3</sub>. *Atmospheric Chemistry and Physics*, **2007**, 7, 495-509 | 6.8 | 21 |
| 162 | Development and evaluation of a suite of isotope reference gases for methane in air. *Atmospheric Measurement Techniques*, **2016**, 9, 3717-3737 | 4 | 20 |
| 161 | Characteristics, sources and evolution of fine aerosol (PM 1 ) at urban, coastal and forest background sites in Lithuania. *Atmospheric Environment*, **2017**, 148, 62-76 | 5.3 | 19 |
| 160 | Studying the spatial variability of methane flux with five eddy covariance towers of varying height. *Agricultural and Forest Meteorology*, **2015**, 214-215, 456-472 | 5.8 | 19 |
| 159 | Evaluation of a two-step thermal method for separating organic and elemental carbon for radiocarbon analysis. *Atmospheric Measurement Techniques*, **2014**, 7, 1943-1955 | 4 | 19 |
| 158 | Fractional release factors of long-lived halogenated organic compounds in the tropical stratosphere. *Atmospheric Chemistry and Physics*, **2010**, 10, 1093-1103 | 6.8 | 19 |
| 157 | Short-term variations in the 13C/12C ratio of CO as a measure of Cl activation during tropospheric ozone depletion events in the Arctic. *Journal of Geophysical Research*, **1999**, 104, 1691-1697 | | 19 |

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| 156 | Impact of a future H 2 transportation on atmospheric pollution in Europe. *Atmospheric Environment* , **2015**, 113, 208-222 | 5.3 | 18 |
| 155 | Can the carbon isotopic composition of methane be reconstructed from multi-site firn air measurements?. *Atmospheric Chemistry and Physics*, **2013**, 13, 6993-7005 | 6.8 | 18 |
| 154 | Reassessing the variability in atmospheric H2 using the two-way nested TM5 model. *Journal of Geophysical Research D: Atmospheres*, **2013**, 118, 3764-3780 | 4.4 | 18 |
| 153 | Absence of isotope exchange in the reaction of N2O + O(1D) and the global 17O budget of nitrous oxide. *Geophysical Research Letters*, **2005**, 32, | 4.9 | 18 |
| 152 | Determination of the triple oxygen and carbon isotopic composition of CO from atomic ion fragments formed in the ion source of the 253 Ultra high-resolution isotope ratio mass spectrometer. *Rapid Communications in Mass Spectrometry*, **2019**, 33, 1363-1380 | 2.2 | 17 |
| 151 | Temporal and spatial variability of the stable isotopic composition of atmospheric molecular hydrogen: observations at six EUROHYDROS stations. *Atmospheric Chemistry and Physics*, **2011**, 11, 6985-6999 | 6.8 | 17 |
| 150 | Isotopic composition of H2 from wood burning: Dependency on combustion efficiency, moisture content, and D of local precipitation. *Journal of Geophysical Research*, **2010**, 115, | | 17 |
| 149 | Observed and modeled seasonal variation of 13C, 18O, and 14C of atmospheric CO at Happo, a remote site in Japan, and a comparison with other records. *Journal of Geophysical Research*, **2000**, 105, 8891-8900 | | 17 |
| 148 | Offline thermal-desorption proton-transfer-reaction mass spectrometry to study composition of organic aerosol. *Journal of Aerosol Science*, **2015**, 79, 1-14 | 4.3 | 16 |
| 147 | Sources and atmospheric processing of size segregated aerosol particles revealed by stable carbon isotope ratios and chemical speciation. *Environmental Pollution*, **2018**, 240, 286-296 | 9.3 | 16 |
| 146 | Analysis of global methane changes after the 1991 Pinatubo volcanic eruption. *Atmospheric Chemistry and Physics*, **2013**, 13, 2267-2281 | 6.8 | 16 |
