Curriculum vitae



Örjan GUSTAFSSON (ORCID 0000-0002-1922-0527), Swedish

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Born 4 January 1968 (Skövde, Sweden), married to Maria Gustafsson, 3 children (Elsa, 2004; Erik, 2005; Anna, 2008; total of 1,5 years parental leave)

Home address: Flottarestigen 54, 19251 Sollentuna, Sweden

Scientific Discipline: **Earth, Climate and Environmental Sciences**

EDUCATION

Ph.D. 1997, *Chemical Oceanography*, **Massachusetts Institute of Technology (MIT)** and **Woods Hole Oceanographic Institution (WHOI)**

APPOINTMENTS

2009 -	**Professor**, *Biogeochemistry*, Dept. Environmental Science and the Bolin Centre for Climate Research, **Stockholm University,** Sweden
2023 -	**Chair, Board of Directors, Future Earth - Global Hub** Stockholm-Sweden
2023	**Elected Academician, The Pontifical Academy of Sciences** (PAS)
2023-2026	**International Global Atmospheric Chemistry** (**IGAC**; an ICS' Future Earth program), Scientific Steering Committee, elected.
2020	**Elected Academician, The Royal Swedish Academy of Engineering Sciences** (IVA)
2015	**Invited Visiting Scholar**, **UCSD** (Dept. Chemistry and Scripps Inst. Oceanography)
2014 -	**Elected Academician**, **The Royal Swedish Academy of Sciences** (+ elected affiliate from Class V Geosciences to the Nobel Prize Committee for Chemistry, the International Comm.)
2014 -	**Deputy Director**, **Bangladesh Climate Observatory – Bhola** (BCOB; international atmospheric observatory strategically placed at exit of the Indo-Gangetic Plain)
2012 -	**Director**, **Maldives Climate Observatory – Hanimaadhoo** (MCOH; the key international Superobservatory for atmospheric/climate studies of S. Asia).
1998 - 2008	**Assistant** then **Associate (w tenure) Professor**, ITM/ACES, **Stockholm University**

AWARDS and FELLOWSHIPS

2023	**The Pontifical Academy of Sciences (PAS)**, **Appointed Academician** (by Pope Francis)
2020	**The Royal Swedish Academy of Engineering Sciences** (IVA), **Elected Academician**
2019	**Chinese Academy of Sciences (CAS) President's Award** (highest level) **"Distinguished Scientist"** (signed Bai Chunli, President of CAS).
2018	**Swedish Research Council (VR) "Distinguished Professor" Award** (2018-2027)
2016	**European Research Council, Advanced Grant (ERC-AdG)** (2016-2021)
2016	**Russian Academy of Sciences (RAS) Merit Award** "*for extraordinary contribution to international scientific collaboration*" (signed V. Sergienko, Vice President RAS).
2015	**The 2015 KAST (Korean Academy of Science and Technology) Lecture on Climate**
2014	**The Royal Swedish Academy of Sciences (KVA), Elected Academician**
2013	**The 2013 Professor Khondokar Mukaram Hossain Memorial Lecture at Univ of Dhaka** (Dept. of Chemistry), Bangladesh "*Chemical forensics of carbon aerosols over South Asia*"
2013	**Revision of Periodic Chart of the Elements**: Recognition awarded by IUPAC - our high-precision δ^{81}Br measurements of natural organobromines contributed to refine the atomic weight of element 35, Br (IUPAC Tech. Report 2013: Pure Appl. Chem., 85, 1047-1098).
2010	**International Polar Year (IPY) Award**: *Best Marine Biogeochemistry Program of IPY* to the International Siberian Shelf Study 2008 (ISSS-08; co-chief scientist with I. Semiletov), Selected by NASA and the International (London) IPY office

PUBLICATIONS

Author of >260 papers in international peer-reviewed journals, including lead roles in papers for ***Science*** (2), ***Science Advances*** (5), ***Nature*** (1), ***PNAS*** (7), ***Nature Geoscience*** (3), ***Nature Communications*** (7), ***Nature Sustainability*** (1), ***Nature Climate Change*** (1), ***One Earth*** (1), ***Nature Reviews Earth&Environment*** (2), 20 in ***Global Biogeochemical Cycles*** and 41 in ***Environ. Science & Technology***.

