Christian Frankenberg

List of Publications by Year
in descending order

234 papers	24,956 citations	6606 79 h-index	8852 145 g-index
341 all docs	341 docs citations	341 times ranked	13042 citing authors

#	Article	IF	Citations
1	The Global Methane Budget 2000â€“2017. Earth System Science Data, 2020, 12, 1561-1623.	3.7	1,199
2	The global methane budget 2000â€“2012. Earth System Science Data, 2016, 8, 697-751.	3.7	824
3	Linking chlorophyll a fluorescence to photosynthesis for remote sensing applications: mechanisms and challenges. Journal of Experimental Botany, 2014, 65, 4065-4095.	2.4	770
4	New global observations of the terrestrial carbon cycle from GOSAT: Patterns of plant fluorescence with gross primary productivity. Geophysical Research Letters, 2011, 38, n/a-n/a.	1.5	749
5	Global and time-resolved monitoring of crop photosynthesis with chlorophyll fluorescence. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, E1327-33.	3.3	741
6	The ACOS CO₂ retrieval algorithm â€“ Part 1: Description and validation against synthetic observations. Atmospheric Measurement Techniques, 2012, 5, 99-121.	1.2	530
7	Global monitoring of terrestrial chlorophyll fluorescence from moderate-spectral-resolution near-infrared satellite measurements: methodology, simulations, and application to GOME-2. Atmospheric Measurement Techniques, 2013, 6, 2803-2823.	1.2	480
8	OCO-2 advances photosynthesis observation from space via solar-induced chlorophyll fluorescence. Science, 2017, 358, .	6.0	438
9	Retrieval and global assessment of terrestrial chlorophyll fluorescence from GOSAT space measurements. Remote Sensing of Environment, 2012, 121, 236-251.	4.6	436
10	Assessing Methane Emissions from Global Space-Borne Observations. Science, 2005, 308, 1010-1014.	6.0	392
11	Remote sensing of solar-induced chlorophyll fluorescence (SIF) in vegetation: 50â€¯years of progress. Remote Sensing of Environment, 2019, 231, 111177.	4.6	372
12	Prospects for chlorophyll fluorescence remote sensing from the Orbiting Carbon Observatory-2. Remote Sensing of Environment, 2014, 147, 1-12.	4.6	361
13	Toward accurate CO₂and CH₄observations from GOSAT. Geophysical Research Letters, 2011, 38, n/a-n/a.	1.5	355
14	Observing terrestrial ecosystems and the carbon cycle from space. Global Change Biology, 2015, 21, 1762-1776.	4.2	339
15	The ACOS CO₂ retrieval algorithm â€“ Part II: Global X_{CO₂} data characterization. Atmospheric Measurement Techniques, 2012, 5, 687-707.	1.2	320
16	Contrasting carbon cycle responses of the tropical continents to the 2015â€“2016 El NiÃ±o. Science, 2017, 358, .	6.0	307
17	Overview of Solar-Induced chlorophyll Fluorescence (SIF) from the Orbiting Carbon Observatory-2: Retrieval, cross-mission comparison, and global monitoring for GPP. Remote Sensing of Environment, 2018, 209, 808-823.	4.6	305
18	Large-Scale Controls of Methanogenesis Inferred from Methane and Gravity Spaceborne Data. Science, 2010, 327, 322-325.	6.0	304

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19	Inverse modeling of global and regional CH₄ emissions using SCIAMACHY satellite retrievals. Journal of Geophysical Research, 2009, 114, .	3.3	280
20	A method for evaluating bias in global measurements of CO₂ total columns from space. Atmospheric Chemistry and Physics, 2011, 11, 12317-12337.	1.9	279
21	The on-orbit performance of the Orbiting Carbon Observatory-2 (OCO-2) instrument and its radiometrically calibrated products. Atmospheric Measurement Techniques, 2017, 10, 59-81.	1.2	271
22	Joint control of terrestrial gross primary productivity by plant phenology and physiology. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 2788-2793.	3.3	265
