Curriculum vitae

MÜLLER BEAT, Ph.D.

Senior Scientist, Department of Surface Waters – Research and Management
Eawag, Swiss Federal Institute of Aquatic Science and Technology, Kastanienbaum, Switzerland

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EDUCATION

Swiss Federal Institute of Technology (ETH) Zürich, and Swiss Federal Institute for Environmental Science and Technology, Eawag Dübendorf, Switzerland. PhD in Natural Sciences. 1989.
University of Zürich. Postgraduate Course in Experimental Medicine and Biology, and medical research project at the Kinderspital Zürich. 1981-82.
Swiss Federal Institute of Technology ETH Zürich. Diploma in Chemistry, 1981.

RESEARCH EXPERIENCE

Eawag, Swiss Federal Institute of Aquatic Science and Technology, Kastanienbaum, Switzerland. Department of Surface Waters – Research and Management. a.i. Head of Department 2005-06, 2008-09.
Curtin University, Perth, Australia. Adjunct Research Professor. 2008-12.
University of Western Australia in Perth. Honorary Research Fellow. 2007-08.
Swiss Federal Institute of Technology (ETH) Zürich. Lecturer Environmental Science. 1995-present.
University of Auckland, New Zealand. Honorary Research Fellow. 1994-95.
Swiss Federal Institute of Technology (ETH) Zürich. Lecturer for water chemistry courses in the graduate program. 1989-93.

RESEARCH INTERESTS

- Chemical limnology of lakes and rivers. Process studies and systems analysis
- Behavior and transport of nutrients in intensely farmed catchments
- Analysis and modeling of early diagenetic processes in lake sediments
- Assessment and adaptation of chemical sensors in surface waters
- Modeling of chemical and physical processes at the sediment-water boundary in lakes
- Meteorological and climatic factors influencing the chemistry of surface waters
- Interaction of trace metals with natural particulate matter in aquatic systems
- Development of software for chemical modeling of thermodynamic equilibrium reactions

COMMISSIONS AND WORKGROUPS

- IGKB, International Commission for the protection of Lake Constance.
- ASSAN, Scientific work group for the amelioration of lakes.
- Consultant for the Swiss Federal Office for the Environment (FOEN).

ACADEMIC HONOURS

Curtin University, Perth, Australia. Adjunct Research Professor. 2008-12.
University of Western Australia. F. Mosey Visiting Fellowship Award. 2008.
Swiss Federal Institute of Technology (ETH) Zürich. Silver Medal for the thesis "On the Adsorption of Metal Ions on the Surface of Aquatic Particles". 1990.

PUBLICATIONS

Articles in reviewed journals

2015

B. Müller, and R. Gächter (subm.) The regulation of alkalinity in calcium carbonate buffered lakes. Limnol. Oceanogr.

L. Och, Müller B., März C. Wichser A, Vologina E, Sturm M. (subm.) Uranium in Lake Baikal sediments. Chem. Geol.

N. T. Torres, T. Chwalek, H. Droz-Georget, B. Müller, H. Brandl, P. C. Hauser, and G. Furrer. A new method to quantify bioavailable elements and mobile ATP on rock surfaces and lichens. (Chem. Geol.)

J. Saiz, I.J. Koenka, C. Garcia-Ruiz, B. Müller, T. Chwalek, and P.C. Hauser (2015). A micro-injector for capillary electrophoresis. Electrophoresis 3. Doi: 10.1002/elps.201400589.

M. Randlett, S. Sollberger, T. Del Sontro, B. Müller, J.P. Corella, B. Wehrli, and C. Schubert (2015). Mineralization pathways of organic matter deposited in a river-lake transition of the Rhone River Delta, Lake Geneva. Environ. Sci.: Processes Impacts, 17, 370-380. Doi: 10.1039/c4em00470a.

W. Qi, H. Singer, M. Berg, B. Müller, B. Pernet-Coudrier, H. Liu, J. Qu (2015). Elimination of polar micropollutants and anthropogenic markers by wastewater treatment in Beijing, China. Chemosphere 119, 1054-1061.

2014

B. Müller, R. Gächter, and A. Wüest (2014). Accelerated water quality improvement during oligotrophication in peri-alpine lakes. Environ. Sci. Technol. 48, 6671-6677. Doi: 10.1021/es4040304.

