

Yafei Li Dr. sc ETH Zurich

Born on 20 July 1990 in North China Plain; a son born in Zurich in 2024

Nationality: China **Language:** Chinese (native); English (Fluent)

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Education

03.2018–03.2022 **PhD, ETH Zurich, Switzerland**

Thesis: Effect of dew and fog on Swiss grasslands using stable isotopes of water; supervised by Prof. Dr. Werner Eugster (passed away in May 2022), Prof. Dr. Nina Buchmann, Prof. Dr. Franziska Aemisegger

08.2014–12.2016 **MSc, University of Chinese Academy of Sciences, China**

Thesis: Water source dividing of *Populus euphratica* and *Tamarix ramosissima* in the riparian zones in Ejina Delta, the lower reaches of Heihe River Basin; supervised by Prof. Dr. Jingjie Yu

08.2014–06.2017 **MSc, University of Copenhagen, Denmark**

Thesis: The Responses of winter wheat to transgenerational exposure in elevated [CO₂] environment combined with drought stress; supervised by Prof. Dr. Fulai Liu

09.2010–07.2014 **BSc, Resources Environment & Urban and Rural Planning Management, Sun Yat-sen University, China**

Thesis: The influence of climate change on the HUII medicine growth and production; supervised by Prof. Dr. Zhen Tao

Employment & Internship

08.2022–now **Postdoc**, Agroscope, Switzerland

03.2018–04.2022 **Scientific assistant & PhD**, Institute of Agricultural Sciences, ETH Zurich

07.2017–02.2018 **Research assistant**, Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences

08.2013–09.2013 **Intern**, Pearl River Water Resources Commission, China

07.2013–12.2013 **Intern**, Guangzhou Institute of Geochemistry, Chinese Academy of Sciences

Research interests

Sustainable agriculture: socio-economics; technology adoption; landscape ecology

Carbon sequestration: soil organic carbon; ecosystem water-carbon relations

Climate change: land-atmosphere interaction; water cycle; dew & fog processes; stable isotopes; hydrology; plant physiology; ecology

Projects

- 2024-2027 Agroscope Reserve - Methodological development of humus balance calculator; employee
- 2022-2024 Swiss National Science Foundation – What is Sustainable Intensification? Operationalizing Sustainable Agricultural Intensification Pathways in Europe (SIPATH); employee
- 2018–2022 Swiss National Science Foundation –The importance of fog and dew for Swiss grasslands today and in the future (IFDewS); employee
- 2014–2017 National Natural Science Foundation of China – Water sources and hydrological responses of typical plants in Ejina Delta, China; participant

Teaching & Supervision

- 01.2022 **1st supervisor** of master student Rutger Jager at VU Amsterdam
Tutor for Master and Doctoral Course "Stable Isotope Ecology",
ETH Zurich
- 07.2018–07.2021 **Advisor** of student helpers and apprentices, Grassland Sciences group,
ETH Zurich
- 07.2017 – 02.2018 **Advisor** for the analysis of water quality and stable isotopes,
Institute of Geographic Sciences and Natural Resources Research, Chinese
Academy of Sciences