23	Satellite chartography of atmospheric methane from SCIAMACHY on board ENVISAT: 2. Evaluation based on inverse model simulations. Journal of Geophysical Research, 2007, 112, .	3.3	263
24	Source attribution of the changes in atmospheric methane for 2006â€“2008. Atmospheric Chemistry and Physics, 2011, 11, 3689-3700.	1.9	252
25	Forest productivity and water stress in Amazonia: observations from GOSAT chlorophyll fluorescence. Proceedings of the Royal Society B: Biological Sciences, 2013, 280, 20130171.	1.2	245
26	Global Retrievals of Solarâ€Induced Chlorophyll Fluorescence With TROPOMI: First Results and Intersensor Comparison to OCOâ€2. Geophysical Research Letters, 2018, 45, 10456-10463.	1.5	242
27	Soil moistureâ€“atmosphere feedback dominates land carbon uptake variability. Nature, 2021, 592, 65-69.	13.7	241
28	Satellite observations of atmospheric methane and their value for quantifying methane emissions. Atmospheric Chemistry and Physics, 2016, 16, 14371-14396.	1.9	230
29	Atmospheric CH₄ in the first decade of the 21st century: Inverse modeling analysis using SCIAMACHY satellite retrievals and NOAA surface measurements. Journal of Geophysical Research D: Atmospheres, 2013, 118, 7350-7369.	1.2	226
30	Drought onset mechanisms revealed by satellite solarâ€induced chlorophyll fluorescence: Insights from two contrasting extreme events. Journal of Geophysical Research G: Biogeosciences, 2015, 120, 2427-2440.	1.3	224
31	Mechanistic evidence for tracking the seasonality of photosynthesis with solar-induced fluorescence. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 11640-11645.	3.3	219
32	Ambiguity in the causes for decadal trends in atmospheric methane and hydroxyl. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 5367-5372.	3.3	213
33	Decadal record of satellite carbon monoxide observations. Atmospheric Chemistry and Physics, 2013, 13, 837-850.	1.9	207
34	Interpreting contemporary trends in atmospheric methane. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 2805-2813.	3.3	205
35	Constraining global methane emissions and uptake by ecosystems. Biogeosciences, 2011, 8, 1643-1665.	1.3	202
36	Tropical methane emissions: A revised view from SCIAMACHY onboard ENVISAT. Geophysical Research Letters, 2008, 35, .	1.5	199

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37	Californiaâ€™s methane super-emitters. Nature, 2019, 575, 180-184.	13.7	192
38	Optical vegetation indices for monitoring terrestrial ecosystems globally. Nature Reviews Earth & Environment, 2022, 3, 477-493.	12.2	191
39	Disentangling chlorophyll fluorescence from atmospheric scattering effects in O₂A-band spectra of reflected sun-light. Geophysical Research Letters, 2011, 38, n/a-n/a.	1.5	189
40	Global column-averaged methane mixing ratios from 2003 to 2009 as derived from SCIAMACHY: Trends and variability. Journal of Geophysical Research, 2011, 116, .	3.3	188
41	Improved retrievals of carbon dioxide from Orbiting Carbon Observatory-2 with the version 8 ACOS algorithm. Atmospheric Measurement Techniques, 2018, 11, 6539-6576.	1.2	188
42	Dynamic Processes Governing Lower-Tropospheric HDO/H ₂ O Ratios as Observed from Space and Ground. Science, 2009, 325, 1374-1377.	6.0	187
43	Satellite chartography of atmospheric methane from SCIAMACHY on board ENVISAT: Analysis of the years 2003 and 2004. Journal of Geophysical Research, 2006, 111, .	3.3	182
44	The Orbiting Carbon Observatory-2: first 18Âmonths of science data products. Atmospheric Measurement Techniques, 2017, 10, 549-563.	1.2	180