H. Zhang, B. Pernet-Coudrier, S. Wen, B. Müller, B. Shan (2014). Budget and fate of phosphorus and trace metals in a heavily loaded shallow reservoir (Shahe, Beijing City). CLEAN – Soil, Air, Water 41. Doi:10.1002/clen.201300231.

N. T. Torres, L. M. Och, P. C. Hauser, G. Furrer, H. Brandl, E. Vologina, M. Sturm, H. Bürgmann, and B. Müller (2014). Early diagenetic processes generate iron and manganese oxide layers in the sediments of Lake Baikal, Siberia. Environ. Sci.: Processes Impacts 16, 879-889. Doi: 10.1039/c3em00676j.

L. Och, B. Müller, A. Wichser, A. Ulrich (2014). Rare earth elements in the sediments of Lake Baikal. Chem. Geol. 367, 61-75. Doi: 10.1016/j.chemgeo.2014.03.018.

W. Qi, B. Müller, B. Pernet-Coudrier, H. Singer, H. Liu, J. Qu, and M. Berg (2014). Organic micropollutants in the Yangtze River: seasonal occurrence and annual loads. Sci. Tot. Environ. 472, 789-799. Doi: 10.1016/j.scitotenv.2013.11.019.

2013

N. T. Torres, P. C. Hauser, G. Furrer, H. Brandl, and B. Müller (2013). Sediment porewater extraction and analysis combining filter tube samplers and capillary electrophoresis. Environ. Sci.: Processes Impacts 15(4), 715-720. DOI: 10.1039/C3EM00068K.

2012

L. Och, B. Müller, A. Voegelin, A. Ulrich, J. Goettlicher, R. Steiniger, S. Mangold, E. G. Vologina, and M. Sturm (2012). Composition and formation of Fe/Mn accumulations during the diagenesis of Lake Baikal sediments. Chem. Geol. 330-331, 244-259. doi: 10.1016/j.chemgeo.2012.09.011.

B. Müller, L.D. Bryant, A. Matzinger, and A. Wüest (2012). Hypolimnetic oxygen depletion in eutrophic lakes. Environ. Sci. Technol. 46, 9964-9971. doi:10.1021/es301422r.

B. Müller, B. Pernet-Coudrier, M. Berg, W. Qi, HJ Liu (2012). The geochemistry of the Yangtze River: seasonality of concentrations and temporal trends of chemical loads. Global Biogeochem. Cycles 26, GB2028, doi:10.1029/2011GB004273.

F. Heeb, H. Singer, B. Pernet-Coudrier, W. Qi, H.J. Liu, P. Longrée, B. Müller, and M. Berg (2012). Organic Micropollutants in Rivers Downstream of the Megacity Beijing: Sources and Mass Fluxes in a Large-Scale Wastewater Irrigation System, Environmental Science and Technology, 46, 16, 8680-8688. doi:10.1021/es301912q.

B. Pernet-Coudrier, , W. Qi, HJ Liu, B. Müller, and M. Berg (2012). Sources and pathways of nutrients in the semi-arid region of Beijing-Tianjin, China. Environ. Sci. Technol. 46(10), 5294-5301. doi:10.1021/es3004415.

N. Pasche, F. Muvundja, M. Schmid, A. Wüest and B. Müller (2012). Nutrient cycling in Lake Kivu. In: Lake Kivu: Limnology and biogeochemistry of a tropical great lake, ed. J.P. Descy. Aquatic Ecology Series 5, doi 10.1007/978-94-007-4243-7_3. Chapter 3, p. Springer Science+Business Media Dordrecht 2012.

B. Müller, R. Gächter (2012). Increasing chloride concentrations in Lake Constance – Characterization of sources and estimation of loads. Aquatic Sci. 74/1, 101-112. doi:10.1007/s00027-011-0200-0.

2010

T.D. Mai, S. Schmid, B. Müller, P.C. Hauser (2010): Capillary electrophoresis with contactless conductivity detection coupled to a sequential injection analysis manifold for extended automated monitoring applications. Anal. Chim. Acta 665, 1-6.

C.J. Schubert, F.S. Lucas, E. Durisch-Kaiser, R. Stierli, T. Diem, O. Scheidegger, and B. Müller (2010): Oxidation and emission of methane in a monomictic lake (Rotsee, Switzerland). Aquatic Sci. 72/4, 455-466. doi:10.1007/s00027-010-0148-5.