| 145 | Characterization of pollution events observed at Schauinsland, Germany, using CO and its stable isotopes. *Atmospheric Environment*, **2002**, 36, 2831-2840 | 5.3 | 16 |
| 144 | Detailed analysis of the isotopic composition of CO and characterization of the air masses arriving at Mount Sonnblick (Austrian Alps). *Journal of Geophysical Research*, **2001**, 106, 3179-3193 | | 16 |
| 143 | Water drives the deuterium content of the methane emitted from plants. *Geochimica Et Cosmochimica Acta*, **2010**, 74, 3865-3873 | 5.5 | 15 |
| 142 | Isotope effect in the formation of H<sub>2</sub> from H<sub>2</sub>CO studied at the atmospheric simulation chamber SAPHIR. *Atmospheric Chemistry and Physics*, **2010**, 10, 5343-5357 | 6.8 | 15 |
| 141 | What caused the extreme CO concentrations during the 2017 high-pollution episode in India?. *Atmospheric Chemistry and Physics*, **2019**, 19, 3433-3445 | 6.8 | 14 |
| 140 | Continued increase of CFC-113a (CCl<sub>3</sub>CF<sub>3</sub>) mixing ratios in the global atmosphere: emissions, occurrence and potential sources. *Atmospheric Chemistry and Physics*, **2018**, 18, 4737-4751 | 6.8 | 14 |
| 139 | Evaluation of stratospheric age of air from CF<sub>4</sub>, C<sub>2</sub>F<sub>6</sub>, C<sub>3</sub>F<sub>8</sub>, CHF<sub>3</sub>, HFC-125, HFC-227ea and SF<sub>6</sub>: implications for the calculations of halocarbon lifetimes, fractional release factors and ozone depletion potentials. *Atmospheric Chemistry and Physics*, **2018**, 18, 3369-3385 | 6.8 | 14 |

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| 138 | Global 3-D Simulations of the Triple Oxygen Isotope Signature Δ in Atmospheric CO. *Journal of Geophysical Research D: Atmospheres*, **2019**, 124, 8808-8836 | 4.4 | 14 |
| 137 | Characterisation of the semi-volatile component of Dissolved Organic Matter by Thermal Desorption - Proton Transfer Reaction - Mass Spectrometry. *Scientific Reports*, **2017**, 7, 15936 | 4.9 | 14 |
| 136 | The effect of stratospheric sulfur from Mount Pinatubo on tropospheric oxidizing capacity and methane. *Journal of Geophysical Research D: Atmospheres*, **2015**, 120, 1202-1220 | 4.4 | 14 |
| 135 | An automated GC-C-GC-IRMS setup to measure palaeoatmospheric <sup>13</sup>C-CH<sub>4</sub>, <sup>15</sup>N-N<sub>2</sub>O and <sup>18</sup>O-N<sub>2</sub>O in one ice core sample. *Atmospheric* | 4 | 14 |
| 134 | H<sub>2</sub> vertical profiles in the continental boundary layer: measurements at the Cabauw tall tower in The Netherlands. *Atmospheric Chemistry and Physics*, **2011**, 11, 6425-6443 | 6.8 | 14 |
| 133 | Methodological aspects of atmospheric 14CO measurements with AMS. *Nuclear Instruments & Methods in Physics Research B*, **2000**, 172, 530-536 | 1.2 | 14 |
| 132 | The error in conventionally reported 13C/12C ratios of atmospheric CO due to the presence of mass independent oxygen isotope enrichment. *Geophysical Research Letters*, **1998**, 25, 3163-3166 | 4.9 | 14 |
| 131 | Estimating CH<sub>4</sub>, CO<sub>2</sub> and CO emissions from coal mining and industrial activities in the Upper Silesian Coal Basin using an aircraft-based mass balance approach. *Atmospheric Chemistry and Physics*, **2020**, 20, 12675-12695 | 6.8 | 14 |
| 130 | Multiangle photopolarimetric aerosol retrievals in the vicinity of clouds: Synthetic study based on a large eddy simulation. *Journal of Geophysical Research D: Atmospheres*, **2016**, 121, 12,914-12,935 | 4.4 | 13 |
| 129 | Iconic CO2 time series at risk. *Science*, **2012**, 337, 1038-40 | 33.3 | 13 |
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