45	Application of satellite solar-induced chlorophyll fluorescence to understanding large-scale variations in vegetation phenology and function over northern high latitude forests. Remote Sensing of Environment, 2017, 190, 178-187.	4.6	175
46	Airborne methane remote measurements reveal heavy-tail flux distribution in Four Corners region. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 9734-9739.	3.3	174
47	Spaceâ€based observations of megacity carbon dioxide. Geophysical Research Letters, 2012, 39, .	1.5	170
48	Terrestrial gross primary production inferred from satellite fluorescence and vegetation models. Global Change Biology, 2014, 20, 3103-3121.	4.2	161
49	The Orbiting Carbon Observatory-2 early science investigations of regional carbon dioxide fluxes. Science, 2017, 358, .	6.0	157
50	Iterative maximum a posteriori (IMAP)-DOAS for retrieval of strongly absorbing trace gases: Model studies for CH₄ and CO₂ retrieval from near infrared spectra of SCIAMACHY onboard ENVISAT. Atmospheric Chemistry and Physics, 2005, 5, 9-22.	1.9	154
51	Potential of the TROPOspheric Monitoring Instrument (TROPOMI) onboard the Sentinel-5 Precursor for the monitoring of terrestrial chlorophyll fluorescence. Atmospheric Measurement Techniques, 2015, 8, 1337-1352.	1.2	152
52	Retrievals of atmospheric CO_2 from simulated space-borne measurements of backscattered near-infrared sunlight: accounting for aerosol effects. Applied Optics, 2009, 48, 3322.	2.1	146
53	Four corners: The largest US methane anomaly viewed from space. Geophysical Research Letters, 2014, 41, 6898-6903.	1.5	142
54	Profiles of CH₄, HDO, H₂O, and N₂O with improved lower tropospheric vertical resolution from Aura TES radiances. Atmospheric Measurement Techniques, 2012, 5, 397-411.	1.2	141

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55	Effect of environmental conditions on the relationship between solarâ€induced fluorescence and gross primary productivity at an OzFlux grassland site. Journal of Geophysical Research G: Biogeosciences, 2017, 122, 716-733.	1.3	139
56	Methane retrievals from Greenhouse Gases Observing Satellite (GOSAT) shortwave infrared measurements: Performance comparison of proxy and physics retrieval algorithms. Journal of Geophysical Research, 2012, 117, .	3.3	128
57	Mapping of North American methane emissions with high spatial resolution by inversion of SCIAMACHY satellite data. Journal of Geophysical Research D: Atmospheres, 2014, 119, 7741-7756.	1.2	126
58	Inverse modelling of CH₄ emissions for 2010â€“2011 using different satellite retrieval products from GOSAT and SCIAMACHY. Atmospheric Chemistry and Physics, 2015, 15, 113-133.	1.9	126
59	Remote sensing of near-infrared chlorophyll fluorescence from space in scattering atmospheres: implications for its retrieval and interferences with atmospheric CO₂ retrievals. Atmospheric Measurement Techniques, 2012, 5, 2081-2094.	1.2	121
60	Using field spectroscopy to assess the potential of statistical approaches for the retrieval of sun-induced chlorophyll fluorescence from ground and space. Remote Sensing of Environment, 2013, 133, 52-61.	4.6	121
61	Satellite observations of atmospheric SO2 from volcanic eruptions during the time-period of 1996â€“2002. Advances in Space Research, 2005, 36, 879-887.	1.2	115
62	Processâ€evaluation of tropospheric humidity simulated by general circulation models using water vapor isotopologues: 1. Comparison between models and observations. Journal of Geophysical Research, 2012, 117, .	3.3	114
63	The Orbiting Carbon Observatory (OCO-2): spectrometer performance evaluation using pre-launch direct sun measurements. Atmospheric Measurement Techniques, 2015, 8, 301-313.	1.2	113