Google Scholar H-index 94 (87 papers cited > 100 times, > 31,000 citations)

MENTORING AND EDUCATIONAL INITIATIVES

Leader of a 8-15 pers gender-balanced research group (now 7 nationalities): responsible for financing and advising at present 1 researcher, 3-5 post-docs, 3-5 Ph.D. students, and 1-2 research engineers.

Mentoring students: Main advisor to **15 completed Ph.D.s (13 of 15 have stayed active in the field)** and continuously several master degree students.

Mentoring researchers: By now 24 (two-year or longer) **post-doc "alumni":**

From Europe, USA, Africa, Japan, S. America, India and China.

Among the 24 post-doc "alumni" from my group, 21 today hold research positions, many as professors and/or senior scientists at research institutes, now in UK (2), Spain (3), Switzerland (2), USA (2), China (4), Norway (1), Sweden (2), France (1), Greece (1), Japan (1), Italy (1), India (2)

Development of the **new Master Program in *Environmental Science – Atmosphere-Biogeochemistry-Climate Change (ES-ABC)*** (2019-2020)

Established **new Cross-Faculty Course** at Stockholm Univ (in collab w Univ California system) "***Bending the Curve: Climate Change Solutions***" (Professors/co-teachers from ten diff. dept. and centers)

SELECTED COMMISSIONS OF TRUST and RESEARCH LEADERSHIP (last ten years)

2008-2018	**Bolin Centre for Climate Research, Stockholm University**, co-founder, steering committee, leader of core theme Biogeochemistry & Climate (co-PI two Grants 25 M€, new faculty hires)
Recurring	**Chief scientist on several Swedish (incl i/b Oden twice) and US ships, deputy on German and Russian ships**; a total of 14 mo at sea on research expeditions
Recurring	**Chief scientist and director of international science teams, atmospheric research programs** at the Maldives Climate Observatory (2007-present, **incl construction and instrumenting**), the Korean Climate Observatory (2010-fwd), the Bangladesh Climate Observatory – Bhola Island (2013-fwd, incl full constructions, infrastructure/utilities and instrumenting), Tiksi RAS Siberian-Arctic Observatory (incl bldg. constructions) 2012-2016
Recurring	**Coordinator,** several EU FP5+6+7, H2020 and Nordic projects
Recurring	**Guest editor and advisory board for research journals**
2018-2019	**European Research Council** Evaluation Panel for **ERC Advanced Grants**
Recurring	**Proposal referee**: National research councils of UK, Switzerland, Norway, Germany, USA, Sweden, the Netherlands; Poland; EU Commission (FP), ESF, ERC, private philantropies
Recurring	**Invited speaker** to **5 different Gordon Research Conferences** (Chem Ocean.; Environ. Sci.; Org. Geochem., Polar Marine Sci., Atmos. Chemistry), AGU, EGU, IMOG, ACS
2023-2026	**ICS' Future Earth program International Global Atmospheric Chemistry** (IGAC), Scientific Steering Committee, elected.
2025	**Max-Planck Institute (MPI)** Appointment Committee for new Director.

