

Curriculum Vitae

Bernhard Wehrli

Professor of Aquatic Chemistry

Institute of Biogeochemistry and Pollutant Dynamics, ETH Zurich, Universitätsstrasse 16, 8092 Zürich

Eawag, Department of Surface Waters, Seestrasse 79, 6047 Kastanienbaum, Switzerland

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Academic Training

Doctorate in Natural Sciences, ETH Zurich, Swiss Federal Institute of Technology (1983 – 87)

Post-graduate course in sanitary engineering and water protection ETH Zurich and Eawag (1983 – 84)

Diploma, Chemistry, ETH Zurich, Switzerland (1977-1982)

Professional Experience

Full professor of Aquatic Chemistry, Dept. of Environmental System Sciences, ETH Zurich (2001- today)

Visiting Professor at Institute National Polytechnique Toulouse, Foundation STAE (2011)

Visiting Professor Hebrew University, Jerusalem (2003)

Associate Professor of Aquatic Chemistry at ETH Zurich, (1997-2001)

Assistant Professor of Aquatic Chemistry at ETH Zurich (1991-1997)

Visiting scientist of CNRS, Laboratory for Mineralogy and Crystallography, University Paris 6 (1991)

Research scientist at EAWAG Kastanienbaum (1988-1991)

Visiting associate at Caltech, Pasadena, USA (1987-1988)

Research Interests

Biogeochemistry of inland waters; nutrient and carbon cycles, redox processes, greenhouse gas emissions.

Aquatic sensing systems for high-resolution analysis in rivers, lakes and sediments.

Human impacts on water resources, remediation measures, and sustainable water management.

Professional Activities

Academic

Study director, environmental science program ETH Zurich (2018 – today)
Deputy Director, Institute of Science, Technology and Policy ETH Zurich (2018 – 2019)
Head of Institute of Biogeochemistry and Pollutant Dynamics, ETH Zürich (2016 – 2018)
Member of the Directorate of Eawag (2005 – 2015)
Member of the National Research council of the Swiss National Science Foundation (2005 – 2011)
Head of Department for Surface Waters, Eawag Kastanienbaum (1999-2005)
Head of Department of Biogeochemistry at Eawag Kastanienbaum (1996-1999)
Lecturer at ETH Zurich (1989 – 1991)

Committees

Scientific Advisory Board, Leibnitz Institute of Freshwater Ecology and Inland Fisheries, Berlin (2016-today)
Steering Board Daylight Academy (2016-today)
Head Scientific Jury, Environmental Systems Research, Vienna Science and Technology Funds, (2016-2017)
Scientific Advisory Board Helmholtz Center Munich (2010 – 2014)
Project Leader Institute of Science, Technology and Policy, ETH Zurich (2013-2014)
Board of the Swiss “Wasser Agenda 21” a stakeholder platform for water policy (2010-2015)
Science Advisory Group of the International Continental-Drilling Program, ICDP (2009-2013)
Council of the European Association of Geochemistry, EAG (2006-2009)
Teaching Commission of Environmental Science Department, ETH Zurich (1999-2010)
Clair Patterson Award Committee, Geochemical Society (2003-2006)
Steering Committee NADUF, Swiss river monitoring program (2001-2006)
Research Commission of ETH Zurich (2000-2005)
Board of the Center of Excellence in Analytical Chemistry, ETH Zurich (1999-2004)
Reorganization Committee Eawag (1998-1999)
Geochemical Society Nominations Committee (1994-1998)
Executive Board Swiss Greina Foundation, SGS, (1984-2014)

Journal Editing

Guest Editor Special Issue “Speciation, Bioavailability and Ecotoxicology of Trace Metals in Natural Waters”, Aquatic Geochemistry (2015)
Associate Editor Aquatic Geochemistry (2005-today),
Associate Editor Journal of Hydrology (2008-2013),
Guest Editor Special Issues “High resolution varve studies in Baldeggersee”, Aquatic Sciences (1997).
Editorial Board Aquatic Sciences (1992-2000),

Conference Organization

Nano- and microplastics in technical and freshwater systems, Ascona, Switzerland October 2018 (member of organizing committee).
ASLO summer meeting Santa Fé, June 5-10, 2016 (member of scientific committee)
Session From Land to Sea – Biogeochemistry of Organic Matter in Inland Waters, Goldschmidt Conference, Prague, Czech Republic, August 2015 (Convener)
GEO Water Quality Summit, Geneva April 2015 (Organizing committee)

International Conference on Contaminated Sediments, Ascona, Switzerland, March 2015 (Co-organizer)
Workshop Environmental Sensors for Inland Waters, Toulouse, France, January 2015 (Co-organizer)
River Corridor Restoration Conference, Ascona, Switzerland, March 2011 (Co-organizer)
Summer School Biogeochemistry and Pollutant Dynamic in Lakes, Kastanienbaum, July 2010 (Organizer)
Conference "Wasserkraft als Spitzenenergie", ETH Zurich, Switzerland Nov. 2008 (Organizer)
Workshop Environmental Changes in the Danube Delta, Bucharest, Romania March 2008 (Co-organizer)
Session Oxygen uptake dynamics at the sediment-water interface, Aslo Conference, Santa Fé, February 2007
(Convener)
Workshop Development and Application of Chemical Sensors in Honor of Ernoe Pretsch, ETH Zurich,
Switzerland (Organizer)
Session Metals in the Environment, Goldschmidt Conference, Copenhagen, Denmark, June 2004, (Convener)
International Conference Biogeochemical Processes Involving Iron Minerals in Natural Waters, Ascona,
Switzerland Nov. 2003, (Co-organizer)
International Conference Environmental Future of Aquatic Ecosystems, Foundation of Environmental
Conservation and Eawag, Zurich Switzerland March 2003, (Program Committee Member)
Goldschmidt Conference 2002, 2003 (Program Committee Member)

Reviews (last years)

Journals: Ambio, Applied Geochemistry, Aquatic Geochemistry, Biogeochemistry, Biogeoscience, Chemical Geology, Ecosystems, Environmental Science & Technology, Frontiers in Earth Sciences, Geochimica Cosmochimica Acta, Journal of Hydrology, Limnologica, Limnology & Oceanography, Limnology & Oceanography Letters, Nature, Nature Communications, Nature Geoscience, PLOS One, Science, Science of the Total Environment, Scientific Reports, Water Research

Funding: Vienna Science and Technology Fund (head of review panel), Helmholtz Society, ICDP-International Continental Drilling Program, Israel Science Foundation, Society in Science (Branco Weiss Fellowships), SNF- Swiss National Science Foundation, Sparkling Science (Austria), DFG – Deutsche Forschungsgemeinschaft.