A. Matzinger, B. Müller, P. Niederhauser, M. Schmid, and A. Wüest (2010). Hypolimnetic oxygen consumption by sediment-based reduced substances in former eutrophic lakes. Limnol. Oceanogr. 55/5, 2073-2084. doi:10.4319/lo.2010.55.5.2073.

2009

M. Maerki, B. Müller, Ch. Dinkel and B. Wehrli (2009): Mineralization pathways in lake sediments with different oxygen and organic carbon supply. Limnol. Oceanogr. 54(2), 428-438.

F. Muvundja, N. Pasche, F.W.B. Bugenyi, M. Isumbisho, B. Müller, J.N. Namugize, P. Rinta, M. Schmid, R. Stierli and A. Wüest (2009): Balancing nutrient inputs to Lake Kivu. J. Great Lakes Res. 35/3, 406-418. Doi:10.1016/j.jglr.2009.1006.1002.

N. Pasche, C. Dinkel, B. Müller, M. Schmid, A. Wüest and B. Wehrli (2009): Physical and biogeochemical limits to internal nutrient loading of meromictic Lake Kivu. Limnol. Oceanogr. 54/6, 1863-1873.

N. Teutsch, M. Schmid, B. Müller, A. Halliday, H. Bürgmann and B. Wehrli (2009): Large iron isotope fractionation at the oxic-anoxic boundary in Lake Nyos. Earth Planet. Sci. Lett. 285, 52-60.

2008

B. Müller, R. Stierli, and R. Gächter: An improved low-tech, low-cost sampler to estimate dissolved reactive phosphorus loads in rivers and streams. J. Environ. Monit. 10/7, 785-900 (2008). doi: 10.1039/b806465b.

B. Müller, M. Berg, Z.P. Yao, X.F. Zhang, D. Wang, and A. Pfluger: How polluted is the Yangtze River? Water quality downstream from the Three Gorges Dam. Sci. Tot. Environ. 402, 232-247 (2008). doi: 10.1016/j.scitotenv.2008.04.049.

2007

B. Müller, A. Stöckli, R. Stierli, E. Butscher and R. Gächter: A low cost method to estimate dissolved reactive phosphorus loads of rivers and streams. J. Environ. Monit. 9/1, 82-86 (2007).

P. Lam, M.M. Jensen, G. Lavik, D. McGinnis, B. Müller, C.J. Schubert, R. Amann, B. Thamdrup, and M.M. Kuypers (2007): Linking crenarcheal and bacterial nitrification to anammox in the Black Sea. Proc. Nat Acad. Sci. USA (PNAS) 104/17, 7104-7109. doi:10.1073/pnas.0611081104.

B. Müller, D. Finger, M. Sturm, V. Prasuhn, T. Haltmeier, P. Bossard, C. Hoyle, and A. Wüest (2007): Present and past bio-available phosphorus budget in the ultra-oligotrophic Lake Brienz. Aquatic Sci. 69, 227-239. doi: 10.1007/s00027-007-0871-8.

D. Finger, Bossard, P., Schmid, M., Jaun, L., Müller, B., Steiner, D., Schäffer, E., Zeh, M., und A. Wüest (2007): Effects of upstream hydropower operations on primary production in downstream lakes. Aquatic Sci. 68 doi: 10.1007/s00027-007-0873-6.

A. Brand, B. Müller, A. Wüest, Ch. Dinkel, N.P. Revsbech, O. Pedersen, L.R. Damgaard, L.H. Larsen, and B. Wehrli (2007): Microsensor for in-situ flow measurements in benthic boundary layers at sub-millimeter resolution with extremely slow flow. Limnol. Oceanogr. Methods 5, 185-191.

2006

L. Moosmann, R. Gächter, B. Müller and A. Wüest: Is phosphorus retention in lakes controlled by oxygen or phosphorus? Limnol. Oceanogr. 51/1 part 2, 763-771 (2006).

A. Matzinger, M. Jordanoski, E. Veljanoska-Sarafiloska, M. Sturm, B. Müller and A. Wüest: Is Lake Prespa jeopardizing the ecosystem of ancient Lake Ohrid? Hydrobiologia 553, 89-109 (2006). doi: 10.1007/s10750-005-6427-9.