SUPPORT OF POLICY/GOVERNANCE AND SOCIETY ENLARGE (examples)

Recurring:	**Consultations for Ministries and Gvmt Agencies** of e.g. Sweden, Russia, USA, China, Bangladesh, Maldives, as well as EU and OECD**, on nexus of air pollution and climate change, Black Carbon aerosols and on the risk for accelerated climate warming due to e.g. aerosol demasking, thawing permafrost, collapsing hydrates and methane releases.**
Recurring:	**Contributions to extensive public and media coverage of environmental, climate, sustainability issues, incl. public presentations, debates, Op-Eds, interviews and articles;** featured in hundreds of news articles/radio/TV programs worldwide including New York Times (twice), Time Magazine, The Hill, CNN, AP, Reuters, The Guardian, Scientific American, BBC World, Sky News, Norwegian Radio NRK, Scientific American, Nature, The Independent, ITAR-TASS, El Mundo, El Pais, Der Spiegel, The Times of India, The Deccan Herald, Indian Express, ifuckinglovescience.com (>100,000 hits), Dagens Nyheter (cover page headline and authored Op-Eds), Svenska Dagbladet (incl Op-Eds), Swedish National TV SVT-Aktuellt (main stories), SVT-Science magazine, Swedish TV4-news, Swedish National Radio P1, wedonthavetime.org (World's largest media platform for climate action), various symposia and pods.
2011	**Bangladesh-Sweden Policy Seminar:** "Near-term Air Quality and Climate Benefits – Promoting International Co-operation and Facilitating Action" (Dhaka, Bangladesh). Invited

by Ministers of Environment of Bangladesh and Sweden. Prep. mtg. to form the Climate and Clean Air Coalition (CCAC).

2012 **US-Swedish Consultations:** incl. Roundtable Discussion on **Climate and Clean Air Coalition (CCAC) to fight short-lived climate pollutants (SLCP)** ***with US Secretary of State Hillary Clinton and Swe Minister of Environment Lena Ek***. I gave also a platform presentation on the scientific underpinning of SLCP action to staff from US and Swe gvmt.

2013 **Coalition of Small Island Nations of the UNFCCC:** On request of the Maldives Minister of Env. Prepared a report on links between SLCPs, climate change and sea-level rise to this Coalition's meeting at the UN

2013 **Application by the Maldives to join the Climate and Clean Air Coalition (CCAC)** at COP-19. Aided with framing and editing.

2014 **European Parliament Presentation**: The Cryosphere Imperative for COP-Paris (sponsored by several EU Parliament party coalitions and the Parliament Env Committee).

2014 **Sino-Swedish Science-Policy Seminar on Short-Lived Climate Forcers** (Beijing, w. Central Planning Commission of China, incl. heads of China and Sweden COP delegations)

2015 **OECD Ministerial Meeting** (Daejeon, Oct.. 2015) Invited by Korean Minister for Science, and Technology to give platform presentation on "Climate and Environment"

2016- **Nobel Prize Committee for Chemistry**, elected for affiliation to the Selection Committee to represent the Class of Geosciences, The Royal Swedish Academy of Sciences.

2016 **Task Force report "Breathing Cleaner Air- Ten Scalable Solutions for Indian Cities**": co-authored report presented at the **World Sustainable Development Summit** and communicated directly ***to Indian ministers, UNEP Head Erik Solheim, CCAC Director Helena Molin-Valdes, Volvo India CEO Mr Bali, and via California Governor Jerry Brown to Indian Prime Minister Modi*** (Delhi, India 6 Oct. 2016).

2016 **Task Force on "*Limiting Climate Change to a Safe Level: A Bottom-Up Task Force for Promoting Fast Actions to Limit Warming Within the Coming Decades*"** Invited participation (conveners Durwood Zaelke, Nobel Prize winner Mario Molina, and V. Ramanathan), incl task force meeting (18-20 Oct 2016)**,** preparation of report to COP-22 (Marrakesh), and major dissemination activities to the public and decision makers worldwide.

2017 **"*Well Under 2 Degrees Celsius: Fast Action Policies to Protect People and the Planet from Extreme Climate Change*": Co-author** of Report presented at the United Nations Climate Week (Sept 2017, New York City) and at UNFCCC COP-23 (November 2017, Bonn, Germany) and to top decision makers worldwide.

