

List of Publications (Markus Flury)

The H -index of my refereed journal articles as of August 2022 is $H = 51/63$ (Web of Science/Google Scholar). The total number of citations of my articles is 8,270/13,590 (Web of Science/Google Scholar).

The H -index uses the highest number of papers a scientist has published that have each received at least that number of citations.

Journal	Number of Articles	2020 Impact Factor
Multidisciplinary Science		
Nature Nanotechnology	1	42.237
Proceedings of the National Academy Sciences USA	1	10.700
Resources Conservation and Recycling	1	10.204
Frontiers in Sustainable Food Systems	1	5.005
PLOS One	1	3.240
Soil Physics, Soil Science, Hydrology		
Water Resources Research	20	5.240
Science of the Total Environment	12	7.963
Soil Science Society of America Journal	10	2.307
Vadose Zone Journal	8	3.289
Soil and Tillage Research	6	5.374
Journal of Contaminant Hydrology	5	3.188
Journal of Environmental Quality	5	2.751
Geoderma	4	6.114
Applied Geochemistry	3	3.524
Journal of Hydrology	3	5.722
Environmental Pollution	2	8.071
Reviews of Geophysics	2	22.000
Advances in Agronomy	1	6.919
Advances in Water Resources	1	4.510
Agricultural and Forest Meteorology	1	5.734
Agricultural Water Management	1	4.516
Agriculture Ecosystems and Environment	1	5.567
Applied Engineering in Agriculture	1	0.985
Applied and Environmental Microbiology	1	4.792
Critical Reviews in Environmental Science and Technology	1	12.561
European Journal of Soil Science	1	4.949
Hydrological Processes	1	3.565
International Journal of Environ. Research	1	2.479
Journal of Plant Diseases and Protection	1	1.928
Microorganisms	1	4.128
Pedosphere	1	3.911
Reviews of Environmental Contamination and Toxicology	1	7.563
Seed Science Research	1	2.250
Transactions of the ASABE	1	1.188
Water Environment Research	1	1.946
Water Research	1	11.236
Colloid Science, Colloid and Surface Chemistry		
Environmental Science and Technology	16	9.028
Colloids and Surfaces Physicochemical Aspects	5	4.539
Langmuir	4	3.882
Journal of Colloid and Interface Science	4	8.128
Clays and Clay Minerals	2	1.609
Microporous and Mesoporous Materials	2	5.455
ACS Omega	1	3.512
ACS Sustainable Chemistry and Engineering	1	8.198
Current Opinion in Green and Sustainable Chemistry	1	6.457
Environmental Science–Nano	1	8.131
Journal of Hazardous Materials Advances	1	na
Journal of Polymers and the Environment	1	3.667
Polymer Testing	1	4.282

1. Thesis and Dissertation

Flury, M., *Transport of bromide and chloride in a sandy and a loamy soil*, Ph.D. Diss. No. 10185, Swiss Federal Institute of Technology, ETH Zurich, 1993.

Flury, M., *Interaction between microclimate and soils in the alpine region of the Swiss National Park*, Masters Thesis, University of Zurich, 1988. (in German)