B. Müller, Y. Wang, and B. Wehrli: Cycling of calcite in hard water lakes of different trophic states. Limnol. Oceanogr. 51(4), 1678-1688 (2006).

B. Müller, R. Stierli, and A. Wüest: Phosphate adsorption by mineral weathering particles in oligotrophic waters of high particle content, Water Resour. Res. 42, W10414 (2006). doi:10.1029/2005WR004778.

M. Märki, B. Müller, and B. Wehrli: Microscale mineralization pathways in surface sediments: A chemical sensor study in Lake Baikal. Limnol. Oceanogr. 51(3), 1342-1354 (2006).

M. Reinhardt, B. Müller, R. Gächter and B. Wehrli: Nitrogen removal in a small constructed wetland: An isotope mass balance approach. Environ. Sci. Technol. 40, 3313-3319 (2006).

A. Matzinger, M. Schmid, E. Veljanoska-Sarafiloska, S. Patceva, D. Guseska, B. Wagner, B. Müller, M. Sturm and A. Wüest: Eutrophication of ancient Lake Ohrid: Global warming amplifies detrimental effects of increased nutrient inputs. Limnol. Oceanogr. 52(1), 338-353 (2006).

2005

L. Moosmann, B. Müller, R. Gächter, A. Wüest, E. Butscher, and P. Herzog: Trend-oriented sampling strategy and estimation of soluble reactive phosphorus in streams. Water Resources Res. 41, W01020, doi:10.1029/2004WR003539 (2005).

B. Müller, M. Märki, M. Schmid, E.G. Vologina, B. Wehrli, A. Wüest, and M. Sturm: Internal carbon and nutrient cycling in Lake Baikal: Sedimentation, upwelling and early diagenesis. Global and Planetary Change 46, 101-124 (2005).

M. Reinhardt, R. Gächter, B. Wehrli and B. Müller: Phosphorus retention in small constructed wetlands treating agricultural drainage water. J. Environ. Quality 34, 1251-1259 (2005).

2004

P. Kuban, M. Reinhardt, B. Müller, and P.C. Hauser: On-site simultaneous determination of anions and cations in drainage water using a flow injection-capillary electrophoresis system with contactless conductivity detection. J. Environ. Monit. 6(3), 169-174 (2004).

M. Märki, B. Wehrli, C. Dinkel, and B. Müller: The influence of tortuosity on molecular diffusion in freshwater sediments of high porosity. Geochim. Cosmochim. Acta 68/7, 1519-1528 (2004).

L. Granina, B. Müller, and B. Wehrli: Origin and dynamics of Fe- and Mn-sedimentary layers in Lake Baikal. Chem. Geol. 205, 55-72 (2004).

A. Lorke, M. Schmid, B. Müller, M. Maerki, and A. Wüest, "Hydrodynamic control of sediment-water fluxes," in Shallow Flows, edited by Jirka and Uijttewaal (London: Taylor & Francis Group, 2004), 497-501.

2003

R. Gächter, and B. Müller: Why the phosphorus retention of lakes does not necessarily depend on the oxygen supply to their sediment surface. Limnol. Oceanogr. 48(2), 929-933 (2003).

S. Haenni, P. R. Schmidlin, B. Müller, B. Sener, and M. Zehnder: Chemical and antimicrobial properties of calcium hydroxide mixed with irrigating solutions. Int. Endod. J. 36(2), 100-105 (2003).

B. Müller, Y. Wang, M. Dittrich, and B. Wehrli: Influence of organic carbon decomposition on calcite dissolution in surficial sediments of a freshwater lake. Water Res. 37, 4524-4532 (2003).

B. Müller, M. Reinhardt, and R. Gächter: High temporal resolution monitoring of inorganic nitrogen load in drainage waters. J. Environ. Monit. 5, 808-812 (2003).

A. Lorke, B. Müller, M. Märki and A. Wüest,: Breathing sediments – the control of sediment-water fluxes by periodic boundary-layer turbulence. Limnol. Oceanogr. 48/6, 2077-2085 (2003).

M. Dittrich, B. Müller, D. Mavrocodatos and B. Wehrli: Induced calcite precipitation by cyanobacterium *Synechococcus*. Acta hydrochim. Hydrobiol. 31(2), 162-169 (2003).