2018- **The inter-/trans-/cross-disciplinary university course "Bending the Curve - Climate Change Solutions"**: Main promoter and course responsible at Stockholm University for this ***hybrid course using modern pedagogics catering to students of all disciplines to inform and stimulate about actions towards climate change mitigation and sustainable development*** (recruited professors from wide range of disciplines incl. environmental science, meteorology, geological sciences, resilience, law, economics, political science, philosophy and literature). Work together with course pioneers at Univ. California system to promote the course worldwide in coming years (aim to raise one million climate champions).

2020 **Consultation on Arctic climate change and carbon/methane feedbacks** with Russian Dept of Natural Resource and **President of Russian Academy of Sciences**. (Moscow)

2021 Symposium presentation at **Embassy of India** on ***Arctic Research and Policy***. (Stockholm)

2022, 2024, 2025 Presentations and **Consultations with the Maldives Ministers of Environment and Climate Change, Mrs. Shauna and Mr. Thoriq Ibrahim** on science to support climate policy and leveraging the Maldives Observatory at the COP (Male, the Maldives).

2022 **Science-Policy Symposium** on "***Polar Ocean and Global Change***" Shandong, China.

2022 Contributed the chapter **on Permafrost in "The Climate Book" 2022** (created by Penguin Press and **Greta Tunberg**) (our book made it to the **New York Times Bestseller List**)

2023 Public Academy Lecture "***From Asian Brown Clouds to Arctic Permafrost***" The Royal Swedish Academy of Sciences (Stockholm, Sweden)

2024	Plenary presentation at **the Vatican Summit "From Climate Crisis to Climate Resilience: Bending the Curve and Bouncing Back**" (May 2024) under the auspices of Pope Francis and with subnational decision makers from around the globe (incl. governors of California, Massachusetts, New York; Mayors of Rome, Paris, London, Boston, Sao Paolo and from Africa and Asia).
2024-2025	Co-author to **Planetary Protocol for Climate Change Resilience** (Pontifical Academies of Science and Social Sciences) – communicated globally through the series of regional climate change resilience dialogues/summits, at the UN New York Climate Week, through engaged sub-national governors/mayors and through the Church.
2024	Plenary presenter and panel participant at **Nature (journals) Conference *Air Pollution and Climate Change*** (Beijing, May 2024)
2024-2025	**Ten New Insights in Climate Science (10NICS)** Contributing author of chapter on "Soaring Methane and Mitigation Opportunities" to this reports of Future Earth, World Climate Research Programme and Earth League, presented at the UN Climate Week (NYC), The UNFCCC-COP, published in OneEarth, and with massive media coverage globally.
2025	**Reforming and strengthening the relationship between IPCC and UNFCCC for effective provision of policy relevant science.** Commissioned articles for ***Nature Climate Change***, co-authored with Svante Bodin (Sweden's Head of Delegation to both UNFCCC and IPCC). https://www.nature.com/articles/s41558-025-02412-z
2024-2025	Lead author of commissioned article to ***Nature Reviews*** on **Atmospheric Black Carbon in the Climate System** (timed to underpin the forthcoming IPCC AR7 report).
2025	**Pan-European Climate Resilience Summit** (Vienna, Sept 2025). Co-organizer and presenter at Summit, convening European mayors/governors, leaders from business, social movements and academia towards accelerating implementation of the MAST Protocol (Mitigation, Adaptation and Societal Transformation)
2025	**UN Climate Week (NYC)** Live studio broadcast with Wedonthavetime.org (reaching ca. 9 Mill viewers during the New York Climate Week).
2026	**The Hanimaadhoo Climate Summit** (co-organized with the Maldives Ministry of Env, Energy and Climate Change) focusing in Mitigation of Short-Lived Climate Pollutants and Climate Resilience with focus on low-lying regions and South Asia (planned for April 2026)

BRIEF ACCOUNT OF SCIENTIFIC ACTIVITIES

My fundamental interest is to understand how human activities are perturbing the climate and the related global carbon cycle; and the resultant effects on our Planet and its People, including the quality of the air that we breathe. I am also engaging in cross-disciplinary initiatives contributing towards a more sustainable and resilient stewardship of our planet. This includes establishing the course Climate Change Solution – Bending the Curve and our M.Sc. Program in Env Sci: Atmopshere – Biogeosphere – Climate (ABC).