64	The Greenhouse Gas Climate Change Initiative (GHG-CCI): Comparison and quality assessment of near-surface-sensitive satellite-derived CO2 and CH4 global data sets. Remote Sensing of Environment, 2015, 162, 344-362.	4.6	112
65	Real-time remote detection and measurement for airborne imaging spectroscopy: a case study with methane. Atmospheric Measurement Techniques, 2015, 8, 4383-4397.	1.2	111
66	A multi-year methane inversion using SCIAMACHY, accounting for systematic errors using TCCON measurements. Atmospheric Chemistry and Physics, 2014, 14, 3991-4012.	1.9	106
67	Pressure broadening in the 2Î½₃ band of methane and its implication on atmospheric retrievals. Atmospheric Chemistry and Physics, 2008, 8, 5061-5075.	1.9	104
68	Comparisons between SCIAMACHY and ground-based FTIR data for total columns of CO, CH₄, CO₂ and N₂O. Atmospheric Chemistry and Physics, 2006, 6, 1953-1976.	1.9	103
69	Atmospheric constraints on global emissions of methane from plants. Geophysical Research Letters, 2006, 33, .	1.5	102
70	Mapping methane concentrations from a controlled release experiment using the next generation airborne visible/infrared imaging spectrometer (AVIRIS-NG). Remote Sensing of Environment, 2016, 179, 104-115.	4.6	101
71	PhotoSpec: A new instrument to measure spatially distributed red and far-red Solar-Induced Chlorophyll Fluorescence. Remote Sensing of Environment, 2018, 216, 311-327.	4.6	100
72	Multiscale analyses of solarâ€induced florescence and gross primary production. Geophysical Research Letters, 2017, 44, 533-541.	1.5	98

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73	Methane formation in aerobic environments. Environmental Chemistry, 2009, 6, 459.	0.7	96
74	Role of continental recycling in intraseasonal variations of continental moisture as deduced from model simulations and water vapor isotopic measurements. Water Resources Research, 2013, 49, 4136-4156.	1.7	96
75	Understanding the Sahelian water budget through the isotopic composition of water vapor and precipitation. Journal of Geophysical Research, 2010, 115, .	3.3	95
76	Simulations of chlorophyll fluorescence incorporated into the <scp>C</scp>ommunity <scp>L</scp>and <scp>M</scp>odel version 4. Global Change Biology, 2015, 21, 3469-3477.	4.2	95
77	Fourâ€dimensional variational data assimilation for inverse modeling of atmospheric methane emissions: Analysis of SCIAMACHY observations. Journal of Geophysical Research, 2008, 113, .	3.3	92
78	On the consistency between global and regional methane emissions inferred from SCIAMACHY, TANSO-FTS, IASI and surface measurements. Atmospheric Chemistry and Physics, 2014, 14, 577-592.	1.9	91
79	Interpreting seasonal changes in the carbon balance of southern Amazonia using measurements of XCO₂ and chlorophyll fluorescence from GOSAT. Geophysical Research Letters, 2013, 40, 2829-2833.	1.5	89
80	OCO-3 early mission operations and initial (vEarly) XCO2 and SIF retrievals. Remote Sensing of Environment, 2020, 251, 112032.	4.6	89
81	MERLIN: A French-German Space Lidar Mission Dedicated to Atmospheric Methane. Remote Sensing, 2017, 9, 1052.	1.8	88
82	Asian monsoon hydrometeorology from TES and SCIAMACHY water vapor isotope measurements and LMDZ simulations: Implications for speleothem climate record interpretation. Journal of Geophysical Research, 2012, 117, .	3.3	87
83	Connecting active to passive fluorescence with photosynthesis: a method for evaluating remote sensing measurements of Chl fluorescence. New Phytologist, 2017, 215, 1594-1608.	3.5	87