2002

B. Müller, L. Granina, T. Schaller, A. Ulrich, and B. Wehrli: P, As, Sb; Mo and other elements in sedimentary Fe/Mn-layers of Lake Baikal. Envir. Sci. Technol. 36 (3), 411-420 (2002).

B. Müller, M. Märki, Ch. Dinkel, R. Stierli and B. Wehrli: In-situ measurements of lake sediments using ion-selective electrodes with a profiling lander system. *In* 'Environmental Electrochemistry: Analyses of Trace Element Biogeochemistry'. Editors: Martial Taillefert and Tim F. Rozan. Volume: American Chemical Society Symposium Series 811, Washington DC. p. 126-143 (2002).

Catalan, J., Ventura, M., Brancelj, A., Granados, I., Thies, H., Nickus, U., Korhola, A., Lotter, A.F., Barbieri, A., Stuchlik, E., Lien, L., Bitusik, P., Buchaca, T., Camarero, L., Goudsmit, G.H., Kopacek, J., Lemcke, G., Livingstone, D.M., Müller, B., Rautio, M., Sorvari, S., Sporka, F., Strunecky, O. and Toro, M. Seasonal ecosystem variability in remote mountain lakes: implications for detecting climatic signals in the sediment record. J. Paleolimnol. 22/1, 25-46 (2002)

2001

P. Jacquinot, B. Müller, B. Wehrli, and P.C. Hauser: Determination of methane and other small hydrocarbons with a platinum-Nafion electrode by stripping voltammetry. Anal. Chim. Acta 432, 1-10 (2001).

B. Müller, A. Duffek: Similar adsorption parameters for trace metals with different aquatic particles. Aquatic Geochem. 7 (2), 107-126 (2001).

2000

H.-P. Volkland, H. Harms, B. Müller, G. Repphun, O. Wanner, and A.J.B. Zehnder: Bacterial Phosphating of mild (unalloyed) steel. Appl. Environ. Microbiol. 66(10), 4389-4395 (2000).

G.H. Goudsmit, G. Lemcke, D.M. Livingstone, A.F. Lotter, B. Müller, and M. Sturm. Hagelseewli: a fascinating high mountain lake - suitable for palaeoclimate studies? Verh. Internat. Verein. Limnol. 27(2), 1013-1022 (2000).

C. Ohlendorf, C. Bigler, G.-H. Goudsmit, G. Lemcke, D.M. Livingstone, A.F. Lotter, B. Müller and M. Sturm: Causes and effects of long periods of ice cover on a remote high Alpine lake. J. Limnol. 59 (Suppl. 1), 65-80 (2000).

L. Granina, B. Müller, B. Wehrli, and P. Martin: Oxygen, iron, and manganese at the sediment-water interface in Lake Baikal. Terra Nostra 9, 87-93 (2000).

1999

P. Jacquinot, A.W.E. Hodgson, B. Müller, B. Wehrli, and P.C. Hauser: Amperometric detection of gaseous ethanol and acetaldehyde at low concentrations on an Au-Nafion electrode. Analyst 6, 871-876 (1999).

K. Zepp Falz, C. Holliger, R. Grosskopf, W. Liesack, A.N. Nozhevnikova, B. Müller, B. Wehrli, H. Hahn: Vertical distribution of methanogens in the anoxic sediment of Rotsee (Switzerland). Appl. Environ. Microbiol. 65, 2402-2408 (1999).

B. Müller, R. Stierli: *In situ* determination of sulfide profiles in sediment porewaters with a miniaturized Ag/Ag_2S electrode. Anal. Chim. Acta 401/1-2, 257-264 (1999).

1998

B. Müller, A.F. Lotter, M. Sturm, A. Ammann: Influence of Catchment Quality and Altitude on the Water and Sediment Composition of 68 Small Lakes in Central Europe. Aquatic Sci. 60, 316-337 (1998).

B. Müller, B. Wehrli: Anwendung von chemischen Sensoren in Sediment-Porenwasser. *In:* Mikrobiologische Charakterisierung aquatischer Sedimente: Methodensammlung, p. 232-244. Hrsg.: Vereinigung für Allgemeine und Angewandte Mikrobiologie (VAAM), Bearb.: A. Remde, P. Tippmann, Oldenbourg Verlag, München, Wien (1998).

