

Dr. Feiyue (Fei) Wang

Professor & Canada Research Chair (Tier 1)
Center for Earth Observation Science (CEOS)
Department of Environment and Geography
University of Manitoba
Winnipeg, MB R3T 2N2, Canada

Tel: 1-204-474-6250
Email: feiyue.wang@umanitoba.ca
Web: <http://home.cc.umanitoba.ca/~wangf>

Publication Profile

Journal papers: 141
h-index: 45 (*Scopus*)

Book chapters/reports: 20
Total citation: 6,573 (*Scopus*)

Research Areas

My research interests are primarily in the areas of environmental fate and effects of legacy and emerging contaminants, especially in the Arctic. Recent research activities have focussed on cold-temperature chemical and biogeochemical processes in the Arctic sea ice and marine environment, mercury in Arctic marine ecosystems, marine oil spill response, and the interplay between chemical contamination and climate change. My **most significant scientific contributions** can be summarized in the following four areas: 1) *Environmental chemistry of mercury*; 2) *Sea ice geochemistry*; 3) *Metal speciation in sediments*; and 4) *Interplay between chemical contamination and climate change*.

Education

1995 Ph.D., Environmental Geochemistry, Peking University, Beijing, China
1990 Environmental Chemistry, Wuhan University, Wuhan, China

Professional Experience

2022 – present: Associate Dean (Research & Innovation), Clayton H. Riddell Faculty of Environment, Earth, and Resources, University of Manitoba, Winnipeg, MB
2018 – present: Honorary Professor, Aarhus University, Aarhus, Denmark
2016 – present: Canada Research Chair (Tier 1), University of Manitoba, Winnipeg, MB
2009 – present: Professor, University of Manitoba, Winnipeg, MB
2018: Visiting Professor, Institute of Geochemistry, Chinese Academy of Sciences, Guiyang, China
2018: Visiting Professor, University of Science and Technology of China, Hefei, China
2010: Visiting Professor, Harvard University, Cambridge, MA, USA
2010: Visiting Professor, Griffith University, Gold Coast, Australia
2005: Visiting Professor, Peking University, Beijing, China
2005: Visiting Professor, Hong Kong Polytechnic University, Hong Kong
2004 – 2009: Associate Professor, University of Manitoba, Winnipeg, MB
2000 – 2004: Assistant Professor, University of Manitoba, Winnipeg, MB
1998 – 2000: NSERC Industrial Research Fellow (IRF), EVS Environment Consultants, North Vancouver, BC
1996 – 1998: Postdoctoral Research Fellow, INRS-Eau, Sainte-Foy, QC
1995 – 1996: Postdoctoral Research Fellow, Chinese Academy of Science, Beijing, China

Honours and Awards

2021: Canadian Institute of Chemistry – Environment Division Research and Development Dima Award
2016 – 2023: Canada Research Chair (Tier 1) in Arctic Environmental Chemistry
2016: Stairs Lecture in Chemistry, Trent University
2010: Sir Allan Sewell Visiting Fellow, Griffith University, Australia.
2006: K.C. Wang Lectureship Award, Chinese Academy of Sciences (Beijing, China) and K.C. Wang Education Foundation (Hong Kong, China).

1996: Outstanding Ph.D. Thesis Award, Peking University, China.