We investigate two grand challenges in climate change science. In both, I have built community and sustainable decadal-scale collaboration with ambitious researchers from the regions. The first addresses Arctic carbon-climate linkages with a focus on thawing land+subsea permafrost and collapsing methane hydrates, which may add greenhouse gases to the atmosphere. We have for two decades pursued field campaigns in the key yet remote and vast region of the Siberian-Arctic shelf seas and unearthed extensive methane releases from thawing subsea permafrost and the dynamics of land permafrost remobilization around the entire circum-Arctic in both the present system and during earlier periods of abrupt climate change.

The second research challenge concerns the interactions of severe air pollution and climate change, with focus on the key regions: South Asia, the Sub-Saharan Africa, the Himalaya-Tibetan Plateau and East Asia.

We have with our regional partners established atmospheric-climate observatories strategically located to intercept the outflow from e.g. India and China. These are continuously operated with decadal perspectives at locations such as in rural S. Bangladesh and on islands in the N. Indian Ocean and in SE Yellow Sea. Within a comprehensive framework of satellite- and observatory data, we are isotopically fingerprinting climate- and health-affecting aerosols and gases to provide measurement constraints on the relative importance of different sources, to support air quality and climate modelling and to guide society's efforts to mitigate emissions.

We used the COVID shutdown in India as a large-scale geophysical perturbation experiment – a preview of what we may face when we go to net zero fossil emissions. While the skies got bluer and the air got cleaner, the climate warming increased. While atmospherically long-lived CO_2 only dropped by 1%, the loading of short-lived net climate-cooling aerosol pollution dropped drastically resulting in an aerosol demasking that enhances climate warming.

The methane added from Arctic permafrost/hydrates and the aerosol demasking in Asia may both cause climate overshoot – that we miss the climate targets and risk passing dangerous thresholds in the earth system. I take a large interest in cross-disciplinary initiatives both in education and in interactions with society and policy makers to contribute towards finding solutions for us to bend the curve of climate change. This includes my teaching across the disciplines, engagement in Future Earth, and the Climate Resilience Summits of the Pontifical Academy of Science (PAS) engaging change leaders in many sectors and across the globe. We need to find ways to survive and thrive in the Anthropocene as we help our world to develop sustainably.

SELECTED PUBLICATIONS

Selected to illustrate breadth, novelty and direction. **ÖG total citations (excl. auto citations): >31,000; Total publications number >260; H-Index > 94 (Google Scholar)** (* = senior/corr. author)

2025

Bodin, S. and **Ö. Gustafsson*** (**2025**) Improving the IPCC–UNFCCC relationship for effective provision of policy-relevant science. ***Nature Climate Change.*** 15, 910-911**.** https://www.nature.com/articles/s41558-025-02412-z

Gustafsson Ö.; Budhavant, Krishnakant; Chimurkar, Navinya; Clarke, Sean; Dreyfus, Gabrielle; Gong, Xin; Klimont, Zbigniew; Klingmüller, Klaus; Kim, Sang-Woo; Lelieveld, Jos; Myhre, Gunnar; Nair, Hari; Peng, Jianfei; Ramanathan, V.; Rana, Archita; Remani, Manoj; Satheesh, S.K.; Venkataraman, Chandra; Zhang, Qiang. Atmospheric black carbon in the climate system ***Nature Reviews Earth& Environ.*** (accepted Dec. 2025).