B. Müller, K. Buis, R. Stierli, and B. Wehrli: Evaluation and Application of PVC Based Liquid Membrane Ion-Selective Electrodes for High Spatial Resolution Measurements in Lake Sediments. Limnol. Oceanogr., 43/7, 1728-1733 (1998).

1984 - 97

B. Müller, B. Wehrli, M. Power, and J.R. van der Meer: Structure and activity of microbial communities in sediments. Chimia 51, 878-883 (1997).

B. Müller, P.C. Hauser: A Fluorescence Optical Sensor for Low Concentrations of Dissolved Carbon Dioxide. Analyst 121, 339-343 (1996).

B. Müller, P.C. Hauser: Effect of pressure on the potentiometric response of ion-selective electrodes and reference electrodes. Anal. Chim. Acta 320, 69-75 (1996).

P.C. Hauser, C.L.C. Liang, B. Müller: A solid-state instrument for fluorescence chemical sensors using a blue light-emitting diode of high intensity. Meas. Sci. Technol., 6, 1081 (1995).

B. Müller, L. Sigg: Adsorption of lead (II) on the Goethite surface: Voltammetric evaluation of surface complexation parameters. J. Colloid Interface Sci. 148/2, 517-532 (1991).

B. Müller, L. Sigg: Interaction of trace metals with natural particle surfaces: Comparison between adsorption experiments and field measurements. Aquatic Sci 52/1, 75-92 (1990).

K.K. Christensen, P. Christensen, G. Duc, W.H. Hitzig, V. Linden, B. Müller, R.A. Seger: Human IgG antibodies to carbohydrate and protein antigens in mouse protection tests with group B streptococci. Pediatr. Res. 18/5, 478-482 (1984).

Research Proposals

Research proposals accepted by the Swiss National Science Foundation:

Müller B., and M. Schmid (2012): Prediction of organic matter mineralization in lakes during re-oligotrophication. Accepted financing: 268’000.

Müller B., P.C. Hauser, G. Furrer, and H. Brandl (2011): Quantification of environmental effects on the weathering state of rock surfaces. Accepted financing: 172’000.

Müller B., A. Vögelin, and A. Ulrich (2009): Diagenetic evolution and mineral composition of Fe/Mn layers in the sediments of Lake Baikal. Accepted financing: 256’000.

Wüest A, P. Isumbisho, R. Ngendahayo, M. Schmid, F. Anselmetti, P. Spaak, B. Müller (2008). Lake Kivu: Learning from the past for managing its future, proposal for a research partnership with developing countries in 2009-2011. Accepted financing 400’000 CHF

Wüest A., and B. Müller (2008): Turbulence and fluxes in stratified natural waters. Accepted financing: 161’000.

Müller, B. (2007): Development and application of chemical sensors. Accepted financing: 3000.

SACh-contribution for the organization of the conference ‘Development and Application of Chemical Sensors’ at ETH Zürich from 28.-29. Juni 07: 10’000.

Wüest A., and B. Müller (2006): Turbulence and fluxes in stratified natural waters. Accepted financing: 224’000.

Wüest A., and B. Müller (2004): Turbulence and fluxes in stratified natural waters. Accepted financing: 220’000.

Wüest A., and B. Müller (2002): Turbulence and fluxes in stratified natural waters. Accepted financing: 242’000.

Wehrli, B., B. Müller, and P. Reichert (2000): Calcite dissolution in lake sediments – dynamic modeling based on high-resolution profiles from ion-selective electrodes. Accepted financing: 182'000.

Hauser, P.C., B. Müller, and B. Wehrli (1997): Electrochemical sensor for dissolved methane and application in the high-resolution analysis of methane gradients in lake sediments. Accepted financing: 116'000.

Conference proceedings and articles in non-reviewed journals

A.J. Wüest, A. Lorke, B. Müller, and M. Maerki: Bottom boundary layer structures in stratified waters: ecological implications of periodic and low flow. ASLO/TOS Ocean Research Conference, Honolulu, 18 Feb 2004.

B. Wehrli, Ch. Dinkel, M. Märki and B. Müller: In-situ measurements of mineralization reactions in lake sediments with ion-selective electrodes. DGL-Tagung 2004.

M. Reinhardt, B. Müller und R. Gächter: Nährstoffrückhalteweiher – ein Beitrag zur Sanierung des Sempachersees? Deutsche Gesellschaft für Limnologie (DGL) Köln, Werder, 29. Sept.-2.Okt. 2003.