Leadership Roles

2022 – present: Associate Dean (Research & Innovation), Clayton H. Riddell Faculty of Environment, Earth, and Resources, University of Manitoba, Winnipeg, MB
2022 – present: Project Lead, Churchill Marine Observatory (CMO)
2020 – present: Lead Scientist, MPRI Offshore Burn Experiment (MOBE)
2019 – present: Chapter Lead, Arctic Monitoring and Assessment Program (AMAP)'s 2021 *Arctic Mercury Assessment*
2019 – present: Canadian Representative, the East Greenland Ice-core Project (EastGRIP)
2018 – present: Program Area Lead, In Situ Burning, Multi-Partnership Oil Research Initiative (MPRI)
2017 – present: Project Coordination Group Member and Chapter Lead, United Nations Environment's 2018 *Global Mercury Assessment*
2017 – present: Chief Scientist, Ocean-Sea-Ice-Mesocosm (OSIM) of the Churchill Marine Observatory (CMO)
2012 – present: Chief Scientist, Sea-ice Environmental Research Facility (SERF)
2002 – present: Director, Ultra-Clean Trace Elements Laboratory (UCTEL)
2019 – 2020: Environment Division Conference Chair, Chemical Institute of Canada (CIC)
2019: Scientific Committee Co-Chair, International Glaciological Society (IGS) Sea Ice Symposium, Winnipeg, Canada
2018 – 2019: Chair, Natural Sciences and Engineering Review Committee for the New Investigators Program, Research Manitoba
2015: Chief Scientist, Scientific Expedition to Villum Research Station, Station Nord, Greenland
2014 – 2017: Chair, Chemical Institute of Canada (CIC) – Environment Division

Editorial Services

2019 – 2022: Editorial Board Member, *Environmental Research* (Elsevier)
2019 – 2020: Associate Chief Editor & Scientific Editor, Special Issues of *Annals of Glaciology* (Volume 61, Issues 82 & 83, 2020)
2011 – 2013: Editorial Board Member, *Environmental Chemistry and Toxicology*

Other Professional Activities

2022 – present: Member, Advisory Board, Atmosphere-Related Research in Canadian Universities (ARRCU)
2020 – present: Member, National Research Vessel Task Team
2013 – present: Member, Science Coordination Board, Villum Research Station, Aarhus University, Denmark
2011 – present: Key National Expert (Canada), Arctic Monitoring and Assessment Program (AMAP) Mercury Experts Group
2015 – 2021: Member, Research Advisory Committee, Research Manitoba, Government of Manitoba
2016 – 2020: Natural Sciences and Engineering Research Council (NSERC) Ship Time Allocation Committee
2012 – 2020: Executive Board, Chemical Institute of Canada (CIC) – Environment Division
2012 – 2014: Ontario Large Infrastructure Review Panel, Government of Ontario

Collaborative Training and Capacity Building

2019 – present: Iceland: Icelandic Meteorological Office
2019 – present: Mexico: Universidad de Guanajuato & Universidad Autónoma de San Luis Potosí
2013 – present: Costa Rica: Universidad Nacional; Sistema Nacional de Areas de Conservacion
2005 – present: China: Chinese Academy of Sciences (Beijing, Guiyang, Lanzhou); University of Science and Technology of China
2004 – present: Indigenous communities in Manitoba (Churchill, Nelson House), Ontario (Grassy Narrows, Eagle Lake, Shoal Lake), Nunavut (Rankin Inlet), and Northwest Territories (Inuvik, Sachs Harbour)
2017 – 2018: Peru: Universidad Nacional Agraria La Molina
2010 – 2012: Ecuador: Instituto Nacional de Meteorología e Hidrología; Galápagos National Park

Major Research Funding as the Principal Investigator (PI)

- 2022 – 2027: NSERC Discovery Grant (DG) & Northern Supplements: Cryoreactions and Arctic marine cryospheric chemistry, \$546K
- 2016 – 2023: Canada Research Chair (Tier 1) in Arctic Environmental Chemistry, \$1.4M
- 2018 – 2022: DFO Multi-Partnership Research Program, \$8.0M
- 2016 – 2022: NSERC Discovery Grant (DG) & Northern Supplements: Arctic marine cryospheric chemistry, \$504K
- 2018 – 2021: Indigenous Services Canada First Nations Environmental Health Program, \$60K
- 2016 – 2019: NSERC Discovery Accelerator: Arctic marine cryospheric chemistry, \$120K
- 2016: NSERC RTI: A solar simulator for Arctic sea ice research, \$147K
- 2011 – 2016: NSERC DG: Cryospheric chemistry of mercury in sea ice, \$275K
- 2006 – 2011: NSERC DG: Metal-thiol complexes in the aquatic environment, \$212K
- 2008 – 2010: NSERC Strategic Grant: TiO₂ as a getter for uranium from uranium-contaminated sites, \$200K
- 2008: Canada Foundation for Innovation (CFI): Sea-ice Environmental Research Facility, \$973K
- 2001 – 2006: NSERC DG: Metal-sulfide interactions, \$160K
- 2003: CFI: Ultra-Clean Trace Elements Laboratory, \$650K