Publications

- [1]. **Li Y.**, Herzog F., Levers C., Mohr F., Verburg P.H., Bürgi M., Dossche R., Williams T.G. (2024) Agricultural technology as a pathway of sustainable intensification: insights from the development, diffusion and impact of patents. *Agronomy for Sustainable Development*. 44, 14.
- [2]. **Li Y.**, Eugster W., Riedl A., Westerhuis S., Buchmann N., Aemisegger F. (2023) Identifying key stages of radiation fog evolution using water vapor isotopes. *Agricultural and Forest Meteorology*. 334, 109430.
- [3]. **Li Y.**, Eugster W., Riedl A., Lehmann M.M., Aemisegger F., Buchmann N. (2023) Dew benefits on alpine grasslands are cancelled out by combined heatwave and drought stress. *Frontiers in Plant Science*. 14, 1136037.
- [4]. **Li Y.**, Riedl A., Eugster W., Buchmann N., Cernusak L.A., Lehmann M.M., Werner R.A., Aemisegger F. (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.
- [5]. Riedl A., **Li Y.**, Eugster J., Buchmann N., Eugster W. (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.
- [6]. **Li Y.**, Aemisegger F., Riedl A., Buchmann N., Eugster W. (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.
- [7]. Li X., **Li Y.**, Zhu X., Liu S., Liu F. (2019) Modulation of photosynthate supply by CO₂ elevation affects the post-head-emergence frost-induced grain yield loss in wheat. Journal of Agronomy and Crop Science. 205, 54-64.
- [8]. Yu J., **Li Y.** (2018) Uncertainties in the usage of stable hydrogen and oxygen isotopes for the quantification of plant water sources. Acta Ecologica Sinica (in Chinese with English abstract). 38, 7942-7949.
- [9]. **Li Y.**, Li X., Yu J., Liu F. (2017) Effect of the transgenerational exposure to elevated CO₂ on the drought response of winter wheat: Stomatal control and water use efficiency. Environmental and Experimental Botany. 136, 78-84.
- [10]. **Li Y.**, Yu J., Lu K., Wang P., Zhang Y., Du C. (2017) Water sources of *Populus euphratica* and *Tamarix ramosissima* in Ejina Delta, the lower reaches of the Heihe River, China. Chinese Journal of Plant Ecology (in Chinese with English abstract). 41, 519-528.
- [11]. Lu K., Yu J., Wang P., **Li Y.**, Li B. (2017) The response of plant water use strategy to hydrological conditions in arid areas: A case study of *Populus euphratica* in Ejina Delta. South-to-North Water Transfers and Water Science & Technology (in Chinese with English abstract). 15(1): 88-94.
- [12]. Ren A., **Li Y.**, Tao Z., Zhang Q., Xu P., Yang B. (2016) The influence of climate change on the Huai medicine growth and production. Acta Scientiarum Naturalium Universitatis Sunyatseni (in Chinese with English abstract). 55(5): 119-126.

Reviewer

Agricultural and Forest Meteorology; Journal of Hydrology; Agronomy for Sustainable Development

Conferences

- [1]. **Li Y.** et al. (2023). Agricultural technology as the pathway towards sustainable intensification of European farming landscapes. 11th IALE World Congress. Nairobi, Kenya, 10–15 July 2023. (oral)
- [2]. **Li Y.** et al. (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)
- [3]. **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. Workshop – «Water isotopes: From Weather to Climate », hybrid workshop, 15–17 November 2021. (poster)
- [4]. **Li Y.** et al. (2020): Tracing dew and fog water inputs into temperate grassland using stable water isotopes in the extreme summer 2018. European Geosciences Union General Assembly, Vienna, Austria, 4–8 May 2020. (poster)
- [5]. **Li Y.** et al. (2019): Effect of dew and fog water on Swiss grassland using stable water isotopes at Chamau study site - in summer 2018. the 17th Swiss Geoscience Meeting, Fribourg, Switzerland,

22–23 Nov 2019. (oral)

[6]. Li Y. et al. (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)

[7]. Li Y. et al. (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)

[8]. Li Y. et al. (2018): Quantifying the importance of dew on Swiss grasslands with stable water isotope. The 16th Swiss Geoscience Meeting, 30 Nov – 1 Dec 2018. (poster)

Awards

2018	PhD scholarship funded by SNF
2018	Exemption of qualifying exam at ETH Zurich
2015	Outstanding Student Leader, University of Chinese Academy of Sciences
2015	Outstanding Student, University of Chinese Academy of Sciences
2014	Outstanding Undergraduate Intern Scholarship, Chinese Academy of Sciences
2013	Exemption for Postgraduate Entrance Examination, Sun Yat-sen University
2012	China Southern Airlines Stipend, Sun Yat-sen University
2013/2011	Chinese National Encouragement Scholarship, Sun Yat-sen University
2013/2012/2011	Outstanding Student Scholarship, Sun Yat-sen University
2011	Outstanding Newspaper Editor, Sun Yat-sen University