R. Gächter and B. Müller: No effect of hypolimnetic aeration on the P recycling of Lake Sempach: a re-evaluation of a well-accepted concept. Geochim. Cosmochim. Acta 66/15A A253 (2002). Abstracts of the 12th annual V.M. Goldschmidt Conference, Davos, Switzerland, August 18-23, 2002.

M. Märki, B. Müller, C. Dinkel and B. Wehrli: Nitrogen turnover on lake sediments - seen with ion-selective electrodes. Geochim. Cosmochim. Acta 66/15A A485 (2002). Abstracts of the 12th annual V.M. Goldschmidt Conference, Davos, Switzerland, August 18-23, 2002.

M. Reinhardt, B. Müller, R. Stierli and R. Gächter: Nutrient retention ponds on agriculture – load and efficiency. Geochim. Cosmochim. Acta 66/15A A632 (2002). Abstracts of the 12th annual V.M. Goldschmidt Conference, Davos, Switzerland, August 18-23, 2002.

B. Wehrli, D. Fabian, G. Friedl and B. Müller (invited): Selective uptake of trace elements by iron and manganese minerals. Euresco Conference Geochemistry of Crustal Fluids. The Role and Fate of Trace Elements in Crustal Fluids. Seefeld Austria, 14-19. Dec. 2002.

B. Müller, and R. Gächter: Ponds as suitable tools to lower the nutrient load of lakes. BIWAKO 2001, Conference proceedings, Session 3(2), 372-375 (2001).

B. Müller, R. Stierli, and B. Wehrli: *In situ* measurements in lake sediments with chemical sensors. Mineral. Magazine 62A, 1034-1035 (1998).

Ch. Dinkel, B. Müller, and B. Wehrli: LISA - A lander for ion-selective analysis in freshwater systems. Mineral. Magazine 62A, 391-392 (1998).

K. Zepp, C. Holliger, A.N. Nozhevnikova, B. Müller, B. Wehrli, R. Grosskopf, W. Liesack, D. Hahn: *In situ* analysis of the spatial distribution of methanogenic *Archaea* in the anoxic sediment of Lake Rotsee. Mineral. Magazine 62A, 1687-1688 (1998).

B. Wehrli, C. Dinkel, B. Müller: Measurements of benthic gradients in deep lakes with ion-selective electrodes and video endoscopy. Mineral. Magazine 58A, 961-962 (1994)

Expert Reports (Consulting)

B. Müller. Beurteilung der Auswirkungen von SwissZinc auf die Konzentrationen von Chlorid und Sulfat in Fliessgewässern. Gutachten zu Handen der Stiftung Zentrum für nachhaltige Abfall- und Ressourcennutzung (ZAR). Zuchwil. September 2015.

B. Müller. Prognostizierung des Sauerstoffbedarfs für den Baldeggersee. Gutachten zHd. Uwe, Kt. Luzern, August 2015

B. Müller und A. Wüest (2013): Entwicklung der Sauerstoffzehrung im Hallwilersee. Gutachten zu handen des Kt. Aargau, November 2013.

B. Müller, L. Och und A. Wüest (2012): Entwicklung des Phosphorhaushalts und der Sauerstoffzehrung im Sempacher- und Baldeggersee. Gutachten zu Handen der Dienststelle Umwelt und Energie des Kt. Luzern, April 2012.

A. Wüest und B. Müller: Abnahme des Phosphorgehalts im Zugersee – Stand 2010. Gutachten zu handen des Kt. Zug. November 2010.

B. Müller and M. Schmid: Oxygen and phosphorus budgets of Murtensee. Expert report on behalf of the Environmental Protection Bureaus of the Cantons of Vaud and Fribourg. December 2009.

A. Matzinger, B. Müller, M. Schmid, J. Little, R. Stierli, A. Zwyssig and A. Wüest. Zirkulationsunterstützung im Türlersee und Pfäffikersee. Empfehlungen für zukünftigen Betrieb und Messprogramm. Gutachten zu Handen AWEL Zürich, 2008.

B. Müller: Ökosystem Brienzersee: Entzug von Nährstoffen durch Adsorption an Schwebstoffen und Kolloiden. (Teilprojekt F). Gutachten zu Handen Gewässer- und Bodenschutzlabor des Kt. Bern (GBL), Dezember 2005.

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