84	Variability and quasi-decadal changes in the methane budget over the period 2000â€"2012. Atmospheric Chemistry and Physics, 2017, 17, 11135-11161.	1.9	85
85	CH₄ retrievals from spaceâ€based solar backscatter measurements: Performance evaluation against simulated aerosol and cirrus loaded scenes. Journal of Geophysical Research, 2010, 115, .	3.3	80
86	Investigating the usefulness of satellite-derived fluorescence data in inferring gross primary productivity within the carbon cycle data assimilation system. Biogeosciences, 2015, 12, 4067-4084.	1.3	80
87	Consistent evaluation of ACOS-GOSAT, BESD-SCIAMACHY, CarbonTracker, and MACC through comparisons to TCCON. Atmospheric Measurement Techniques, 2016, 9, 683-709.	1.2	80
88	Retrieval of CO from SCIAMACHY onboard ENVISAT: detection of strongly polluted areas and seasonal patterns in global CO abundances. Atmospheric Chemistry and Physics, 2005, 5, 1639-1644.	1.9	79
89	Quantification of uncertainties in OCO-2 measurements of XCO₂: simulations and linear error analysis. Atmospheric Measurement Techniques, 2016, 9, 5227-5238.	1.2	79
90	Highâ€Resolution Global Contiguous SIF of OCOâ€2. Geophysical Research Letters, 2019, 46, 1449-1458.	1.5	79

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91	TROPOMI reveals dry-season increase of solar-induced chlorophyll fluorescence in the Amazon forest. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 22393-22398.	3.3	78
92	Processâ€evaluation of tropospheric humidity simulated by general circulation models using water vapor isotopic observations: 2. Using isotopic diagnostics to understand the mid and upper tropospheric moist bias in the tropics and subtropics. Journal of Geophysical Research, 2012, 117, .	3.3	77
93	NIRVP: A robust structural proxy for sun-induced chlorophyll fluorescence and photosynthesis across scales. Remote Sensing of Environment, 2022, 268, 112763.	4.6	77
94	Spaceâ€based remote imaging spectroscopy of the Aliso Canyon CH₄ superemitter. Geophysical Research Letters, 2016, 43, 6571-6578.	1.5	76
95	From the Ground to Space: Using Solarâ€Induced Chlorophyll Fluorescence to Estimate Crop Productivity. Geophysical Research Letters, 2020, 47, e2020GL087474.	1.5	75
96	Disentangling Changes in the Spectral Shape of Chlorophyll Fluorescence: Implications for Remote Sensing of Photosynthesis. Journal of Geophysical Research G: Biogeosciences, 2019, 124, 1491-1507.	1.3	73
97	Detecting forest response to droughts with global observations of vegetation water content. Global Change Biology, 2021, 27, 6005-6024.	4.2	73
98	Airborne DOAS retrievals of methane, carbon dioxide, and water vapor concentrations at high spatial resolution: application to AVIRIS-NG. Atmospheric Measurement Techniques, 2017, 10, 3833-3850.	1.2	72
99	Orbiting Carbon Observatory-2 (OCO-2) cloud screening algorithms: validation against collocated MODIS and CALIOP data. Atmospheric Measurement Techniques, 2016, 9, 973-989.	1.2	71
100	The Greenhouse Gas Climate Change Initiative (GHG-CCI): comparative validation of GHG-CCI SCIAMACHY/ENVISAT and TANSO-FTS/GOSAT CO₂ and CH₄ retrieval algorithm products with measurements from the TCCON. Atmospheric Measurement Techniques, 2014, 7, 1723-1744.	1.2	70
101	Retrieval techniques for airborne imaging of methane concentrations using high spatial and moderate spectral resolution: application to AVIRIS. Atmospheric Measurement Techniques, 2014, 7, 491-506.	1.2	70
102	Comparison of an isotopic atmospheric general circulation model with new quasi-global satellite measurements of water vapor isotopologues. Journal of Geophysical Research, 2011, 116, .	3.3	66