Major Research Funding as a Participant

- 2019 – 2025: NSERC CREATE training program: Persistent, emerging, and oil pollution in cold marine environments (PEOPLE), B. Chen (PI), \$1.65M
- 2019 – 2023: Networks of Centres of Excellence (NCE): ArcticNet, P. Archambault & J. Dawson (co-PIs), \$32.5M
- 2016 – 2020: NSERC Collaborative Research and Development (CRD): Mercury - Solving emerging environmental challenges of the hydroelectric sector, M. Amyot (PI), \$560K
- 2016 – 2019: European Commission Horizon 2020: GRACE, K. Jørgensen (PI), \$7.8M
- 2015 – 2019: NSERC CRD: BaySys, D. Barber (PI), \$9.1M
- 2015 – 2018: CFI: Churchill Marine Observatory, D. Barber (PI), \$32M
- 2013 – 2018: NSERC: Canadian Arctic GEOTRACES, R. Francois (PI), \$4.6M
- 2004 – 2018: Networks of Centres of Excellence (NCE): ArcticNet, L. Fortier (PI), \$90M
- 2007 – 2010: International Polar Year: Circumpolar Flaw Lead System Study, D. Barber (PI), \$7M
- 2004 – 2009: NSERC Network: Metals in the Human Environment (MITHE), B. Hale (PI), \$5M
- 2007: CFI: Scientific upgrade of the CCGS Amundsen, L. Fortier (PI), \$27M
- 2001 – 2006: NSERC Network: Collaborative Mercury Research Network (COMERN), M. Lucotte (PI), \$5M
- 2001 – 2004: NSERC Network: Metals in the Environment (MITE), P. Campbell (PI), \$5M

Teaching

Current:

- Aquatic Chemistry (ENVR4550/CHEM4550)
Chemical Oceanography (GEOG4670/7010)
Oil Spill Research and Response (*Virtual School*)

Past:

- Environmental Chemistry (ENVR2550/CHEM2550), with lab
Environmental and Instrumental Analysis (ENVR3550/CHEM3590), with lab
Materials Characterization (CHEM 4802/GEOL4280/ECE4860/GEOL7790; team teaching)
Chemical Speciation and Bioavailability (CHEM7520)
Advanced Techniques for Chemical Speciation (CHEM7700)

HQP Training

Technicians (years in training): Current position

- Leonard McPherson (2022 – present)
Cyril Fredlund (2020 – present)
David Binne (2014 – present)

Debbie Armstrong (2005 – present)
Lisa Oswald (2020 – 2022): Technician, University of Manitoba, Winnipeg
Evelyn Ang (2019 – 2021)

Postdoctoral research fellows and associates (years in training): Current position

Dr. Weijia Li (2022 – present)
Dr. Nasima Chorfa (2019 – present)
Dr. Ashish Sarker (2018 – 2022)
Dr. Nicolas-Xavier Geilfus (2016 – 2020): Research Associate, University of Manitoba, Winnipeg
Dr. Kathleen Munson (2015 – 2020): Staff Scientist, Pacific Northwest National Laboratory, Sequim, USA
Dr. Kang Wang (2019 – 2019): PDF, Florida International University, Miami, USA
Dr. Yubin Hu (2014 – 2016): Associate Professor, Shandong University, Qingdao, China
Dr. Alex Hare (2011 – 2014): Biogeochemist, Hakai Institute, Heriot Bay, BC
Dr. Marcos Lemes (2010 – 2012): Research Associate, University of Manitoba, Winnipeg
Dr. Ren Zhang (2008 – 2010): Instrumentation Specialist, Baylor University, Waco, Texas, USA
Dr. Weijia Li (2003 – 2004): Research Fellow, National University of Singapore, Singapore
Dr. Jinzhong Zhang (2002 – 2003): Professor, Southwest University, Chongqing, China