Search committees and review panels (last years)

University Innsbruck (2018), University Tübingen and Helmholtz München (2015-2016), University of Zurich (2015), ETH (2014), Eawag (2013), Helmholtz Center Leipzig (2013), ETH (2012), Eawag (2012), Helmholtz Center Munich (2011), Waste Management Laboratory PSI Würenlingen (2011), EPFL (2011)

Awards and Recognition

Outreach Lecturer Africa, Geochemical Society and European Association of Geochemistry (2013), Lady Davis Fellowship, Hebrew University (2003), Swiss Transdisciplinary Award (2000), Research Fellow of CNRS, University Paris 6 (1991), ETH Medal for excellent doctoral thesis, ETH Zurich (1987)

Membership in Professional Societies

European Association of Geochemistry, Geochemical Society, International Society of Limnology, Association for the Sciences of Limnology and Oceanography, American Association for the Advancement of Science

Publications

ORCID ID 0000-0001-7092-1972

Papers in peer-reviewed journals

- Winton R.S., Calamita E., Wehrli B. (2019) Reviews and syntheses: Dams, water quality and tropical reservoir stratification. *Biogeosciences*, **16**, 1657-1671.
- Lange K., Wehrli B., Aberg U., Bätz N., Brodersen J., Fischer M., Hermoso V., Liermann C.R., Schmid M., Wilmsmeier L., Weber C. (2019) Small hydropower goes unchecked. *Frontiers in Ecology and the Environment*. **17**, 256-258. doi:10.1002/fee.2049
- Guggenheim C., Brand A., Bürgmann H., Sigg L., Wehrli B. (2019) Bioavailable copper controls methanotroph abundance in lacustrine methane consumption zones. *Scientific Reports*, **9**, 4817
- Kamali B., Abbaspour K.C., Lehmann A., Wehrli B., Yang H. 2018. Spatial assessment of maize physical drought vulnerability in sub-Saharan Africa: Linking drought exposure with crop failure. *Environmental Research Letters* **13**, 074010, doi.org/10.1088/1748-9326/aacb37
- Kamali B., Abbaspour K.C., Lehmann A., Wehrli B., Yang H. 2018. Uncertainty-based auto-calibration for crop yield – the EPIC+ procedure for a case study in Sub-Saharan Africa . *European Journal of Agronomy* **93**, 57-72.
- Kamali B., Abbaspour K.C., Wehrli B., Yang H. 2018. Drought vulnerability assessment of maize in Sub-Saharan Africa: Insights from physical and social perspectives. *Global and Planetary Change* **162**, 266-274.
- Athavale R., Dinkel C., Wehrli B., Bakker E., Crespo G.A., Brand A. 2017. Robust solid-contact ion selective electrodes for high resolution in-situ measurements in fresh water systems. *Environmental Science and Technology Letters*. **4**, 286-291. doi: 10.1021/acs.estlett.7b00130.
- Ghahraman Afshar M., Tercier-Waeber M., Wehrli B., Bakker E. 2017. Direct sensing of total alkalinity profile in a stratified lake *Geochemical Perspectives Letters*, **3**, 85-93. doi: 10.7185/geochemlet.1709
- Oswald. K., Graf J.S., Littmann S., Tienken D., Brand A., Wehrli B., Albertsen M., Daims H., Wagner M., Kuypers M.M.M., Schubert C.J., Milucka J. 2017. Crenothrix are major methane consumers in stratified lakes. *The ISME Journal*, doi:10.1038/ismej.2017.77
- Randlett M-E., Bechtel A., van der Meer M.T.J., Peterse F., Litt T., Pickarski N., Kwiecien O., Stockhecke M., Wehrli B., Schubert C.J. 2017. Biomarkers in Lake Van sediments reveal dry conditions in eastern Anatolia during 110.000-10.000 years B.P. *Geochemistry, Geophysics, Geosystems*. **18**, 571-582. doi:10.1002/2016GC006621.
- Sollberger S., Wehrli B., Schubert C.J., DelSontro T., Eugster W. Minor methane emissions from an Alpine hydropower reservoir based on monitoring of diel and seasonal variability *Environmental Science: Processes and Impacts*. doi: 10.1039/c7em00232g
- Steinsberger T., Schmid M., Wüest A., Schwefel R., Wehrli B., Müller B. 2017- Organic carbon mass accumulation rate regulates the flux of reduced substances from the sediments of deep lakes. *Biogeosciences*. **14**, 3275-3285. doi: 10.5194/bg-14-3275-2017
- Zuijdgeest A., Wehrli B. 2017. Carbon and nutrient fluxes from dams and wetlands in the Zambezi basin. *Chemical Geology*, **467**, 1-11. doi:10.1016.chemgo.2017.07.025
- DelSontro T., Perez K.K., Sollberger S., Wehrli B. 2016. Methane dynamics downstream of a bubbling reservoir: Evidence for emission hot spots. *Limnol. Oceanogr.* **61**, S188-S203, doi: 10.1002/lno.10387

- Oswald K., Milucka J., Brand A., Hach, P., Littmann S., Wehrli B., Kuypers M.M.M., Schubert C.J. 2016. Aerobic gammaproteobacterial methanotrophs mitigate methane emissions from oxic and anoxic lake waters. *Limnol Oceanogr.* **61**, S101-S118, doi: 10.1002/lno.10312
- Zuijgeest A., Baumgartner S., Wehrli B. Hysteresis effects in organic matter turnover in a tropical floodplain during a flood cycle. 2016. *Biogeochemistry*, **131**, 49-63, doi 10.107/s10533-016-0263-z
- Koenka I.J., Küng N., Kubán P., Chwalek T., Furrer G., Wehrli B., Müller B., Hauser P.C. Thermostatted dual-channel portable capillary electrophoresis instrument. *Electrophoresis* **37**, 2368-2375 DOI 10.1002/elps.201600235
- Brand A., Bruderer H., Oswald K., Guggenheim C., Schubert C.J., Wehrli B. 2016. Oxygenic primary production below the oxycline and its importance for redox dynamics *Aquatic Sciences* **78**, 727–741 doi: 10.1007/s00027-016-0465-4
- Mertens J., Rose J., Wehrli B., Furrer G. 2016. Arsenate uptake by Al nanoclusters and other Al-based sorbents during water treatment. *Water Research* **88**, 844-851.
- Brun N., Wehrli B., Fent K. 2016. Ecotoxicological assessment of solar cell leachates: Copper indium gallium selenide (CIGS) cells show higher activity than organic photovoltaic (OPV) cells. *Science of the Total Environment* **543**, 703-714.
- Athavale R., Kokorite I., Crespo G.A., Dinkel C., Bakker E., Wehrli B., Brand A. 2015. In-situ ammonium profiling using solid contact ion selective electrodes in eutrophic lakes. *Analytical Chemistry*, **87**, 11990-11997. doi: 10.1021/acs.analchem.5b02424
- Zuijgeest A.L., Zurbrügg R., N. Blank, R. Fulcri, D.B. Senn, and B. Wehrli 2015. Seasonal dynamics of carbon and nutrients from two contrasting tropical floodplain systems in the Zambezi River Basin. *Biogeosciences* **12**, 7535–7547. doi:10.5194/bg-12-7535-2015
- Peter S., Mächler L., R. Kipfer, Wehrli B., Durisch-Kaiser E. 2015. Flood-controlled excess air formation favors aerobic respiration and limits denitrification in riparian groundwater. *Frontiers in Environmental Science* **3**:75, doi: 10.3389/fenvs.2015.00075
- Oswald K., Milucka J., Brand A., Wehrli B., Kuypers M.M.M., Schubert C.J. 2015. Light-dependent aerobic methane oxidation reduces methane emissions from seasonally stratified lakes. *PLOS ONE*. 10(7): e0132574. doi:10.1371/journal.pone.0132574
- Kraemer B., Hook S., Huttula T., Kotilainen P., O'Reilly C.M., Peltonen A., Plisnier P.-D., Sarvala J., Tamatamah R., Vadeboncoeur Y., Wehrli B., McIntyre P.B. 2015. Century-long warming trends in the upper water column of Lake Tanganyika. *PLOS ONE* 10(7): e0132490. doi:10.1371/journal.pone.0132490
- Zigah P.K., Oswald K., Brand A., Dinkel C., Wehrli B., Schubert C.J. 2015. Molecular and isotopic insights into methane oxidation and associated methanotrophic communities in the water column of a tropical lake (Lake Kivu). *Limnology & Oceanography*. **60**, 553-572. DOI: 10.1002/lno.10035
- DelSontro, T., McGinnis, D.F., Wehrli, B., Ostrovsky, I. 2015. Size does matter: Importance of large bubbles and small-scale hot spots for methane transport. *Environ. Sci. Technol.* **49**, 1268-1276 DOI: 10.1021/es5054286
- Randlett, M.-E., Sollberger, S., Del Sontro, T., Müller, B., Corella J. P., Wehrli, B., and Schubert, C.J. 2015. Mineralization pathways of organic matter deposited in a river-lake transition of the Rhone River Delta, Lake Geneva, *Environmental Science-Processes and Impacts*. **17**, 370-380. DOI: 10.1039/c4em00470a
- Kirf M.K., Røy H., Hotappels M., Fischer J., Schubert C., Wehrli B. 2015. Redox gradients at the low oxygen boundary of lakes. *Aquatic Sciences* **77**: 81-93, DOI 10-1007/s00027-014-0365-4.
- Randlett M.È., Coolen M.J.L., Stockhecke M., Pickarski N., Litt T., Balkema C., Kwiecien O., Tomonaga Y., Wehrli B., Schubert C.J. 2014. Alkenone distribution in Lake Van sediments since the last 600 kyrs; influences of temperature and haptophyte species composition. *Quaternary Science Reviews*.**104**, 53-62.