103	Comparison of CH₄ inversions based on 15 months of GOSAT and SCIAMACHY observations. Journal of Geophysical Research D: Atmospheres, 2013, 118, 11,807.	1.2	66
104	Impact of atmospheric convection on south Tibet summer precipitation isotopologue composition using a combination of in situ measurements, satellite data, and atmospheric general circulation modeling. Journal of Geophysical Research D: Atmospheres, 2015, 120, 3852-3871.	1.2	66
105	Satellite-based survey of extreme methane emissions in the Permian basin. Science Advances, 2021, 7, .	4.7	66
106	A double peak in the seasonality of California's photosynthesis as observed from space. Biogeosciences, 2020, 17, 405-422.	1.3	64
107	Satellite-derived methane hotspot emission estimates using a fast data-driven method. Atmospheric Chemistry and Physics, 2017, 17, 5751-5774.	1.9	63
108	Tundra photosynthesis captured by satelliteâ€observed solarâ€induced chlorophyll fluorescence. Geophysical Research Letters, 2017, 44, 1564-1573.	1.5	62

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109	High spatial resolution imaging of methane and other trace gases with the airborne Hyperspectral Thermal Emission Spectrometer (HyTES). Atmospheric Measurement Techniques, 2016, 9, 2393-2408.	1.2	61
110	Water vapor isotopologue retrievals from high-resolution GOSAT shortwave infrared spectra. Atmospheric Measurement Techniques, 2013, 6, 263-274.	1.2	58
111	Solar Induced Chlorophyll Fluorescence: Origins, Relation to Photosynthesis and Retrieval. , 2018, , 143-162.		58
112	Potential of next-generation imaging spectrometers to detect and quantify methane point sources from space. Atmospheric Measurement Techniques, 2019, 12, 5655-5668.	1.2	58
113	Observed Impacts of COVIDâ€19 on Urban CO₂ Emissions. Geophysical Research Letters, 2020, 47, e2020GL090037.	1.5	57
114	Moisture availability mediates the relationship between terrestrial gross primary production and solarâ€induced chlorophyll fluorescence: Insights from globalâ€scale variations. Global Change Biology, 2021, 27, 1144-1156.	4.2	57
115	The TROPOSIF global sun-induced fluorescence dataset from the Sentinel-5P TROPOMI mission. Earth System Science Data, 2021, 13, 5423-5440.	3.7	54
116	Methane airborne measurements and comparison to global models during BARCA. Journal of Geophysical Research, 2012, 117, .	3.3	53
117	Aerosol information content analysis of multi-angle high spectral resolution measurements and its benefit for high accuracy greenhouse gas retrievals. Atmospheric Measurement Techniques, 2012, 5, 1809-1821.	1.2	52
118	Assimilation of atmospheric methane products into the MACC-II system: from SCIAMACHY to TANSO and IASI. Atmospheric Chemistry and Physics, 2014, 14, 6139-6158.	1.9	52
119	Global satellite observations of column-averaged carbon dioxide and methane: The GHG-CCI XCO2 and XCH4 CRDP3 data set. Remote Sensing of Environment, 2017, 203, 276-295.	4.6	52
120	A spatially downscaled sun-induced fluorescence global product for enhanced monitoring of vegetation productivity. Earth System Science Data, 2020, 12, 1101-1116.	3.7	52
121	African tropical rainforest net carbon dioxide fluxes in the twentieth century. Philosophical Transactions of the Royal Society B: Biological Sciences, 2013, 368, 20120376.	1.8	49
122	Solarâ€Induced Fluorescence Detects Interannual Variation in Gross Primary Production of Coniferous Forests in the Western United States. Geophysical Research Letters, 2018, 45, 7184-7193.	1.5	49
123	Assessing the benefit of satellite-based Solar-Induced Chlorophyll Fluorescence in crop yield prediction. International Journal of Applied Earth Observation and Geoinformation, 2020, 90, 102126.	1.4	48