Ph.D. students (years in training): Current position

Brock Edwards (2019 – present)
Jeff Gao (2017 – present)
Katarzyna Polcwiartek (2017 – present)
Kedong Zhang (2017 – present)
Heather Kyle (2017 – 2021; withdrawn)
Kang Wang (2012 – 2019): PDF, Florida International University, Miami, USA
Jiang Liu (2016 – 2018): PDF, Institute of Geochemistry, Chinese Academy of Sciences, Guiyang, China
Mohammad Khan (2008 – 2010): Assistant Professor, Jubail University College, Jubail, Saudi Arabia
Alex Hare (2006 – 2010): Research Scientist, Hakai Institute, Calvert Island, BC
Jesse Carrie (2006 – 2010): Research Scientist, Canadian Nuclear Laboratories, Chalk River, ON
Marcos Lemes (2004 – 2010): Research Associate, University of Manitoba, Winnipeg
Mark Loewen (2004 – 2008): Research Associate, University of Manitoba, Winnipeg

M.Sc. students (years in training): Current position

Ainsleigh Loria (2018–2021): Environmental Scientist, KGS, Winnipeg
Neal Bailey (2018 – 2021): PhD student, Southern Cross University, Lismore, Australia
Nolan Snyder (2017 – 2021): Application Chemist, Waters Corp., Cincinnati, USA
Lauren Timlick (2017–2020): Research Scientist, IISD Experimental Lakes Area, Winnipeg
James Singer (2016 – 2019): Research Scientist, Canadian Grain Commission, Winnipeg
Skye Kushner (2016 – 2018): PhD Student, University of Alaska, Fairbanks, USA
Ashley Elliott (2014 – 2016): Research Chemist, Department of Fisheries and Oceans, Winnipeg
Wen Xu (2013 – 2015): Laboratory Manager, Western University, London, ON
Breanne Reinfort (2008 – 2015): Instructor, FortWhyte Alive, Winnipeg
Sarah Beattie (2011 – 2014): Resource Management Technician, Parks Canada, Yellowknife, NWT
Alexis Burt (2008 – 2012): Aquatic Science Technician, Department of Fisheries and Oceans, Winnipeg
Amanda Chaulk (2008 – 2011): Communications & Research Administration Coordinator, Aurora Research Institute, Inuvik, NWT
Jeffery Latonas (2008 – 2010): Environmental & Regulatory Coordinator, Long Run Exploration, Calgary, AB
Akef Afaneh (2007 – 2009): Assistant Professor, Balqa Applied University, As-Salt, Jordan
Xiaoxi Hu (2007 – 2009): Geochemist, Flett Research Ltd., Winnipeg
Dan Leitch (2004 – 2007): Environmental Scientist, KGS Group, Winnipeg
Bryan Page (2003 – 2005): Research Biologist, Ducks Unlimited Canada, Winnipeg
Katrina Sukola (2001 – 2003): Water Quality & Water Resources Specialist, ICF, Seattle, USA

Publications

Peer-reviewed journal articles:

141. Jonsson S., Nerentorp Mastromonaco M., **Wang F.**, Bravo A.G., Cairns W.R.L., Chételat J., Douglas T.A., Lescord G., Ukonmaanaho L., and Heimbürger-Boavida L.-E., 2022. Arctic methylmercury cycling. *Sci. Total Environ.* doi: 10.1016/j.scitotenv.2022.157445.
140. Gao Z., Zheng W., Li Y.B., Liu Y.R., Wu M.J., Li S.Y., Li P., Liu G.L., Fu X.W., Wang S.X., **Wang F.**, Cai Y., Feng X., Gu B., Zhong H., and Yin Y.G. 2022. Mercury transformation processes in nature: Critical knowledge gaps and perspectives for moving forward. *J. Environ. Sci.* doi: 10.1016/j.jes.2022.07.013.
139. Loria A., Ramos-Arroyo Y.R., Rocha D., Cruz-Jiménez G., Razo Soto I., Alfaro de la Torre M.C., Armstrong D., Guerrero S., and **Wang F.** 2022. Widespread elevated concentrations of gaseous elemental mercury in Guanajuato, Mexico, centuries after historical silver refining by mercury amalgamation. *Sci. Total Environ.* 843, 157093. doi: 10.1016/j.scitotenv.2022.157093.
138. Huang J., Kang S., Wang L., Liu K., Ram K., Sillanpää M., Tang W., Guo J., Zhang Q., Ma M., Tripathee L., and **Wang F.** 2022. Anthropogenic and natural drivers of seesaw-like spatial patterns in precipitation mercury over western China. *Environ. Pollut.* 307, 119525. doi: 10.1016/j.envpol.2022.119525
137. Dietz R., Letcher R.J., Aars J., Andersen, M., Boltunov A., Born E.W., Ciesielski T.M., Das K., Dastnai S., Derocher A.E., Desforges J.-P., Eulaers I., Ferguson S., Hallanger I., Heide-Jørgensen M.P., Heimbürger-Boavida L.-E., Hoekstra P.F., Jenssen B.M., Kohler S.G., Larsen M.M., Lindstrøm U., Lippold A., Morris A., Nabe-Nielsen J., Nielsen N.H., Peacock E., Pinzone M., Rigét F.F., Rosing-Asvid A., Routti H., Siebert U., Stenson G., Stern G., Strand J., Søndergaard J., Treu G., Vikingsson G.A., **Wang F.**, Welker J.M., Wiig Ø., Wilson S.J., Sonne C., 2022. A risk assessment review of mercury exposure in Arctic marine and terrestrial mammals. *Sci. Total Environ.*, 829, 154445, doi: 10.1016/j.scitotenv.2022.154445.
136. Chételat J., McKinney M.A., Amyot M., Dastoor A., Douglas T.A., Lars-Eric Heimbürger-Boavida, Kirk J., Kahilainen K.K., Outridge P., Pelletier N., Skov H., St. Pierre K., Vuorenmaa J., **Wang F.** 2022. Climate change and mercury in the Arctic: Abiotic interactions. *Sci. Total Environ.* 824, 153715, doi: 10.1016/j.scitotenv.2022.153715.