2. Refereed Journal Articles

2022

141. Wang, D., N. B. Saleh, A. Byro, R. Zepp, E. Sahle-Demessis, T. P. Luxton, K. T. Ho, R. M. Burgess, M. Flury, J. C. White, and C. Su, Nano-enabled pesticides for sustainable agriculture and global food security, *Nature Nanotechnol.*, **17**, 347–360, 2022. (doi.org/10.1038/s41565-022-01082-8)
(Journal Front Cover: <https://www.nature.com/nano/volumes/17/issues/4>)
140. Lyu, X., F. Xiao, C. Shen, J. Chen, C. M. Park, Y. Sun, M. Flury, and D. Wang, Per- and polyfluoroalkyl substances (PFAS) in subsurface environments: Occurrence, fate, transport, and research prospect, *Rev. Geophys.*, **60**, e2021RG000765, doi:10.1029/2021RG000765, 2022. (doi.org/10.1029/2021RG000765)
139. Yu, Y., H. Y. Sintim, A. F. Astner, D. G. Hayes, A. I. Bary, A. Zelenyuk, O. Qafoku, L. Kovarik, and M. Flury, Enhanced transport of TiO₂ in unsaturated sand and soil after release from biodegradable plastic during composting, *Environ. Sci. Technol.*, **56**, 2398–2406, 2022. (doi.org/10.1021/acs.est.1c07169)
138. Strand, S. E., L. Zhang, and M. Flury, A theoretical analysis of engineered plants for control of atmospheric nitrous oxide and methane by modification of the mitochondrial proteome, *ACS Sustainable Chem. Eng.*, **10**, 5441–5452, 2022. (doi.org/10.1021/acsschemeng.1c08237)
(Journal Front Cover: <https://pubs.acs.org/toc/ascecg/10/17>)
137. Wismeth, C., M. Flury, and T. Baumann, Experimental quantification of interfacial convections at the water-nonaqueous-phase liquid interface in microfluidic systems, *Vadose Zone J.*, **21**, e20209, doi:10.1002/vzj2.20209, 2022. (doi.org/10.1002/vzj2.20209)
136. Li, S., F. Ding, M. Flury, Z. Wang, L. Xu, S. Li, D. Jones, and J. Wang, Macro- and microplastic accumulation in soil from 32 years of plastic film mulching, *Environ. Pollut.*, **300**, 118945, doi.org/10.1016/j.envpol.2022.118945, 2022. (doi.org/10.1016/j.envpol.2022.118945)
135. Griffin-LaHue, D., S. Ghimire, Y. Yu, E. J. Scheenstra, C. A. Miles, and M. Flury, In-field degradation of soil-biodegradable plastic mulch films in a Mediterranean climate, *Sci. Total Environ.*, **806**, 150238, doi.org/10.1016/j.scitotenv.2021.150238, 2022. (doi.org/10.1016/j.scitotenv.2021.150238)
134. Madrid, B., S. Wortman, D. G. Hayes, J. M. DeBruyn, C. Miles, M. Flury, T. L. Marsh, S. P. Galinato, K. Englund, S. Agehara, and L. W. DeVetter, End-of-life management options for agricultural mulch films in the United States. A review, *Frontiers in Sustainable Food Systems*, **6**, 921496, doi:10.3389/fsufs.2022.921496, 2022. ([doi:10.3389/fsufs.2022.921496](https://doi.org/10.3389/fsufs.2022.921496))

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133. Yu, Y., D. E. Griffin-LaHue, C. A. Miles, D. G. Hayes, and M. Flury, Are microplastics from biodegradable plastic mulches an environmental concern?, *J. Hazard. Mat. Adv.*, **4**, 100024, doi.org/10.1016/j.hazadv.2021.100024, 2022. (doi.org/10.1016/j.hazadv.2021.100024)
132. Yu, Y., and M. Flury, How to take representative samples to quantify microplastic particles in soil?, *Sci. Total Environ.*, **748**, 147166, doi.org/10.1016/j.scitotenv.2021.147166, 2021. (doi.org/10.1016/j.scitotenv.2021.147166)