124	Satellite observation of tropical forest seasonality: spatial patterns of carbon exchange in Amazonia. Environmental Research Letters, 2015, 10, 084005.	2.2	47
125	Systematic Assessment of Retrieval Methods for Canopy Farâ€Red Solarâ€Induced Chlorophyll Fluorescence Using Highâ€Frequency Automated Field Spectroscopy. Journal of Geophysical Research G: Biogeosciences, 2020, 125, e2019JG005533.	1.3	47
126	The 2Î½3 band of CH4 revisited with line mixing: Consequences for spectroscopy and atmospheric retrievals at 1.67Î¼m. Journal of Quantitative Spectroscopy and Radiative Transfer, 2010, 111, 1344-1356.	1.1	46

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127	Effects of atmospheric light scattering on spectroscopic observations of greenhouse gases from space. Part 2: Algorithm intercomparison in the GOSAT data processing for CO₂ retrievals over TCCON sites. Journal of Geophysical Research D: Atmospheres, 2013, 118, 1493-1512.	1.2	46
128	The Chlorophyll Fluorescence Imaging Spectrometer (CFIS), mapping far red fluorescence from aircraft. Remote Sensing of Environment, 2018, 217, 523-536.	4.6	45
129	The seasonal variation of the CO₂ flux over Tropical Asia estimated from GOSAT, CONTRAIL, and IASI. Geophysical Research Letters, 2014, 41, 1809-1815.	1.5	44
130	Improving Estimates of Gross Primary Productivity by Assimilating Solarâ€Induced Fluorescence Satellite Retrievals in a Terrestrial Biosphere Model Using a Processâ€Based SIF Model. Journal of Geophysical Research G: Biogeosciences, 2019, 124, 3281-3306.	1.3	44
131	The potential of satellite FPAR product for GPP estimation: An indirect evaluation using solar-induced chlorophyll fluorescence. Remote Sensing of Environment, 2020, 240, 111686.	4.6	42
132	Monitoring of atmospheric trace gases, clouds, aerosols and surface properties from UV/vis/NIR satellite instruments. Journal of Optics, 2008, 10, 104019.	1.5	41
133	Fast and Accurate Retrieval of Methane Concentration From Imaging Spectrometer Data Using Sparsity Prior. IEEE Transactions on Geoscience and Remote Sensing, 2020, 58, 6480-6492.	2.7	41
134	Cropland Carbon Uptake Delayed and Reduced by 2019 Midwest Floods. AGU Advances, 2020, 1, e2019AV000140.	2.3	41
135	El NiÃ±o, the 2006 Indonesian peat fires, and the distribution of atmospheric methane. Geophysical Research Letters, 2013, 40, 4938-4943.	1.5	40
136	CH₄ and CO distributions over tropical fires during October 2006 as observed by the Aura TES satellite instrument and modeled by GEOS-Chem. Atmospheric Chemistry and Physics, 2013, 13, 3679-3692.	1.9	39
137	Evaluation and attribution of OCO-2 XCO₂ uncertainties. Atmospheric Measurement Techniques, 2017, 10, 2759-2771.	1.2	39
138	Multisatellite Imaging of a Gas Well Blowout Enables Quantification of Total Methane Emissions. Geophysical Research Letters, 2021, 48, e2020GL090864.	1.5	39
139	Satellite footprint data from OCO-2 and TROPOMI reveal significant spatio-temporal and inter-vegetation type variabilities of solar-induced fluorescence yield in the U.S. Midwest. Remote Sensing of Environment, 2020, 241, 111728.	4.6	38
140	Application of SCIAMACHY and MOPITT CO total column measurements to evaluate model results over biomass burning regions and Eastern China. Atmospheric Chemistry and Physics, 2011, 11, 6083-6114.	1.9	37
141	Variations of oxygen-18 in West Siberian precipitation during the last 50 years. Atmospheric Chemistry and Physics, 2014, 14, 5853-5869.	1.9	36
142	Towards a Harmonized Longâ€Term Spaceborne Record of Farâ€Red Solarâ€Induced Fluorescence. Journal of Geophysical Research G: Biogeosciences, 2019, 124, 2518-2539.	1.3	36
