Yafei Li

Yafei Li, Dr., Research associate
Agroscope, Research Division of Agroecology and Environment, Soil Quality and Soil Use group
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Language: Chinese (Native); English (Fluent); German (Beginner)
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Employment

11.2025-05.2027
Research Associate, Agroscope, Soil Quality and Soil Use group
06.2024-10.2025
Postdoc, Agroscope, Soil Quality and Soil Use group
08.2022-05.2024
Postdoc, Agroscope, Agricultural Landscape and Biodiversity Group
03.2018-04.2022
Scientific assistant, ETH Zurich. Grassland Sciences Group
07.2017-02.2018
Research assistant, Chinese Academy of Sciences.
08.2013–09.2013
Intern, Pearl River Water Resources Commission, China
07.2013–12.2013
Intern, Chinese Academy of Sciences

Education

03.2018–12.2021
PhD, ETH Zurich, Switzerland. Micrometeorology
08.2014–12.2016
MSc, University of Copenhagen, Denmark. Water & Environment
08.2014–06.2017
MSc, University of Chinese Academy of Sciences. Environmental Science
09.2010–07.2014
BSc, Sun Yat-sen University. Resources Environment & Urban and Rural Planning Management

Reviewer of Agricultural and Forest Meteorology; Journal of Hydrology; Agronomy for Sustainable Development; Soil & Tillage Research; European Journal of Soil Science; Agricultural Systems; Hydrological Processes

Projects

Agroscope Reserve. Methodological development of humus balance calculator. 2024-2027. Employee

Swiss National Science Foundation. What is Sustainable Intensification? Operationalizing Sustainable Agricultural Intensification Pathways in Europe (SIPATH). 2022-2024. Employee

Swiss National Science Foundation. The Importance of Fog and Dew for Swiss Grasslands Today and in the Future (IFDewS). 2018-2022. Employee

National Natural Science Foundation of China. Water Sources and Hydrological Responses of Typical Plants in Ejina Delta, China. 2014-2017. Master student

Teaching

Tutor for Master and Doctoral Course "Stable Isotope Ecology", ETH Zurich. 2022

Advisor of student helpers and apprentices, Grassland Sciences Group, ETH Zurich. 2018-2021

Advisor for water analysis, Chinese Academy of Sciences. 2017-2018

Supervision

Mater thesis “Agricultural technology and agroecological practice for sustainable intensification in Dutch arable farming”, Rutger Jager (2023), VU Amsterdam

Conference organization

Session convener: Soil carbon flux for climate and soil health. World Congress of Soil Science 2026

Research Interests

Water and carbon cycling under climate change and extreme conditions – biophysical and ecological functions of dew and fog processes, ecosystem water use strategies and carbon sequestration, plant physiology, weather forecast modeling

Sustainable assessment: landscape ecology, soil organic matter modeling, agri-technology adoption

Publications

(Thesis)

PhD thesis: Effect of dew and fog on Swiss grasslands using stable isotopes of water. 2021. ETH Zurich. Supervisors: Prof. Dr. Werner Eugster (passed away), Prof. Dr. Nina Buchmann, Prof. Dr. Franziska Aemisegger.

Master thesis: The Responses of winter wheat to transgenerational exposure in elevated [CO_2] environment combined with drought stress. 2016. University of Copenhagen. Supervisor: Prof. Dr. Fulai Liu

Master thesis: Water source dividing of *Populus euphratica* and *Tamarix ramosissima* in the riparian zones in Ejina Delta, the lower reaches of Heihe River Basin. 2017. University of Chinese Academy of Sciences. Supervisor: Prof. Dr. Jingjie Yu

(Peer-reviewed journals)

[1]. **Li Y.** et al. (2026) The potential of variable-rate technology for sustainable intensification of European arable farming. European Journal of Agronomy. 172, 127868.

[2]. **Li Y.** et al. (2025) Agroecological and technological practices in European arable farming: Past uptake and expert visions for future development. Land Use Policy. 153, 107553.

[3]. **Li Y.** et al. (2024) Agricultural technology as a pathway of sustainable intensification: insights from the development, diffusion and impact of patents. Agronomy for Sustainable Development. 44, 14.

[4]. **Li Y.** et al. (2023) Identifying key stages of radiation fog evolution using water vapor isotopes. Agricultural and Forest Meteorology. 334, 109430.

[5]. **Li Y.**, et al. (2023) Dew benefits on alpine grasslands are cancelled out by combined heatwave and drought stress. Frontiers in Plant Science. 14, 1136037.