- Sollberger S., Corella J.P., Giraclos S., Randlett M.-E., Schubert C.J., Senn D.B., Wehrli B., DelSontro T. 2014. Methane production in the Rhone delta of Lake Geneva: Spatial heterogeneity in three distinct underwater canyons. *Aquatic Sciences*, **76**, (Suppl 1), S89-S101. DOI 10.1007/s00027-013-0319-2
- Kirf M.K., Dinkel C., Schubert C.J., Wehrli B. 2014. Measuring submicromolar oxygen profiles at the oxic-anoxic boundary of lakes *Aquatic Geochemistry*, DOI 10.1007/s10498-013-9206-7
- Brun N.R., Lenz M., Wehrli B., Fent K. 2014. Comparative effects of zinc oxide nanoparticles and dissolved zinc on zebrafish embryos and eleuthero-embryos: Importance of zinc ions. *Science of the Total Environment*. **47**, 476-477.
- Friedrich J., Janssen F., Alynik D., Bange H.W., Boltacheva N., Cagatay M.N., Dale A.W., Etiope G., Erdem Z., Geraga M., Gilli A., Gomoiu M.T., Hall P.O.J., Hansson D., He Y., Holtappels M., Kirf M., Kononets M., Konovalov S., Lichtschlag A., Livingstone D.M., Marinaro G., Mazlumyan S., Naeher S., North R.P., Papatheodorou G., Pfannkuche O., Prien R., Rehder G., Schubert C.M. Soltwedel T., Sommer S., Stahl H., Stanev E.V., Teaca A., Tengberg A., Waldmann C., Wehrli B., Wenzhöfer F. 2014. Investigating hypoxia in aquatic environments: diverse approaches to addressing a complex phenomenon. *Biogeosciences* **11**, 1215–1259, doi:10.5194/bg-11-1215-2014
- Kunz M.J., Senn D.B., Wehrli B., Mwelwa E.M., Wüest A. 2013. Optimizing turbine withdrawal from a tropical reservoir for improved water quality in downstream wetlands. *Water Resources Res.* **49**. 5570-5584. doi:10.1002/wrcr.20358,
- Solterman D., Fernandes M.M., Baeyens B., Dähn R., Miehé-Brendlé J., Wehrli B., Bradbury M.H. 2013. Fe(II) sorption on a synthetic montmorillonite. A combined macroscopic and spectroscopic study. *Environ. Sci. Technol.* **47**, 6978-6986
- Andersson J.C.M., Zehnder A.J.B., Wehrli B., Jewitt G.P.W., Abbaspour K.C., Yang H. 2013. Improving crop yield and water productivity by ecological sanitation and water harvesting in South Africa. *Environ. Sci. Technol.* **47**, 4341-4348.
- Zurbrügg R., Suter S., Lehmann M.F., Wehrli B., Senn D.B. 2013. Organic carbon and nitrogen export from a tropical dam-impacted floodplain system. *Biogeosciences* **10**, 23–38. doi:10.5194/bg-10-23-2013
- Peter S., Rechsteiner R., Lehmann M.F., Brankatschk R., Vogt T., Diem S., Wehrli B., Tockner K., Durisch-Kaiser E. 2012. Nitrate removal in a restored riparian groundwater system: functioning and importance of individual riparian zones. *Biogeosciences* **9**, 4295-4307 doi: 10.5194/bg-9-4295-2012
- Diem T., Koch S., Schwarzenbach S., Wehrli B., Schubert C.J. 2012. Greenhouse gas emissions (CO₂, CH₄, and N₂O,) from several perialpine and alpine hydropower reservoirs by diffusion and loss in turbines. *Aquatic Sciences*, **74**, 619-635, DOI 10.1007/s00027-012-0256-5
- Peter S., Koetzsch S., Traber J., Bernasconi S.M., Wehrli B., Durisch-Kaiser E. 2012. Intensified organic carbon dynamics in the groundwater of a restored riparian zone. *Freshwater Biology*, **57**, 1603-1616.
- Zurbrügg R., Wamulume J., Kamanga R., Wehrli B., Senn D.B. 2012. River-floodplain exchange and its effects on the fluvial oxygen regime in a large tropical river system (Kafue Flats, Zambia) *J. Geophys Res. Biogeosciences* **117**, G03008, doi: 10.1029/2011JG001853
- Mertens J., Rose J., Kägi R., Chaurand P., Plötze M., Wehrli B., Furrer G. 2012. Adsorption of arsenic on polyaluminum granulate. *Environ. Sci. Technol.* **46**, 7310-7317.
- Carstens D., Koellner K.E., Buergermann H., Wehrli B., Schubert C.J. 2012. Contribution of bacterial cells to lacustrine organic matter based on amino sugars and D-amino acids. *Geochim. Cosmochim. Acta.* **89**, 159-172.
- Hering J.G., Hoehn E., Klinke A., Maurer M., Peter A., Reichert P., Robinson C., Schirmer K., Schirmer M., Stamm C., Wehrli B. 2012. Moving targets, long-lived infrastructure, and increasing needs for integration and adaptation in water management: an illustration from Switzerland. *Environ Sci. Technology* **46**, 112-118.
- Andersson J.C.M., Zehnder, A.J.B., Wehrli B., Yang H. 2012. Improved SWAT model performance with time-dynamic Voronoi tessellation of climatic input data in Southern Africa. *J. Amer. Water Resources Association* **48**, 480-493, DOI: 10.1111/j.1752-1688.2011.00627.x