143	Diurnal and Seasonal Dynamics of Solarâ€Induced Chlorophyll Fluorescence, Vegetation Indices, and Gross Primary Productivity in the Boreal Forest. Journal of Geophysical Research G: Biogeosciences, 2022, 127, .	1.3	36
144	Quantifying lower tropospheric methane concentrations using GOSAT near-IR and TES thermal IR measurements. Atmospheric Measurement Techniques, 2015, 8, 3433-3445.	1.2	34

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145	Synergistic use of SMAP and OCO-2 data in assessing the responses of ecosystem productivity to the 2018 U.S. drought. Remote Sensing of Environment, 2020, 251, 112062.	4.6	34
146	Accounting for canopy structure improves hyperspectral radiative transfer and sun-induced chlorophyll fluorescence representations in a new generation Earth System model. Remote Sensing of Environment, 2021, 261, 112497.	4.6	34
147	Methane concentrations over Monsoon Asia as observed by SCIAMACHY: Signals of methane emission from rice cultivation. Remote Sensing of Environment, 2013, 139, 246-256.	4.6	32
148	Evaluating the effects of surface properties on methane retrievals using a synthetic airborne visible/infrared imaging spectrometer next generation (AVIRIS-NG) image. Remote Sensing of Environment, 2018, 215, 386-397.	4.6	32
149	Atmospheric Methane Emissions Correlate With Natural Gas Consumption From Residential and Commercial Sectors in Los Angeles. Geophysical Research Letters, 2019, 46, 8563-8571.	1.5	32
150	Sustained Nonphotochemical Quenching Shapes the Seasonal Pattern of Solarâ€Induced Fluorescence at a Highâ€Elevation Evergreen Forest. Journal of Geophysical Research G: Biogeosciences, 2019, 124, 2005-2020.	1.3	32
151	Quantifying Global Power Plant Carbon Dioxide Emissions With Imaging Spectroscopy. AGU Advances, 2021, 2, e2020AV000350.	2.3	32
152	Evaluation and mechanism exploration of the diurnal hysteresis of ecosystem fluxes. Agricultural and Forest Meteorology, 2019, 278, 107642.	1.9	31
153	Global Retrievals of Solarâ€Induced Chlorophyll Fluorescence at Red Wavelengths With TROPOMI. Geophysical Research Letters, 2020, 47, e2020GL087541.	1.5	31
154	Satellite Constraints on the Latitudinal Distribution and Temperature Sensitivity of Wetland Methane Emissions. AGU Advances, 2021, 2, e2021AV000408.	2.3	31
155	Improved water vapour spectroscopy in the 4174â€“4300 cm^{âˆ’1} region and its impact on SCIAMACHY HDO/H₂O measurements. Atmospheric Measurement Techniques, 2013, 6, 879-894.	1.2	30
156	Simplified physically based retrieval of sun-induced chlorophyll fluorescence from GOSAT data. IEEE Geoscience and Remote Sensing Letters, 2015, 12, 1446-1450.	1.4	30
157	Fire decline in dry tropical ecosystems enhances decadal land carbon sink. Nature Communications, 2020, 11, 1900.	5.8	30
158	Seasonal variation in the canopy color of temperate evergreen conifer forests. New Phytologist, 2021, 229, 2586-2600.	3.5	30
159	Towards accurate methane point-source quantification from high-resolution 2-D plume imagery. Atmospheric Measurement Techniques, 2019, 12, 6667-6681.	1.2	30
160	Semi-autonomous sounding selection for OCO-2. Atmospheric Measurement Techniques, 2013, 6, 2851-2864.	1.2	29
161	Influence of ENSO and the NAO on terrestrial carbon uptake in the Texasâ€northern Mexico region. Global Biogeochemical Cycles, 2015, 29, 1247-1265.	1.9	29
162	Water vapour total columns from SCIAMACHY spectra in the 2.36 Î¼m window. Atmospheric Measurement Techniques, 2009, 2, 561-571.	1.2	27

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