Wu, J., F. Matsubara, G. Mollenhauer, R. Stein, B Wei, K. Fahl, X. Xiao, **Ö. Gustafsson*** (**2025**) Geospatial patterns in terrestrial organic matter reactivity across four shelf seas spanning the Eurasian Arctic. ***Science Advances***. Sci. Adv. 11, eadt6806. Doi: https://www.science.org/doi/10.1126/sciadv.adt6806

Liu, J., F. Jiang, Q. Wang, G. Zhang, J. Li, W. Chen, P. Ding, S. Zhu, Z. Cheng, X. Zhang, Q. Sha, Z. Huang, X. Yuan, J. Zheng, Y. Zhang, C. Yan, C. Tian, Y. Chen, J.Z. Yu, & **Ö. Gustafsson*** (**2025**) Substantial reductions in black carbon from both fossil fuels and biomass burning during China's Clean Air Action, ***Proc. Natl. Acad. Sci. U.S.A***. 122 (35) e2500843122, https://doi.org/10.1073/pnas.2500843122

Vonk, J.E., Fritz, M., Speetjens, N.J. et al. incl. **Ö. Gustafsson** (**2025**). The land–ocean Arctic carbon cycle. ***Nature Reviews Earth Environ*** 6, 86–105 https://doi.org/10.1038/s43017-024-00627-w

Schaeffer, R., L. F. Schipper, D. Ospina et al., incl. **Ö. Gustafsson** (**2025**) Ten new insights in climate science 2024. ***One Earth*** 8, 101285. https://doi.org/10.1016/j.oneear.2025.101285

Yan X.W., Liu J.B.*, Kang W.G., Huang X.Y., Zhou A.F., Chen L., Zhang J.F., Dong H.R., Chen Z.T., Wu J.J., Holmstrand H., Rühland K.M., Smol J.P., Chen F.H., **Gustafsson Ö.*** (**2025**) Pronounced methane cycling in northern lakes coincided with a rapid rise in atmospheric CH4 during the last deglacial warming. ***Science Advances***. 11, eadt2561. doi: 10.1126/sciadv.adt2561

2023-2024

Fang, W., A. Andersson, M. Lee, M. Zheng, K. Du, S-W Kim, H. Holmstrand and **Ö. Gustafsson*** (**2024**) Combined influences of sources and atmospheric bleaching on light absorption of water-soluble brown carbon aerosols. ***npj Climate Atmospheric Science***, 6:104 ; https://doi.org/10.1038/s41612-023-00438-8

Sabino, M., **Ö. Gustafsson***, B. Wild, I. P. Semiletov, O. V. Dudarev, G. Ingrosso and T. Tesi (**2024**) Feedbacks from young permafrost carbon remobilization to the deglacial methane rise. ***Global Biogeochem. Cycles***, 38, https://doi.org/10.1029/2024GB008164

Nair, H.C.R.C., K. Budhavant, M. R. Manoj, A. Andersson, S. K. Satheesh, V. Ramanathan, **Ö. Gustafsson*** (**2023**) Aerosol demasking enhances climate warming over South Asia. ***npj Climate and Atmospheric Science***, 6:39 ; https://doi.org/10.1038/s41612-023-00367-6

Budhavant, K., A. Andersson, H. Holmstrand, S.K Satheesh, and **Ö. Gustafsson*** (**2023**) Black carbon aerosols over Indian Ocean have unique source fingerprint and optical characteristics during monsoon

season. ***Proceedings of the National Academy of Sciences (PNAS, USA)*** https://doi.org/10.1073/pnas.2210005120

Kirago, L., **Ö. Gustafsson**, S.M. Gaita, S. L. Haslett, M. J. Gatari, M. E. Popa, T. Röckmann, C. Zellweger, M. Steinbacher, J. Klausen, C. Félix, D. Njiru and A. Andersson (**2023**) Sources and long-term variability of carbon monoxide at Mount Kenya and in Nairobi. ***Atmos. Chem. Phys***., 23, 14349–14357 https://doi.org/10.5194/acp-23-14349-2023