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- Sobek S., Del Sontro T., Wongfung N., Wehrli B. Extreme organic carbon burial fuels intense methane bubbling in a temperate reservoir. 2012. *Geophysical Res. Letters*. **39**, L01401, doi:10.1029/2011GL050144
- Kunz M.J., Wüest A., Wehrli B., Landert J., Senn D.B. 2011. Impact of a large tropical reservoir on riverine transport of sediment, carbon and nutrients to downstream wetlands. *Water Resources Research* **47**, W12531, doi:10.1029/2011WR010996
- Del Sontro T., Kunz M.J., Kempton T., Wüest A., Wehrli B., Senn D.B. 2011 Spatial heterogeneity of intense methane ebullition in a large tropical reservoir *Env. Sci. Technol.* **45**, 9866-9873
- Wamulume J., Landert J., Zurbrügg R., Nyambe I., Wehrli B., Senn D.B. 2011 Exploring the hydrology and biogeochemistry of the dam-impacted Kafue River and Kafue Flats (Zambia). *J. Phys. Chem. Earth.* **36**, (14-15) 775-788 doi:10.1016/j.pce.2011.07.049
- Kunz M.J., Anselmetti F.S., Wüest A., Wehrli B., Vollenweider A., Thuring S., Senn D.B. 2011. Sediment accumulation and carbon, nitrogen, and phosphorus deposition in the large tropical reservoir Lake Kariba (Zambia/Zimbabwe). *J. Geophys. Res. – Biogeosci.* **116**, G03003, doi:10.1029/2010JG001538
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- Durisch-Kaiser E., Schmid M., Peeters F., Kipfer R., Dinkel C., Diem T., Schubert C.J. Wehrli B. 2011 What prevents out-gassing of methane to the atmosphere in Lake Tanganyika? *Journal of Geophysical Research* **116**, G02022, doi: 10.1029/2010JG001323
- Roberts L.C., Hug S.J., Voegelin A., Dittmar J., Kretzschmar R., Wehrli B., Saha G.C., Badruzzaman A.B.M., Ali M.A. 2011. Arsenic dynamics in porewater of an intermittently irrigated paddy field in Bangladesh. *Environ. Science and Technology* **45**, 971-976.
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- Leisinger S.M., Lothenbach B., Le Saut G., Kägi R., Wehrli B., Johnson A.C. 2010. Solid solutions between CrO₄⁻ and SO₄⁻-ettringite Ca₆(Al(OH)₆)₂[(CrO₄)_x(SO₄)_{1-x}]₃*26H₂O. *Env. Sci. Technol.* **44**, 8983-8988.
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- Schwarzenbach, R. P., Egli T., Hofstetter T.B., von Guten U., Wehrli B. 2010. Global Water pollution and human health. *Annu. Rev. Environ. Resources.* **35**, 109-136.
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- Roberts L.C., Hug S.J., Dittmar J., Voegelin A., Wehrli B., Kretzschmar R., Saha G.C., Ali M.A., Badruzzaman A.B.M. 2010 Arsenic mobilization from paddy soils during monsoon flooding. *Nature Geoscience* **3** (1) 53-59.
- Mandaliev P., Dähn R., Tits J., Wehrli B., Wieland E. 2010. EXAFS study of Nd(III) uptake by amorphous calcium silicate hydrates (C-S-H). *J. Colloid Interface Science* **342**, 1-7
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- Pavel A., Durisch-Kaiser E., Balan S., Radan S., Sobek S., Wehrli B. 2009. Sources and emission of greenhouse gases in Danube Delta Lakes, *Env. Sci. and Pollutant Research* **16**, Suppl 1: S86–S91. DOI 10.1007/s11356-009-0182-9
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- Brand A., Dinkel C., Wehrli B. 2009. Influence of the diffusive boundary layer on solute dynamics in the sediments of a seiche-driven lake: A model study. *J. Geophysical Research* **114**, G01010, doi:10.1029/2008JG000755.
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- Meier C., Wehrli B., van der Meer J.R. 2008. Seasonal fluctuations of bacterial community diversity in agricultural soil and experimental validation by laboratory disturbance experiments. *Microbial Ecology* **56**, 210-222.
- Nozhevnikova A.N., Nekrasova V., Ammann A., Zehnder A.J.B., Wehrli B., Holliger C. 2007. Influence of temperature and high acetate concentrations on methanogenesis in lake sediment slurries. *FEMS Microbiology Ecology*, **62**, 336-344.
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- Fette M., Weber C., Peter A., Wehrli B. 2007. Hydropower production and river rehabilitation: A case study on an alpine river *Environ. Modelling and Assessment* **12**, 257-267.
- Teodoru C., Friedl G., Friedrich J., Roehl U., Sturm M., Wehrli B. 2007. Carbon, nitrogen and phosphorus accumulation in the sediments of the Black Sea. *Marine Chemistry* **105**, 52-69
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- Wehrli B., Wüest A. 1996. Zehn Jahre Seebelüftung: Analyse der Entwicklung und Optionen für die Zukunft. Schriftenreihe der Eawag Nr. 9. 138 S.
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- Wüest A., Wehrli B., Friedl G. 1991. Sanierung des Baldeggersees: Bericht über die Sauerstoff- und Phosphorentwicklung von 1982-1990 mit spezieller Analyse des Jahres 1990. Eawag Bericht für den Kanton Luzern. 83 S.

Outreach (last years)

2019: «Konfliktlinien der Pestizidpolitik» Seminar Geoethik, Universität Basel. May 21. «Klimaflüchtlinge», Podium at the Sustainability Week Zurich, March 8.

2018: “Auch das Mittelmeer ist vom Plastikmüll verseucht», 10vor10, TV SRF, June 8. «Plastik Strategie der EU», Tagesschau TV SRF May 28. «Winzige Teilchen, grosse Umweltbelastung», Blick, May 7. «Plastikabfall am Genfersee enthält hochgiftige Stoffe», diverse print media: Tages Anzeiger, Bund etc. April 17, «Das Wasser soll sauberer werden. Luzerner Zeitung, March 22.

2017: «Poyquaternium in consumer products» interview with Stephan Wüthrich, Radio SRF, May 26. “Zurückgezogene Studie über Mikroplastik in Science”, interview with Irène Dietschi, Radio SRF. May 5. «Elemente einer Risikoanalyse» PEAK course pollutants in sediments, Eawag, May 4. “Zürichseeboden sauber saniert”, Interview with Erich Aschwanden, NZZ, April 5. “Sind unsere Gewässer zu sauber?” talk show, SRF Forum, March 23. «Mikroschadstoffe beim Coiffeur», presentation, Hairdresser association, Central Switzerland. March 13. «Auch die Tiefsee ist verschmutzt» Interview Thomas Häusler, Echo der Zeit, Radio SRF, Feb. 13. «Froh, dass nur ein paar Haare versengt sind», Interview Noah Knüsel, 20Minuten. Feb. 3. «Abfalltaucher», Interview Radio SRF Jan. 12.

2016: «Cities improve their water resilience in the face of climate change», skype presentation at Climathon 2016 with participants in Bogotá, Colombia. «Mikroplastik in Kosmetika», Interview TV SRF, Oct. 18, «Mikroplastik Fasern aus Sportbekleidung», Interview, Radio SRF, Oct. 18. «Seenforschung vor neuen Herausforderungen», presentation at Eawag Infotag, Sept. 5, Lucerne. «Warum Wasser uns Menschen fasziniert» Symposium contribution «Märchen vom Wasser, Märchen am Wasser» Lucerne, June 18. «Hundert Jahre Wasserforschung in Kastanienbaum». Cercl’Eau, Lucerne, June 16, «Jakob Nüesch, der freundliche Veränderer, Jakob Nüesch Gedenkveranstaltung, Collegium Helveticum, May 13. «Mehr Mikroplastik in Flüssen als bisher gedacht» Interview Anita Vonmont, SRF News Radio, Feb 26. «Aufrüsten gegen Mikroverunreinigungen» Interview Blick, Feb 18. «Aufrüsten gegen Mikroverunreinigungen» ETH Zukunftsblog, Feb 16. «Barrages tropicaux controversés» interview with Le Temps, Jan 9.

2015: “Ist der blaue Planet im roten Bereich?”ETH future blog, Sept 11. “SCNAT live” interview for Radio SRF1, Aug 4. “Best available technologies for sustainable water management”, Conference on Water Governance in Central Asia, OSCE, EDA, July 2-3, Astana Kasachstan. “Mercury” Exoposition item for Focus Terra Exhibition at ETH and interview for exhibition booklet, June 8. “Achtung Hochwasser” ETH future blog, May 12.

2014: “Cooperating for sustainable water management, the aspect of water quality”.Basel Conference on IWRM for Central Asia, Nov.24 “River restoration and water quality”, interview with Korean TV. . Oct. 29. “Pea soup and other waters”, video <https://vimeo.com/115070687> . Aug 21. “Sauberes Wasser ist ein Menschenrecht” ETH Future blog, <http://bit.ly/1Agw0VY> June 5. „Schöne, heile Plastikwelt“ Café Scientifique, Basel May 18. “Wasserprojekte in Entwicklungsländern” Café Scientifique Luzern, May 14. „Mikroplastik in Lebensmitteln“ SRF I (Swiss Radio), Kassensturz SRF TV. Jan. 21.