[6]. **Li Y.** et al. (2023) The role of radiative cooling and leaf wetting in air–leaf water exchange during dew and radiation fog events in a temperate grassland. Agricultural and Forest Meteorology. 328, 109256.

[7]. Riedl A., **Li Y.** et al. (2022) Technical note: High accuracy weighing micro-lysimeter system for long-term measurements of non-rainfall water inputs to grasslands. Hydrology and Earth System Sciences. 26(1): 91-116.

[8]. **Li Y.** et al. (2021) The role of dew and radiation fog inputs in the local water cycling of a temperate grassland during dry spells in central Europe. Hydrology and Earth System Sciences. 25, 2617-2648.

[9]. Li X., **Li Y.** et al. (2019) Modulation of photosynthate supply by CO_2 elevation affects the post-head-emergence frost-induced grain yield loss in wheat. Journal of Agronomy and Crop Science. 205, 54-64.

[10]. Yu J., **Li Y.** (2018) Uncertainties in the usage of stable hydrogen and oxygen isotopes for the quantification of plant water sources (in Chinese with English abstract). Acta Ecologica Sinica. 38, 7942-7949.

[11]. **Li Y.** et al. (2017) Effect of the transgenerational exposure to elevated CO_2 on the drought response of winter wheat: Stomatal control and water use efficiency. Environmental and Experimental Botany. 136, 78-84.

[12]. **Li Y.** et al. (2017) Water sources of *Populus euphratica* and *Tamarix ramosissima* in Ejina Delta, the lower reaches of the Heihe River, China (in Chinese with English abstract). Chinese Journal of Plant Ecology. 41, 519-528.

Conferences

[1]. (2025) Developing a Soil Organic Matter Management Tool for Swiss Farmers. European Geosciences Union General Assembly, Vienna, Austria, 27 April–2 May 2025. (poster)

[2]. (2025) How Can Agri-Tech Support Sustainable Agriculture? Insights from Patent Reviews and Farm Surveys. 35th Meeting of the FLAN, Paris, France, 12-13 June 2025. (invited speaker)

[3]. (2023) Agricultural technology as the pathway towards sustainable intensification of European farming landscapes. 11th IALE World Congress. Nairobi, Kenya, 10–15 July 2023. (oral)

[4]. (2022) The role of dew and radiation fog inputs in the local water cycling of a temperate grassland during dry spells in central Europe. European Geosciences Union General Assembly, Vienna, Austria, 23–27 May 2022. (oral)

[5]. (2021) The role of dew and radiation fog inputs in the local water cycling of a temperate grassland during dry spells in central Europe. Workshop – «Water isotopes: From Weather to Climate », hybrid workshop, 15–17 November 2021. (poster)

[6]. (2020) Tracing dew and fog water inputs into temperate grassland using stable water isotopes in the extreme summer 2018. European Geosciences Union General Assembly, Online, 4–8 May 2020. (poster)

[7]. (2019) Effect of Dew and Fog Water on Swiss Grasslands Using Stable Water Isotopes. the 17th Swiss Geoscience Meeting, Fribourg, Switzerland, 22–23 Nov 2019. (oral)

[8]. (2019) Effect of dew and fog water on Swiss grassland with stable water isotopes - a case study in 2018 extreme summer drought. The 8th International Fog and Dew Association Conference, Taipei, China, 14–19 July 2019. (oral)

[9]. (2019) Quantifying the effect of dew and fog water on Swiss grasslands with stable water isotopes. European Geosciences Union General Assembly, Vienna, Austria, 7–12 April 2019. (poster)

[10]. (2018) Quantifying the importance of dew on Swiss grasslands with stable water isotope. The 16th Swiss Geoscience Meeting, Bern, Switzerland, 30 Nov – 1 Dec 2018. (poster)

Honors & Awards

PhD scholarship funded by Swiss National Science Foundation. 2018

Exemption from doctoral qualifying exam at ETH Zurich. 2018

Outstanding Student Leader, University of Chinese Academy of Sciences.2015

Outstanding Student, University of Chinese Academy of Sciences.2015

Outstanding Undergraduate Intern Scholarship, Chinese Academy of Sciences.2014

Exemption for Postgraduate Entrance Examination, Sun Yat-sen University.2013

Chinese National Encouragement Scholarship, Sun Yat-sen University.2011/2013

Outstanding Student Scholarship, Sun Yat-sen University.2011/2012/2013

China Southern Airlines Stipend, Sun Yat-sen University.2012

Outstanding Newspaper Editor, Sun Yat-sen University.2011