2022-earlier

Wild, B., N. Shakhova, O. Dudarev, A. Ruban, D. Kosmach, V. Tumskoy, T. Tesi, H. Grimm, I. Nybom, F. Matsubara, H. Alexanderson, M. Jakobsson, A. Mazurov, I Semiletov, and **Örjan Gustafsson*** (**2022**) Organic matter composition and greenhouse gas production of thawing subsea permafrost in the Laptev Sea. ***Nature Comm***. 13, 5057 https://doi.org/10.1038/s41467-022-32696-0

Martens J., B. Wild, I. Semiletov, O. V. Dudarev and **Ö. Gustafsson*** (**2022**) Circum-Arctic release of terrestrial carbon varies between regions and sources. ***Nature Comm***. 13, 5858 https://doi.org/10.1038/s41467-022-33541-0

Xu, Buqing, G. Zhang, **Ö. Gustafsson**, K. Kawamura, J. Li,, A. Andersson; S. Bikkina; B. Kunwar, A Pokhret, G. Zhong, Z. Cheng, S. Zhu, P. Peng and G. Sheng (**2022**) Large contribution of fossil-derived components to aqueous secondary organic aerosols in China ***Nature Communications***, 13, 5115. https://doi.org/10.1038/s41467-022-32863-3

Steinbach, J., H. Holmstrand, K. Shcherbakova, D. Kosmach, V. Brüchert, N. Shakhova, A: Salyuk, C. J. Sapart, D. Chernykh, R. Noormets, I. Semiletov, and **Ö. Gustafsson*** (**2021**) Source apportionment of methane escaping the subsea permafrost system in the outer Eurasian Arctic Shelf. ***Proceedings of the National Academy of Sciences (USA).*** 118, e2019672118. https://doi.org/10.1073/pnas.2019672118

Salam, A. A: Andersson, F. Jeba, Md. I. Haque, Md D. H. Khan, **Ö. Gustafsson*** (**2021**) Wintertime air quality in megacity Dhaka, Bangladesh strongly affected by influx of Black Carbon aerosols from regional biomass burning. ***Environ. Sci. Technol***., 55, 12243−12249. https://doi.org/10.1021/acs.est.1c03623

Martens, J., B. Wild, F. Muschitiello, M. O'Regan, M. Jakobsson, I. Semiletov, O. V. Dudarev and **Ö. Gustafsson*** (**2020**) Remobilization of dormant carbon from Siberian-Arctic permafrost during three past warming events. ***Science Advances*** 6, doi: 10.1126/sciadv.abb6546

Winiger, P., T. E. Barrett, R. J. Sheesley, L. Huang, S. Sharma, L. A. Barrie, K. E. Yttri, N. Evangeliou, S. Eckhardt, A. Stohl, Z. Klimont, C. Heyes, I. P. Semiletov, O. V. Dudarev, A. Charkin, N. Shakhova, H. Holmstrand, A. Andersson and **Ö. Gustafsson*** (**2019**) Source apportionment of circum-Arctic atmospheric black carbon from isotopes and modelling. ***Science Advances*** Doi: 10.1126/sciadv.aau8052.

Dasari, S. A. Andersson, S: Bikkina, H. Holmstrand. K. Budhavant, S. Satheesh, E. Asmi, J. Kesti, J. Backman, A. Salam, D., **Ö. Gustafsson*** (**2019**) Photochemical degradation affects the light absorption of water-soluble brown carbon in the South Asian outflow. ***Science Advances*** Doi: 10.1126/sciadv.aau8066

Bikkina, S., A. Andersson, E. N. Kirillova, H. Holmstrand, S. Tiwari, A.K. Srivastava, D. S. Bisht and **Ö. Gustafsson*** (**2019**) Air quality in megacity Delhi affected by countryside biomass burning. ***Nature Sustainability*** DOI: 10.1038/s41893-019-0219-0.