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Year	Funding	Title	PI, CoPIs	Duration	CHF
2017	ETH	Swiss Minerals Laboratory, ISTP research incubator program	Hellweg et al.	09.17-08.20	648'786
2016	EU	DAFNE, Decision analytical framework for..	Burlando et al.	09.16-03.20	317'240
2016	SNF	From biogeochemistry to the ecological genomics of pelagic fish stocks...	Wehrli, Seehausen	06.16-05.19	593'924
2015	EU	C-Cascades, Marie-Curie Training Network	P. Reignier et al.	07.15-06.19	274'224
2014	SNF	Cluster of sondes for high-resolution analysis of aquatic ecosystems	Matthews et al.	09.14-08.15	375'290
2014	SNF	Factors governing methane oxidation...	Wehrli, Schubert	04.14-03.16	259'197
2014	CCES	ADAPT Database for Africa	Wehrli, Schleiss	06.14-05.16	100'000
2014	SNF	In-situ sensing tools for assessing rapid phytoplankton dynamics	Bakker, Pomati, Wehrli	01.14-12.16	1'024'250
2013	Eawag	Adaptive capacity of aquatic ecosystems in variable environments	Matthews et al.	06.13-05.15	286'119
2012	Sciex	Applying new sensor technology to the analysis of sediment-water exchange processes	Wehrli	09.12-12.13	130'533
2012	Admin, Eawag	Fliessgewässer Schweiz (river restoration in Switzerland)	Wehrli	09.12-02.17	800'000
2011	EPFL	éLEMO, Real-time mapping... of CH4 ebullition...in the Rhone River delta	Senn, Wehrli	03.11-12.12	150'728
2011	CCES	ADAPT – synthesis phase	Wehrli et al.	01.12-05.13	200'000
2011	SNF	Methane oxidation pathways...	Wehrli Schubert	04.11-03.14	489'322
2010	SNF	The influence of Fe(II) on clay properties, the sorption of Fe(II) on clays and competitive sorption investigations.	Baeyens, Marques, Wehrli	08.10-07.13	196'548
2010	SNF	Methane emissions from lakes - extension	Wehrli, Wüest	06.10-03.11	42'804
2009	Admin	Mercury contamination of fish species	Senn	06.09-05.10	50'000
2009	SNF	REquip - High resolution in-situ nutrient mapping of large rivers and lakes	Wehrli, Senn	04.10-03.11	255'948
2009	Eawag				
2009	Admin	Oxygenation Lake Hallwil	Wehrli	07.09-10.09	9'000
2009	Admin	Risk analysis of contaminated sediments in L. Zurich	Wehrli	08.09-12.09	30'000
2008	Eawag	ADAPT - (matching funds)	Wüest, Wehrli	01.08-12.08	58'000
2008	SNF	Scientific concepts for the sustainable management of mid-sized lakes	Pfeiffer et al.	10.08-09.11	433'276
2008	SNF	Towards noble gas analysis in ocean sediments to characterize active CH4 seepage	Kipfer et al.	10.08-09.09	67'150
2008	Fund	Hydropower and residual flows	Wehrli	01.08-12.08	39'135
2008	Eawag	ADAPT (matching funds)	Wüest, Wehrli	01.08-12.08	60'000
2008	CCES	ADAPT, the African Dams Project	Wehrli et al.	09.08-08.11	400'200
2008	SNF	The role of lake sediments in the carbon cycle: organic carbon preservation and CH4 emission	Wehrli et al.	06.08-05.10	272'191
2007	Admin	Risk analysis of contaminated sediments in Lake Zurich	Wehrli	01.07-12.07	30'000
2007	CCES	RECORD - River corridor dynamics	Cirpka et al.	04.07-03.11	200'000

Year	Funding	Title	PI, CoPIs	Duration	CHF
2007	ETH	ADAPT - African Dams Project (S-ENETH)	Wehrli	01.07-12.10	100'000
2007	SNF	Iron isotope fractionation for geochemical process identification in aquatic systems	von Gunten et al.	01.07-03.08	100'839
2007	EU	Aquatrain - Training Network Geogenic Chemicals in Groundwaters and Soils	Polya et al.	09.07-12.10	332'148
2007	Fund	Hydropower and residual flows	Wehrli	01.07-12.07	17'000
2006	EU	GNOM - Groundwater-derived nutrients and organic matter in coastal sediment	Hyacinthe	06.06-05.10	450'000
2006	CCES	ADAPT - the African Dams Project (pilot)	Wehrli et al.	09.06-08.07	170'000
2006	SNF	The role of lake sediments in the carbon cycle	Wehrli et al.	01.06-05.08	286'039
2006	Fund	Hydropower and residual flows	Wehrli	01.06-12.06	85'000
2005	SNF	Phosphorus release from lake sediments	Dittrich	07.05-06.07	90'453
2005	SNF	Nobel gases as tracers for transport of solutes and fluids in lake sediments	Kipfer et al.	08.05-09.08	242'870
2005	SNF/ SDC	Assessing the impact of environmental change on ecosystems in the Danube delta	Wehrli et al.	09.05-08.08	72'000
2005	SNF/ SDC	Water and sediment dynamics & greenhouse gas emissions in the Danube Delta	Wehrli et al.	05.05-10.07	100'000
2004	SNF	Noble gases in lacustrine sediments as indicators of environmental change	Kipfer et al.	10.04-09.05	118'806
2004	SNF	Redox cycling at anoxic interfaces - a biomarker and tracer study in the Eastern Black Sea	Wehrli & Schubert	07.04-08.06	151'539
2003	EU	Contribution of high-intensity gas seeps in the Black Sea to methane emissions to the atmosphere	Wehrli et al.	02.03-01.06	547'450
2002	SNF	Anerobic oxidation of methane in sediments and water column of the Black Sea and in lakes	Schubert & Wehrli	11.02-10.03	115'132
2002	SNF	Redox cycling at anoxic interfaces - a biomarker and tracer study in the Eastern Black Sea	Wehrli & Schubert	10.02-12.03	83'220
2002	INTAS	Methane Budget for the oxic/anoxic water column of the Black Sea	Wehrli et al.	06.02-05.04	165'000
2001	ETH	Calcite precipitation in lake sediments	Wehrli et al.	01.01-12.03	152'000
2001	ETH	Low-level chemical sensors	Pretsch et al.	01.01-12.03	142'000
2001	Eawag	Rhone-Thur Project - Subproject on Hydropeaking	Peter, Wehrli	01.01-12.04	166'000
2001	SNF	Iron isotopes as a tool for investigating redox process in groundwater and surface water	von Guten et al.	10.01-10.04	224'308
2000	Admin	Evaluation of alternative lake restoration methods	Wehrli		70'000
2000	ETH	High-resolution measurements of biogeochemical processes determining calcite dissolution in lake sediments	Wehrli, Müller		134'000
2000	EU	CONTINENT: High-resolution continental paleoclimate record in the Lake Baikal: A key site for Eurasian teleconnections to the North Atlantic Ocean and monsoonal system	Oberhänsli et al.		292'000
2000	Eawag	Cross-cutting project "Green Hydropower"	Truffer, Wehrli		277'000