131. Yu, Y., and M. Flury, Current understanding of subsurface transport of micro- and nanoplastics in soil, *Vadose Zone J.*, 20, e20108, doi.org/10.1002/vzj2.20108, 2021. (doi:10.1002/vzj2.20108)
130. Yu, Y., M. Elliott, I. Chowdhury, and M. Flury, Transport mechanisms of motile and non-motile *Phytophthora cactorum* zoospores in unsaturated porous media, *Water Resour. Res.*, 57, e2020WR028249, doi.org/10.1029/2020WR028249s, 2021. (doi:10.1029/2020WR028249)
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128. Yang, W., T. Qu, M. Flury, X. Zhang, G. Sigmund, J. Shang, and B. Li, PAHs sorption to biochar colloids changes their mobility over time, *J. Hydrol. (Amsterdam)*, 603, 126839, doi.org/10.1016/j.jhydrol.2021.126839, 2021. (doi.org/10.1016/j.jhydrol.2021.126839)
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126. Sintim, H. Y., S. Bandopadhyay, M. E. English, A. I. Bary, J. E. Lique y Gonzalez, J. M. DeBruyn, S. M. Schaeffer, C. A. Miles, and M. Flury, Four years of continuous use of biodegradable plastic mulch: Effects on soil and groundwater quality, *Geoderma*, 381, 114665, doi.org/10.1016/j.geoderma.2020.114665, 2021. (doi:10.1016/j.geoderma.2020.114665)
125. Anunciado, M. B., D. G. Hayes, L. C. Wadsworth, M. E. English, S. M. Schaeffer, H. Y. Sintim, and M. Flury, Impact of agricultural weathering on physicochemical properties of biodegradable plastic mulch films: Comparison of two diverse climates over four successive years, *J. Polym. Environ.*, 29, 1–16, 2021. (doi:10.1007/s10924-020-01853-1)
124. Wang, Z., M. Li, M. Flury, S. M. Schaeffer, Y. Chang, Z. Tao, Z. Jia, S. Li, F. Ding, and J. Wang, Agronomic performance of polyethylene and biodegradable plastic film mulches in a maize cropping system in a humid continental climate, *Sci. Total Environ.*, 786, 147460, doi.org/10.1016/j.scitotenv.2021.147460, 2021. (doi.org/10.1016/j.scitotenv.2021.147460)
123. Zhang, J., J. E. Amonette, and M. Flury, Effect of biochar particle size on water retention of sand, silt loam, and clay soil, *Soil Till. Res.*, 212, 104992, doi.org/10.1016/j.still.2021.104992, 2021. (doi.org/10.1016/j.still.2021.104992)

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116. Ghimire, S., M. Flury, E. J. Scheenstra, and C. A. Miles, Sampling and degradation of biodegradable plastic and paper mulches in field after tillage incorporation, *Sci. Total Environ.*, **703**, 135577, doi.org/10.1016/j.scitotenv.2019.135577, 2020. (doi.org/10.1016/j.scitotenv.2019.135577)
115. Zhang, H., M. Flury, C. Miles, H. Liu, and L. DeVetter, Soil-biodegradable plastic mulches undergo minimal in-soil degradation in a perennial raspberry system after 18 months, *Horticulturae*, **6**, 47, doi:10.3390/horticulturae6030047, 2020. ([doi:10.3390/horticulturae6030047](https://doi.org/10.3390/horticulturae6030047))

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114. Kessenich, B. L., N. Pokhrel, E. Nakouzi, C. J. Newcomb, M. Flury, L. Maibaum, and J. J. D. Yoreo, Connecting wettability, topography, and chemistry in a simple lipid-montmorillonite system, *J. Colloid Interface Sci.*, **55**, 498–508, 2019. (doi.org/10.1016/j.jcis.2019.07.075)
113. Shahzad, K., A. I. Bary, D. P. Collins, L. Chalker-Scott, M. Abid, H. Y. Sintim, and M. Flury, Carbon dioxide and oxygen exchange at the soil-atmosphere boundary as affected by various mulch materials, *Soil Till. Res.*, **194**, 104335, doi.org/10.1016/j.still.2019.104335, 2019. (doi.org/10.1016/j.still.2019.104335)
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111. Sintim, H. Y., S. Bandopadhyay, M. E. English, A. I. Bary, J. M. DeBruyn, S. M. Schaeffer, C. A. Miles, J. P. Reganold, and M. Flury, Impacts of biodegradable plastic mulches on soil health, *Agric. Ecosystems Environ.*, **273**, 36–49, 2019. (doi.org/10.1016/j.agee.2018.12.002)
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108. Schulze-Makuch, D., et al. A transitory microbial habitat in the hyperarid Atacama Desert, *Proc. Natl. Acad. Sci. USA*, **115**, 2670–2675, 2018. (doi.org/10.1073/pnas.1714341115)
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104. Flury, M., and S. Aramrak, Role of air-water interfaces in colloid transport in porous media: A review, *Water Resour. Res.*, **53**, 5247–5275, 2017. ([dx.doi.org/10.1002/2017WR020597](https://doi.org/10.1002/2017WR020597))
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