Wild, B., A. Andersson, L. Bröder, J. Vonk, G. Hugelius, J. W. McClelland. W. Song, P. A. Raymond and **Ö. Gustafsson*** (**2019**) Rivers across the Siberian Arctic unearth the patterns of carbon release from thawing permafrost. ***Proc. Nat. Acad. Sci. (USA),*** doi: 10.1073/pnas.1811797116.

Fang, W., K. Du, A. Andersson, Z. Xing, C. Cho, S.-W. Kim, J. Deng and **Ö. Gustafsson*** (**2018**) Dual-isotope constraints on seasonally resolved source fingerprinting of Black Carbon aerosols in sites of the four emission hotspot regions of China. ***Journal of Geophysical Research: Atmospheres***, 123. https://doi.org/10.1029/2018JD028607

Gustafsson, Ö.* And V. Ramanathan **(2017)** Convergence on climate warming by black carbon aerosols. ***Proc. Nat. Acad. Sci.*** (USA). DOI: doi/10.1073/pnas.1603570113.

Shakhova, N., I. Semiletov, **Ö. Gustafsson**, V. Sergienko, L. Lobkovsky,O. Dudarev, V. Tumskoy, M. Grigoriev, A. Mazurov, A. Salyuk, R. Ananiev, A. Koshurnikov, D. Kosmach, A. Charkin, N Dmitrevsky, V. Karnaukh, A. Gunar, A. Meluzov and D. Chernykh (**2017**) Current rates and mechanisms of subsea permafrost degradation in the East Siberian Arctic Shelf. ***Nature Communications***. 8:15872, DOI: 10.1038/ncomms15872.

Li, C., C. Bosch, S. Kang, A. Andersson, P. Chen, Q. Zhang, Z. Cong, B. Chen, D. Qin and **Ö. Gustafsson*** (**2016**) Sources of black carbon to the Himalayan–Tibetan Plateau glaciers. ***Nature Communications*** 7:12574, DOI: 10.1038/ncomms12574

Tesi, T., F. Muschitiello, R.H. Smittenberg, M. Jakobsson, J.E. Vonk, P. Hill, A. Andersson, N. Kirchner, R. Noormets, O. Dudarev, I. Semiletov and **Ö. Gustafsson*** (**2016**) Massive remobilization of permafrost carbon during post-glacial warming. ***Nature Communications*** 7: 13653, DOI: 10.1038/ncomms13653

Semiletov, I., I. Pipko, **Ö. Gustafsson**, L. G. Anderson, V. Sergienko, S. Pugach, O. Dudarev, A. Charkin, A. Gukov, L. Bröder, A. Andersson, E. Spivak, N. Shakhova (**2016**) Acidification of East Siberian Arctic Shelf waters through addition of freshwater and terrestrial carbon. ***Nature Geoscience*** 9, 361-365. doi:10.1038/ngeo2695

Vonk, J.E. and **Ö. Gustafsson*** (**2013**) Permafrost carbon complexities. ***Nature Geoscience***, 6, 675-676. doi:10.1038/ngeo1937

Vonk, J. E., Sanchez-Garcia, L., et al., and **Ö. Gustafsson*** (**2012**) Activation of old carbon by erosion of coastal and subsea permafrost in Arctic Siberia, ***Nature***, *489*, 137-140. doi: 10.1038/nature11392

Shakhova, N., I. Semiletov, A. Salyuk, V. Joussupov, D. Kosmach and **Ö. Gustafsson*** (**2010**) Extensive methane venting to the atmosphere from sediments of the East Siberian Arctic Shelf. ***Science***, 327, 1246-1250 (doi: 10.1126/science.1182221).

Gustafsson*, **Ö.;** M. Kruså, Z. Zencak, R.J. Sheesley, L. Granat, E. Engström, P.S. Praveen, P.S.P. Rao, C. Leck and H. Rodhe (**2009**) Brown clouds over South Asia: Biomass or fossil fuel combustion? ***Science***, *323*, 495-498.