Year	Funding	Title	PI, CoIs	Duration	CHF
2000	SNF	Spatial and seasonal dynamic of methanogens and sulfate-reducing bacteria in anoxic lake sediments	Zepp Falz, Wehrli		133'000
2000	SNF,SDC	Nutrient and metal retention capacity of the Iron Gates reservoir	Wehrli		55'000
2000	SNF	Delta lakes as nutrient sinks – (Danube Delta) prolongation			25'000
1999	SNF	Calcite dissolution in lake sediments - dynamic modeling based on high-resolution profiles from ion-selective electrodes	Wehrli		182'000
1999	Eawag	Cross-cutting project "Green Hydropower"	Truffer, Wehrli		430'000
1998	Fund	Postdoc Fellowship to Lin Wang			18'000
1998	Fund	Postdoc Fellowship to Maria Dittrich			72'000
1998	SNF	Delta lakes as nutrient sinks - process study along a salinity gradient in the Danube delta	Wehrli		149'000
1998	Eawag	Cross-cutting project "Green Hydropower"	Truffer, Wehrli		400'000
1997	SNF	Methane sensors	Hauser, Wehrli		116'000
1996	EU	European River-Ocean Systems, (EROS 21) Biogeochemical interactions between the Danube River and the northwestern Black Sea	Lancelot et al.		269'000
1996	SNF	Transformations of amorphous iron sulfides in lake sediments: A potential indicator for climate change	Wehrli, Manceau		112'000
1995	EU	European River-Ocean Systems, Pilot Study, Biogeochemical interactions between the Danube River and the northwestern Black Sea	Martin et al.		91'000
1994	Admin	Mechanisms and applications of magnetic water treatment	Wehrli, Siegrist		150'000
1994	SNF	Transformations of amorphous iron sulfides in lake sediments: A potential indicator for climate change	Wehrli, Manceau		93'000
1993	Admin	Restoration of Lake Zug	Imboden et al.		150'000
1992	SNF	Calibration of proxy indicators in lake sediment	Wehrli et al.		401'000
1990	SNF	Structure and reactivity of mineral surfaces	Sulzberger et al.		67'000
1990	Admin	Restoration of Lakes Baldegg and Sempach	Wehrli, Wüest		66'000

Ongoing Supervision of Doctoral Students

Co-advisors who act as project-PIs are marked in **bold**.

Name	Start	Working Title of ongoing PhD Project	Co-Advisor
Désirée Ruppen	2017	Mining and water quality	Fritz Brugger
Raoul Thoma	2017	Nitrogen dynamics in lakes	Beat Müller
Benedikt Ehrenfels	2016	Nitrogen biogeochemistry in L. Tanganyika	Carsten Schubert
Elisa Calamita	2016	Modeling water quality in large reservoirs	Martin Schmid
Andrea Mancini	2016	Fe(II) speciation in cement matrices	Erich Wieland
Silvan Wick	2016	Speciation of thallium in contaminated soil	Andreas Voegelin
Marie-Sophie Maier	2015	Trace gas emissions from Danube Delta	Tim Eglinton
Matthias Zimmermann	2015	Modeling methane oxidation processes	Helmut Bürgmann

Completed Doctoral Projects

Most PhD projects involved interdisciplinary collaboration. Most students worked at Eawag and were affiliated with ETH Zurich. Project-PIs are marked in **bold**.

Name	Years	Thesis Title	Committee
Carole Guggenheim	2012-2018	The role of copper for methane-oxidizing bacteria in lakes	Laura Sigg, Helmut Bürgmann, Martin Ackermann
Patrick Stücheli	2014-2018	Molecular characterization of natural organic matter in lacustrine systems	Carsten Schubert , Thorsten Dittmar
Rohini Athavale	2014-2018	<i>In situ</i> application of profiling ion-selective sensor systems in lakes	Eric Bakker Andreas Brand Dirk DeBeer
Bahareh Kamali	2013-2017	Application of a spatially explicit biophysical crop model to assess drought impacts on crop yield and crop-drought vulnerability in Sub-Saharan Africa	Hong Yang , Karim C. Abbaspour Stefan Siebert
Thomas Steinsberger	2013-2017	Hypolimnetic oxygen consumption in deep Swiss lakes	Beat Müller , Martin Schmid Michael Hupfer
Alissa Zuijdgeest	2012-2016	Biogeochemical dynamics of a tropical river-floodplain system	Tim Eglinton, Steven Bouillon Nathalie Dubois
Michael Besmer	2013-2016	Monitoring short-term dynamics of bacterial concentrations in natural and engineered aquatic ecosystems	Frederik Hammes , Martin Ackermann, Hans Vrouwenvelder, Andreas Farnleitner
Kirsten Oswald	2012-2016	Methane oxidation in suboxic and anoxic zones of freshwater lakes	Carsten Schubert, Marcel M. Kuypers, Martin Ackermann
Nadja Rebecca Brun	2011-2015	Ecotoxicological assessment of organic photovoltaics	Karl Fent Thomas Braunbeck

Sébastien Sollberger	2011-2015	Methane emissions from an anthropogenically-modified freshwater continuum	Carsten Schubert, Werner Eugster, Tonya DelSontro, David Bastviken
Daniela Soltermann	2010-2014	Ferrous iron uptake mechanisms at the montmorillonite-water interface under anoxic and electrochemically reduced conditions	Bart Baeynes , Maria Marques, Horst Geckeis
Marie-Ève Randlett	2009-2014	Lipid biomarkers as paleolimnological indicators in a 600 kyrs sediment record from Lak Van	Carsten Schubert , Timothy Eglinton, Irka Haydas, Gesine Mollenhauer
Mathias K. Kirf	2008-2014	Chemical eyes – visualization and interpretation of chemical gradients in stratified water bodies	Carsten Schubert, Marcel Kuypers
Roland Zurbrügg	2008-2012	Biogeochemistry of a large tropical floodplain system (Kafue Flats, Zambia): River-floodplain exchange and dam impacts	David Senn Moritz Lehmann
Dörte Carstens	2008-2012	Degradation and transformation of lacustrine organic nitrogen compounds	Carsten Schubert Moritz Lehmann Stefano Bernasconi
Simone Peter	2007-2011	Spatial and temporal variability in the transport and transformation of organic matter and nitrogen in a restored riparian aquifer	Edith Durisch-Kaiser Klement Tockner Stuart Findlay
Jasmin Mertens	2007-2011	Treatment of arsenic-contaminated water with polyaluminum nanoclusters	Gerhard Furrer Calin Baciu Jérôme Rose
Tonya S. Del Sontro	2007-2011	Quantifying methane emissions from reservoirs: From basin-scale to discrete analyses with a focus on ebullition dynamics	Alfred Wüest Ilja Ostrovsky Daniel F. McGinnis
Jafet C. M. Andersson	2007-2011	The potential impacts of enhanced soil moisture and soil fertility on smallholder crop yields in Southern Africa	Hong Yang Alexander J.B. Zehnder
Sabine M. Leisinger	2006-2010	Identification of chromate binding mechanisms in a hydrated cement paste	C. Annette Johnson Barbara Lothenbach
Linda C. Roberts	2004-2009	Arsenic dynamics in groundwater-irrigated and seasonally flooded paddy soils in Bangladesh	Stephan J. Hug Ruben Kretschmar Andreas Voegelin
Torsten Diem	2004-2008	Methane dynamics in oxic and anoxic systems	Carsten Schubert Nina Buchmann
Peter Mandaliev	2005-2008	Mechanisms of Nd(III) and Eu(III) uptake by cementitious materials	Erich Wieland Thorsten Stumpf
Andreas Brand	2003-2007	The influence of bottom boundary turbulence on sediment solute dynamics	Alfred Wüest John Little
Lucia V. Klauser	2003-2007	Distribution of amino sugars in a lacustrine and a marine anoxic environment	Carsten Schubert Josef Zeyer Ron Benner