135. Gao Z., Geilfus N.-X., Saiz-Lopez A., and **Wang F.** 2022. Reproducing Arctic springtime tropospheric ozone and mercury depletion events in an outdoor mesocosm sea ice facility. *Atmos. Chem. Phys.* 22, 1811–1824, doi: 10.5194/acp-22-1811-2022.
134. Geilfus N.X., Munson K.M., Lemes M., **Wang F.**, Tison J.L., and Rysgaard S. 2021. Meteoric water contribution to sea ice formation and its control of the surface water carbonate cycle on the Wandel Sea shelf, northeastern Greenland. *Elementa* 9, 00004, <https://doi.org/10.1525/elementa.2021.00004>.
133. Geilfus N.-X., Munson K.M., Eronen-Rasimus E., Kaartokallio H., Lemes M., Wang F., Rysgaard S., and Delille B. 2021. Landfast sea ice in the Bothnian Bay (Baltic Sea) as a temporary storage compartment for greenhouse gases. *Elementa* 9, 00028, doi: 10.1525/elementa.2021.00028.
132. Sun G.-Y., Wu Y.-J., Feng X.-B., Wu X., Li X.-Y., Deng Q.-W., Wang F., and Fu X.-W. 2021. Precise analysis of antimony isotopic composition in geochemical materials by MC-ICP-MS. *Chem. Geol.* 582, 120459, doi: 10.1016/j.chemgeo.2021.120459.
131. Sanei H., Outridge P.M., Oguri K., Stern G.A., Thamdrup B., Wenzhöfer F., **Wang F.**, and Glud, R.N. 2021. High mercury accumulation in deep-ocean hadal sediments. *Sci. Rep.* 11, 10970, doi: 10.1038/s41598-021-90459-1.
130. Zhang Y., Song Z., Huang S., Zhang P., Peng Y., Wu P., Gu J., Dutkiewicz S., Zhang H., Wu S., **Wang F.**, Chen L., Wang S., and Li P. 2021. Global health effects of future atmospheric mercury emissions. *Nature Comm.* 12, 3035, doi: 10.1038/s41467-021-23391-7.
129. Huang J., Hills J., Teasdale P.R., Panther J.G., **Wang F.**, Welsh D.T. 2021. Evaluation of the Chelex-DGT technique for the measurement of rare earth elements in the porewater of estuarine and marine sediments. *Talanta.* 230, 122315, doi: 10.1016/j.talanta.2021.122315.
128. Edwards B.A., Kushner D.S., Outridge P.M., and **Wang F.** 2021. Fifty years of volcanic mercury emission research: knowledge gaps and future directions. *Sci. Total Environ.* 757, 143800.
127. Saiz-Lopez A., Travníkov O., Sonke K.E., Thackray C.P., Jacob D.J., Carmona-García J., Francés-Monerris A., Roca-Sanjuán D., Ulises Acuña A., Dávalos J.Z., Cuevas C.A., Jiskra M., **Wang F.**, Bieser J., Plane J.M.C., and Francisco J.S. 2020. New photochemistry of oxidized Hg(I) and Hg(II) species suggests missing mercury oxidation in the troposphere. *Proc. Natl. Acad. Sci. U.S.A.* doi: 10.1073/pnas.1922486117.