Michael Döring	2003-2007	Environmental heterogeneity and respiration in a dynamic river corridor	Klement Tockner Urs Uehlinger Sergio Sabater
Martin Märki	2000-2007	Biogeochemical processes in surface sediments of lakes – a microscale approach	Beat Müller Ernoe Pretsch
Simone D. Langhans	2002-2006	Riverine floodplain heterogeneity as a controller of organic matter dynamics and terrestrial invertebrate distribution	Klement Tockner Urs Uehlinger Stuart Findlay
Marika Vespa	2003-2006	Influence of the inherent heterogeneity of cement on the uptake mechanisms of Ni and Co: A micro-spectroscopic study	André Scheidegger Ruben Kretzschmar
Ann-Kathrin Leuz	2002-2006	Redox reactions of antimony in the aquatic and terrestrial environment	Annette Johnson Ruben Kretzschmar
Martin Obst	2002-2006	Mechanisms of calcite precipitation by picocyanobacteria	Maria Dittrich Judith McKenzie
Miriam Reinhardt	2001-2006	Phosphorus and nitrogen retention in small constructed wetlands treating non-point source pollution	Beat Müller Emmanuel Frossard
Marc-Olivier Buffle	2001-2005	Mechanistic investigation of the initial phase of ozone decomposition in drinking water and wastewater	Urs von Gunten Willem Koppenol
Cristian R. Teodoru	2002-2005	Nutrient retention capacity of the Danube-Black Sea system	Alfred Wüest Flavio Anselmetti
Markus W. Fette	2001-2005	Tracer study of river-groundwater interactions under hydropeaking conditions	Anton Schleiss, Pierre Perochet
Olivier X. Leupin	2000-2004	Arsenic removal at the household level	Stephan J. Hug, Ruben Kretzschmar
Christine M. Bratrich	1999-2004	Kennzeichen erfolgreicher Revitalisierungsprojekte: Planung, Bewertung und Entscheidungsprozesse im Fließgewässer Management	Bernhard Truffer, Thomas Bernauer, Matthias Jungwirth
Emel Sahan	1999-2003	Interrelations of methanogens and sulfate-reducing bacteria in sediments of trough-flow and stratified lakes	Kornelia Zepp, Alexander Zehnder
Daniel Fabian	1998-2002	Sedimentation and remobilisation of metals in Baldeggersee: from early diagenesis to paleo-indicators	Gabriela Friedl Alex Halliday
Isabel Baur Keller	1998-2002	The immobilisation of heavy metals and metalloids in cement stabilized wastes	Annette Johnson, Fred P. Glasser
Markus Bott	1994-2002	Iron sulfides in Baldeggersee during the last 8000 years: Formation processes, chemical speciation and mineralogical constraints by EXAFS spectroscopy	Alain Manceau, Laura Sigg
Suzanne Mettler	1997-2002	In-situ removal of iron from groundwater: Fe(II) oxygenation & precipitation products in a calcareous aquifer	Urs von Gunten Wolfgang Kinzelbach
Rainer Dähn	1998-2001	Determination of Ni(II) and Th(IV) sorption mechanisms on clay mineral surfaces	André Scheidegger Alain Manceau
Sandra Steingruber	1996-2000	Nutrient transformations in a wetland pond	René Gächter Wolfgang Kinzelbach

Yves Bichsel	1995-1999	Behavior of iodine species in oxidative processes during drinking water treatment	Urs von Gunten Willem Koppenol Aguste Bruchet
Ignaz Bürge	1995-1999	Influence of pH, organic ligands and mineral surfaces on the reduction of chromium(VI) by iron(II)	Stephan J. Hug, Bruce R. James
Regula Müller	1994-1998	Einfluss elektromagnetischer Felder auf Kristallisationsvorgänge	Hansruedi Siegrist, Armin Reller
Martin Mengis	1993-1996	Nitrogen elimination in lakes by N ₂ and N ₂ O emission	René Gächter, Søren Rysgaard,
Tobias Schaller	1992-1996	Redox-sensitive metals in recent lake sediments Proxy-indicators of deep-water oxygen and climate conditions	Michael Sturm, Helmut Weissert
Gabriela Friedl	1990-1994	Die Mineralogie des Mangankreislaufs in eutrophen Seen. Eine Untersuchung mit EXAFS-Spektroskopie	Alain Manceau

Mentoring of Postdocs and Collaborators

Name	years	main research topic
Rohini Athavale	2018-2019	application of miniaturized solid-contact sensors
Scott R. Winton	2017-today	biogeochemistry of riparian systems
Cristian Teodoru	2016-2019	biogeochemistry of Danube Delta
Andreas Brand	2012-2018	boundary-layer and redox dynamics, sensor applications
Tim Kalvelage	2015-2017	Nitrogen dynamics and N ₂ O emissions
Jasmin Mertens	2012-2014	African dams project (ADAPT), project synthesis
Ilga Kokorite	2012-2013	Solid-state ion-selective sensors
Tonya Del Sontro	2011-2013	Methane ebullition in river systems and deltas
David Senn	2007-2011	Africa dams project (ADAPT), Biogeochemistry of Zambezi reservoirs
Edith Durisch-Kaiser	2006-2011	River-groundwater exchange, nitrogen and carbon dynamics
Sebastian Sobek	2006-2009	Carbon burial in lake sediments
Maria Dittrich	1999-2008	Calcite precipitation by cyanobacteria
Gabriela Friedl	1988-2001	Biogeochemistry of large dams
Lin Wang	1988-1999	Ion selective sensors for sediment profiling
Jana Friedrich	1997-2000	Benthic exchange in Danube Delta lakes and on Black Sea shelf
Noel Urban	1990-1995	Sediment-water exchange, sulfur diagenesis
Stefan Peiffer	1989-1990	Sulfid – iron interactions

Supervision of Master Students

Until 2005 the curriculum in environmental sciences ended with a diploma thesis. After the Bologna reform the program was split into BSc and Master program and students listed here completed a Master thesis.

Name	Year	Title of Thesis	Co advisor
Juliana Neumann	2018	Hydrothermal carbonization of poultry litter: Recirculation and biotoxicity testing in the liquid phase	Amit Gross, Viviane Mau, Ben Gurion Univ
Till Breitenmoser	2018	CH ₄ and N ₂ O dynamics in the Danube Delta	Marie-Sophie Maier
Remo Röthlin	2017	Metal contamination in sediments of Lake Zurich	Adrian Gili, ETH Nathalie Dubois, ETH
Stefanie Müller	2017	Cyanide and mercury contamination near mining sites in Burkina Faso	Gerhard Furrer
Eva Baier	2015	Fish pass Steffstep - solution for disconnected rivers?	Armin Peter
Rahel Liechti	2015	Heavy metal distribution in the sediments of Lake Walen	Nathalie Dubois, Adi Gili ETH
Simon Weber	2015	Applicability of three water tests for detection of fecal contamination in drinking water in households	Isabel Günther, ETH
Renata Fulcri	2013	Comparison of phosphorus dynamics in a pristine and a human-impacted floodplain	Alissa Zuijdgheest, ETH
Hannah Bruderer	2013	Primary production in and below the oxycline of Lake Rot	Andreas Brand, ETH
Stephan Suter	2011	Effects of river-floodplain exchange on organic C and N biogeochemistry in the Kafue Flats	D. Senn, ETH
Tim Kempter	2010	Methane fluxes in and emissions from an African hydroelectric reservoir (Lake Kariba)	Del Sontro, Kunz, Senn, ETH
Adrian Vollenweider	2009	Sediment records of Lake Kariba and L. Ithezi-Tezhi	D. Senn, ETH
Romana Rechsteiner	2009	Nitrogen transformation along hyporheic hydrological connectivity of a restored riparian zone	E. Durisch-Kaiser, ETH
Nanina Blank	2009	Nitrogen cycling in two floodplains in the Zambezi River basin	D. Senn, ETH
Rita Barros	2009	Integrated water resource management in Mozambique, the case of the Limpopo River basin	T. Bernauer, ETH
Jan Landert	2008	Diffuse nutrient sources in the Zambezi River Basin	D. Senn, ETH
Beatrice Künzli	2008	Anwendung des Multi-Energie-Portfoliomodells auf das Erzeugungsportfolio der Stadt Zürich	Göran Andersson, EEH-ETH
Nuttakan Wongfun (IHE, Delft)	2008	Organic carbon burial in a Swiss hydroelectric reservoir	H. Lubberding, Unesco,IHE
Fabian Blaser	2008	Simulating sediment transport in alpine torrents	Rickenmann, WSL
Denise Hofer	2007	Ice standards, two synthesis experiments	T. Stocker, Uni BE
Roland Zurbrügg	2007	Organic carbon burial in Lake Kinneret. Role of oxygen and mineral phases	S. Sobek, E. Durisch-Kaiser
Nathan Solothurnmann	2007	Degradation proxies in the study of organic matter preservation in freshwater sediments	E. Durisch-Kaiser, C. Schubert
Anna Doberer & Judith Rüttimann	2006	Nutrient and methane dynamics in the Danube Delta lakes	E. Durisch-Kaiser, S. Sobek
Elisabeth Karrer	2006	Surface properties of cyanobacteria: Role of different ionic strength and cadmium adsorption on cells	M. Dittrich

Aristidis Dimoupulos	2005	Biogenic silica retention in the sediments of the Iron Gates reservoir	C. Theodoru
Benjamin Leimgruber & Adrian Konrad	2005	Solar Energy use in water heating projects in India	D. Diem
Claudia Lorrai	2004	Influence of the Nile River on the formation of sapropels S5 and S6 in the Eastern Mediterranean	S. Bernasconi, ETH
Micha Siegrist	2004	Metal contamination (Cr, Ni, Cu) in Baldeggersee since the Middle Ages	M. Sturm
Torsten Diem	2003	Emissions of CH ₄ and N ₂ O from hydropower reservoirs	C. Schubert
Roland Steiner	2003	Hydrological interactions between River Rhone and the aquifer in Pfynwald	E. Hoehn
Linda Roberts	2002	Arsenic removal from groundwater by co-precipitation with iron: Effects of P and Si and of As and Fe speciation	S. Hug
Ralf Bona (IHE Delft)	2002	Calcite precipitation by picoplankton	M. Dittrich
Debora Freyre (IHE Delft)	2002	Hydropeaking in the Rhone catchment	M. Fette
Michael Brögli	2001	Geochemical and isotopic analyses of the Rhone River between Sion and Branson	E. Hoehn
Florian Erzinger	2001	Nitrogen Isotopes in Lake Zug	-
Friederike Meyer (Univ. Bayreuth)	2001	Riparian groundwater exchange in the Blenio valley	B. Truffer
Andreas Peter & Daniel Matzenmüller	2000	Phosphate, nitrate and ammonia monitoring in a constructed wetland for agricultural drainage water	R. Gächter, B. Müller
Phillipp Kurz	2000	Calcium carbonate biomineralization by freshwater picoplankton	M. Dittrich
Markus Hostmann	2000	Cost-benefit analysis and freshwater ecology	B. Truffer
Christian Müller (Univ. Karlsruhe)	2000	The role of suspended particles for transport and transformation of phosphate in rivers	R. Gächter
Christoph Sutter	1999	Life cycle analysis of "green" power products in liberalized markets	B. Kiefer
Carlo Wiegand	1999	Criteria for ecologic labelling of large hydropower plants	-
Martin Maerki	1998	Water balance and nutrient loading of a peat pond (Buchser Weiher, Luzern)	R. Gächter
Jörg Hunziker	1997	Nitrate and ammonia in the sediments of Alpnachersee. Analyzing diagenetic processes with microelectrodes	B. Müller
Felix Ramisch	1997	Calcium cycle in the Northern Basin of Luganersee	A. Wüest
Andrea Christoffel	1997	Iron sulfide as redox parameter in the sediments of Rotsee and Zugersee	-
Gerald Jödicke	1996	High-resolution record of iron sulfides in Baldeggersee	-
Christof Meile	1995	Modelling the nitrogen cycle in Luganersee	A. Wüest
Sandra Steingruber	1995	Sulfate reduction analyzed by pore-water gradients and in-situ hybridization	D. Hahn, ETH
Patrick Walser	1995	Heavy Metals in porewater of Baldeggersee	-
Adrian Scheidegger	1992	Artificial oxygenation of Hallwilersee	A. Wüest
Nicolas Gruber	1992	Modeling of the carbon cycle in Soppensee	A. Wüest

Teaching

Teaching experience ranges from freshman chemistry for environmental engineers to advanced courses in aquatic chemistry, biogeochemistry and water management. Several interdisciplinary lab and field were developed and implemented together with colleagues. Course types: P – practicals, S – seminars, V-lectures, G – lectures with assignments

Years	Course Title	Instructors	Students	hours/week, type
2019	Seminar Umweltsysteme	Wehrli, Brändle	BSc env. xci	2
2016 – today	Umweltsysteme II	Wehrli, Garcia, Sonneveld	BSc env. sci.	2
2016 – today	Responsible use of mineral resources I and II	Wehrli, Brugger, Schlogova, Hellweg, Kadyras	MSc	2 S
2016 – today	Cooperation and conflict over international water resources	Wehrli, Bernauer, Athavale	MSc	2 S
2013 - 2019	Feldkurs Chemie und Umwelt	Wehrli	BSc env. science	1 P
2012 – 2019	Biogeochemische Kreisläufe	Wehrli	BSc env. science	2 G
2008 - today	Term paper in Biogeochemistry and Pollutant Dynamics	Faculty of IBP.	MSc env. science	6 S
2012 – 2018	Seminar Biogeochemie	Furrer, Kertzschar, Wehrli	BSc env. science	2 S
2012 - 2018	Praktikum Biogeochemie	Wehrli et al.	BSc env. science	16 P
2010 - 2015	Erd- und Produktionssysteme	Schär, Frossard, Garcia, Sonneveld, Wehrli, Willet	BSc, earth, env. agriculture	4 V
2006 - 2013	Tracers in Biogeochemistry	Wehrli, Beer, Schubert	MSc env. science	2 V
2006 - 2012	Science and Policy of International Water Management	Bernauer, Wehrli	MSc env. science	3 S
2005 - 2011	Biogeochemische Prozesse in Aquatischen Systemen	Wehrli	BSc env. science	2 V
2005 - 2010	Seminar in Aquatischen Systemen	Wehrli, Furrer, Kaiser	BSc env. science	2 S
2002- 2003	Case Study River Thur	Wehrli, Schär	env. science	20 P
2001 - 2004	Seminar in Environmental Chemistry and Microbiology	Schwarzenbach, Zeyer, Wehrli, Kretzschar	env. science	1 S
2001 - 2010	Integriertes Praktikum Aquatische Systeme	Wehrli et al.	env. science	16 P
2000 - 2005	Sustainable Management of International Rivers	Bernauer, Wüest, Wehrli	ETH graduate program	4G
1999 - 2005	Umweltchemie	Schwarzenbach, Goss, Wehrli	env. science	6 G

1997 - 2004	Biogeochemische Kreisläufe	Wehrli, Dittrich	env. science	2 G
1995 - 2001	Chemical Ecology	Schwarzenbach, Wehrli	chemistry	2 V
96,98,00,02	Feldkurs Limnologie	Wehrli et al.	graduates EPFL	2 P
1993 - 2000	Laborkurs Umweltchemie	Giger, Sigg, Wehrli Schwarzenbach	env. science	4 P
1998 - 1999	Aquatische Chemie	Sigg, Wehrli	env. science	4 V
1992 - 1995	Aquatische Chemie II	Wehrli	env. science	2 G
1991 - 1994	Einführung in Umweltchemie	Schwarzenbach, Sticher, Wehrli	env. science	2 V
1989 - 1999	Laborpraktikum Chemie	Wehrli, Siegrist	env. engineering	4 P
1989 - 1999	Chemie I	Wehrli, Siegrist	env. engineering	4 G

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