126. Wang X., Yuan W., Lin C.-J., Luo J., **Wang F.**, Feng X.B., Fu X.W., and Liu C. 2020. Underestimated sink of atmospheric mercury in a deglaciated forest chronosequence. *Environ. Sci. Technol.* 54, 8083–8093.
125. Hu Y.-B. and **Wang F.** 2020. Effect of ikaite precipitation on phosphate removal in sea ice. *Polar Res.* 39, 3413.
124. Huang J., Kang S.C., Yin R.S., Lin M., Guo J.M., Ram K., Li C.L., Sharma C., Tripathee L., Sun S.W., and **Wang F.** 2020. Decoupling natural and anthropogenic mercury and lead transport from South Asia to the Himalayas. *Environ. Sci. Technol.* 54, 5429–5436.
123. Hudelson K.E., Drevnick P.E., **Wang F.**, Armstrong D., and Fisk A.T. 2020. Mercury methylation and demethylation potentials in Arctic lake sediments. *Chemosphere* 248, 126001.
122. Munson K.M., Latonas J., Xu W., Elliot A., Armstrong D.A., Stern, G.A, and **Wang F.** 2020. Elemental mercury in the marine boundary layer of North America: temporal and spatial patterns. *Mar. Chem.* 220, 103755.
121. Wang K., Munson K.M., Armstrong D., Macdonald R.W., and **Wang F.** 2020. Determining seawater mercury methylation and demethylation rates by the seawater incubation approach: a critique. *Mar. Chem.* 219, 103753.
120. Wang X., Luo J., Yuan W., Lin C.-J., **Wang F.**, Liu C., Wang G., and Feng X. 2020. Global warming accelerates uptake of atmospheric mercury in regions experiencing glacier retreat. *PNAS* 117, 2049–2055.
119. Jørgensen K.S., Kreutzer A., Lehtonen K.K., Kankaanpää H., Rytönen J., Wegeberg S., Gustavson K., Fritt-Rasmussen J., Truu J., Kõuts T., Lilover, M.J., Seiler T.-B., Hollert H., Johann S., Marigómez I., Soto M., Lekube X., Jenssen B.M., Ciesielski T., Wilms L.B., Högström R., Pirneskoski M., Virtanen S., Forsman B., Petrich C., Phuong -Dang N., **Wang F.** 2019. The EU Horizon 2020 project GRACE – Integrated oil spill response actions and environmental effects. *Environ. Sci. Eur.* 31, 44, doi: 10.1186/s12302-019-0227-8.
118. Geilfus N.-X., Munson K.M., Sousa J., Germanov Y., Bhugaloo S., Babb D., and **Wang F.** 2019. Distribution and impacts of microplastic incorporation within sea ice. *Mar. Pollut. Bull.* 145, 463–473, doi: 10.1016/j.marpolbul.2019.06.029.
117. Huang J., Kang S., Ma M., Guo J., Cong Z., Dong Z., Yin R., Xu J., Tripathee L., Ram K., and **Wang F.** 2019. Accumulation of atmospheric mercury in glacier cryoconite over Western China. *Environ. Sci. Technol.* 53, 6632–6639, doi: 10.1021/acs.est.8b06575.
116. **Wang F.**, Outridge P.M., Feng, X.-B., Meng B., Heimbürger-Boavida L.-E., and Mason R.P. 2019. How closely do mercury trends in fish and other aquatic wildlife track those in the atmosphere? – Implications for evaluating the effectiveness of the Minamata Convention. *Sci. Total Environ.* 674, 58–70.
115. Asaduzzaman A., Riccardi D.; Afaneh A., Cooper S., Smith J., **Wang F.**, Parks J., and Schreckenbach G. 2019. Environmental mercury chemistry – In silico. *Acc. Chem. Res.* 52, 379–388, doi: 10.1021/acs.accounts.8b00454.
114. Saiz-Lopez A., Sitkiewicz S., Roca-Sanjuan D., Oliva-Enrich J., Davalos J., Notario R., Jiskra M., Xu Y., **Wang F.**, Thackray C., Sunderland E., Jacob D., Travnikov O., Cuevas C., Acuña A., Rivero D., Plane J., Kinnison D., and Sonke J. 2018. Photoreduction of gaseous oxidized mercury changes global atmospheric mercury speciation, transport and deposition. *Nature Comm.* 9, 4796, doi: 10.1038/s41467-018-07075-3.
113. Bailey N., Papakyriakou T., Bartels C., **Wang F.** 2018. Henry’s Law constant for CO₂ in aqueous sodium chloride solutions at 1 atm and sub-zero (Celsius) temperatures. *Mar. Chem.* 207, 26–32. doi: 10.1016/j.marchem.2018.10.003.
112. Outridge P., Mason R., **Wang F.**, Guerrero S., and Heimbürger L.-E. 2018. Updated global and oceanic mercury budgets for the United Nations Global Mercury Assessment 2018. *Environ. Sci. Technol.* 52, 11466–11477. doi: 10.1021/acs.est.8b01246.
111. Wang K., Munson, K.M., Beaupré-Laperrière A., Mucci A., Macdonald R.W., and **Wang F.** 2018. Subsurface seawater methylmercury maximum explains biotic mercury concentrations in the Canadian Arctic. *Sci. Rep.* 8:14465, doi: 10.1038/s41598-018-32760-0.
110. Geilfus N.-X., Pind M., Else B., Galley R.J., Miller L.A., Thomas H., Gosselin M., Rysgaard S., **Wang F.**, and Papakyriakou T.N. 2018. Spatial and temporal variability of seawater pCO₂ within the Canadian Arctic Archipelago and Baffin Bay during the summer and autumn 2011. *Cont. Shelf Res.* 156, 1–10. doi.org/10.1016/j.csr.2018.01.006

109. Hu Y.-B., **Wang F.**, Boone W., Barber D., and Rysgaard S. 2017. Assessment and improvement of the sea ice processing for dissolved inorganic carbon analysis. *Limnol. Oceanogr. Methods* 16, 83–91, doi: 10.1002/lom3.10229.
108. Liu J., Jiang T., **Wang F.**, Zhang J.-Z., Wang D.-Y., Huang R., Yin D.-L., Liu Z.-Y., and Wang J.Z. 2017. Inorganic sulfur and mercury speciation in the water level fluctuation zone of the Three Gorges Reservoir, China: The role of inorganic reduced sulfur on mercury methylation. *Environ. Pollut.* 237, 1112–1123, doi.org/10.1016/j.envpol.2017.11.045
107. Wang J.C., Xie Z.Q., **Wang F.**, and Kang H. 2017. Gaseous elemental mercury in the marine boundary layer and its air-sea flux in the Southern Ocean in austral summer. *Sci. Total Environ.* 603–604, 510–518. doi:10.1016/j.scitotenv.2017.06.120
106. Kauko H.A., Taskjelle T., Assmy P., Pavlov A.K., Mundy C.J., Duarte P., Méndez M.F., Olsen L.M., Hudson S.R., Johnsen G., Elliott A., **Wang F.**, and Granskog M.A. 2017. Windows in Arctic sea ice: light transmission and ice algae in a refrozen lead. *J. Geophys. Res. Biogeosci.* 122, 1486–1505. <http://dx.doi.org/10.1002/2016JG003626>
105. Corella J.P., Valero-Garcés B.L., **Wang F.**, Martínez-Cortizas A., Cuevas C.A., and Saiz-Lopez A. 2017. 700 years reconstruction of mercury and lead atmospheric deposition in the Pyrenees (NE Spain). *Atmos. Environ.* 155, 97–107.
104. Hong Q.-Q., Xie Z.-Q., Liu C., **Wang F.**, Xie P.-H., Kang H., Xu J., Wang J.-C., Wu F.-C., He P.-Z., Mou F.-S., Fan S.-D., Dong Y.-S., Zhan H.-C., Yu X.-W., Chi X.-Y., Liu J.-G., 2016. Speciated atmospheric mercury on haze and non-haze days in an Inland city in China. *Atmos. Chem. Phys.* 16, 13807–13821, doi:10.5194/acp-16-13807-2016.
103. Xu W., Tenuta M., and **Wang F.** 2016. Bromide and chloride distribution across the snow-sea ice-ocean interface: A comparative study between an Arctic coastal marine site and an experimental sea ice mesocosm. *J. Geophys. Res. Oceans.* doi:10.1002/2015JC011409 (access).
102. Kang S., Huang J., **Wang F.**, Zhang Q., Zhang Y., Li C., Wang L., Chen P., Sharma C., Li Q., Sillanpää M., Hou J., Xu B., and Guo J., 2016. Atmospheric mercury depositional chronology reconstructed from lake sediment and ice cores in the Himalayas and Tibetan Plateau. *Environ. Sci. Technol.*, 50, 2859–2869.
101. Elliott A., Mundy C.J., Gosselin M., Poulin M., Campbell K., and **Wang F.** 2015. Spring production of mycosporine-like amino acids and other UV-absorbing compounds in sea ice associated algae communities in the Canadian Arctic. *Mar. Ecol. Prog. Ser.* 541, 91-104, doi: 10.3354/meps11540.
100. Else B.G.T., Rysgaard S., Attard K., Campbell K., Crabeck O., Galley R.J., Geilfus N.-X., Lemes M., Lueck R., Papakyriakou T., and **Wang F.** 2015. Under-ice eddy covariance flux measurements of heat, salt, momentum, and dissolved oxygen in an artificial sea ice pool. *Cold Regions Sci. Technol.* 119, 158-169, doi:10.1016/j.coldregions.2015.06.018. (access)
99. Kang S.C., **Wang F.**, Morgenstern U., Zhang Y.L., Grigholm B., Kaspari S., Schwikowski M., Ren J.W., Yao T.D., Qin D.H., and Mayewski P.A. 2015. Dramatic loss of glacier accumulation area on the Tibetan Plateau revealed by ice core tritium and mercury records. *Cryosphere*, 9, 1213-1222.
98. Slemr F., Angot H., Dommergue A., Magand O., Barret M., Weigelt A., Ebinghaus R., Brunke E.-G., Pfaffhuber K., Edwards G., Howard D., Powell J., Keywood M., and **Wang F.** 2015. Comparison of mercury concentrations measured at several sites in the Southern Hemisphere. *Atmos. Chem. Phys.* 15, 3125-3133.
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