

Publications, Presentations, and Outreach

General Scientific Journals

Schneider T., Herzig A., **Koinig K.A.** and Sommaruga R. 2012. Copepods in Turbid Shallow Soda Lakes Accumulate Unexpected High Levels of Carotenoids. PLOS ONE 7, 8.

Sommaruga-Wöger S., **Koinig K.A.**, Schmidt R., Sommaruga R., Tessadri R. and Psenner R. 1997. Temperature effects on the acidity of remote alpine lakes. NATURE 387: 64-67.

Ecology Journals

Ilyashuk, E.A., Ilyashuk, B.P., Tylmann, W., **Koinig, K.A.**, Psenner, R., 2015. Biodiversity dynamics of chironomid midges in high-altitude lakes of the Alps over the past two millennia. INSECT CONSERVATION AND DIVERSITY 8, 547-561.

Ilyashuk, B.P., Ilyashuk, E.A., Psenner, R., Tessadri, R., **Koinig, K.A.**, 2014. Rock Glacier Outflows May Adversely Affect Lakes: Lessons from the Past and Present of Two Neighboring Water Bodies in a Crystalline-Rock Watershed. ENVIRON. SCI. TECHNOL. 48, 6192-6200.

van Drooge, B.L., Garriga, G., **Koinig, K.A.**, Psenner, R., Pechan, P., Grimalt, J.O., 2014. Sensitivity of a Remote Alpine System to the Stockholm and LRTAP Regulations in POP Emissions. ATMOSPHERE 5, 198-210.

Schlueter, M., Hentzel, T., Suarez, C., Koch, M., Lorenz, W.G., Boehm, L., Duering, R.-A., **Koinig, K.A.**, Bunge, M., 2014. Synthesis of novel palladium(0) nanocatalysts by microorganisms from heavy-metal-influenced high-alpine sites for dehalogenation of polychlorinated dioxins. CHEMOSPHERE 117, 462-470.

Nevalainen L., Ketola M., Korosi J., Manca M., Kurmayer R., **Koinig K.**, Psenner R. and Luoto T. 2013. Zooplankton (Cladocera) species turnover and long-term decline of Daphnia in two high mountain lakes in the Austrian Alps. HYDROBIOLOGIA 1-17.

Holm T.M., **Koinig K.A.**, Andersen T., Donali E., Hormes A., Klaveness D. and Psenner R. 2012. Rapid physicochemical changes in the high Arctic Lake Kongressvatn caused by recent climate change. AQUATIC SCIENCES 74, 3: 385-395.

Kamenik C., **Koinig K.A.** and Schmidt R. 2005. Potential effects of pre-industrial lead pollution on algal assemblages from an Alpine lake. VERH. INTERNAT. VEREIN. LIMNOLOGIE 29: 535-538.

Mosello R., Lami A., Marchetto A., Rogora M., Wathne B., Lien L., Catalan J., Camarero L., Ventura M., Psenner R., **Koinig K.**, Thies H., Sommaruga-Wöger S., Nickus U., Tait D., Thaler B., Barbieri A. and Harriman R. 2002. Trends in the water chemistry of high altitude lakes in Europe. WATER AIR AND SOIL POLLUTION: FOCUS 2: 75-89.

Rose N.L., Shilland E., Yang H., Berg T., Camarero L., Harriman R., **Koinig K.**, Lien L., Nickus U., Stuchlik E., Thies H. and Ventura M. 2002. Deposition and storage of spheroidal carbonaceous fly-ash particles in Europe mountain lake sediments and catchment soils. WATER AIR AND SOIL POLLUTION: Focus 2: 251-260.

Kamenik C., Schmidt R., **Koinig K.A.**, Agustí-Panareda A., Thompson R. and Psenner R. 2001. The chrysophyt stomatocyst composition in a high alpine lake (Gossenköllesee, Tyrol) in relation to seasonality, temperature and land-use. BEIH. NOVA HEDWIGIA 122: 1-22.

Rose N.L., Shilland E., Berg T., Hanselmann K., Harriman R., **Koinig K.**, Nickus U., Trad B.S., Stuchlik E., Thies H. and Ventura M. 2001. Relationships between acid ions and carbonaceous fly-ash particles in deposition at European

mountain lakes. *WATER AIR AND SOIL POLLUTION* 130: 1703-1708.

Koinig K.A., Büsing N., Wille A., Sattler B., Schmidt R. and Psenner R. 2000. Diatom communities in the ice cover of an alpine lake - their influence on pH reconstruction from fossil diatom assemblages. *VERH. INTERNAT. VEREIN. LIMNOLOGIE* 27: 1203.

Kamenik C., **Koinig K.A.**, Schmidt R., Appleby P., Dearing J., Lami A., Thompson R. and Psenner R. 2000. Eight hundred years of environmental changes in a high alpine lake (Gossenköllesee, Tyrol) inferred from sediment records. *JOURNAL OF LIMNOLOGY* 59: 43-52.

Sommaruga R., Psenner R., Schafferer E., **Koinig K.A.** and Sommaruga-Wögerath S. 1999. Dissolved organic carbon concentration and phytoplankton biomass in high-mountain lakes of the Austrian Alps: Potential effect of climatic warming on UV underwater attenuation. *ARCTIC ANTARCTIC ALPINE RESEARCH* 31: 247-253.

The MOLAR Water Chemistry Group, Mosello R. and 21 authors incl. **Koinig K.A.** 1999. The MOLAR Project: atmospheric deposition and lake water chemistry. *JOURNAL OF LIMNOLOGY* 58: 88-106.

Koinig K.A., Schmidt R., Sommaruga-Wögerath S., Tessadri R. and Psenner R. 1998. Climate change as the primary cause for pH shifts in a high alpine lake. *WATER AIR AND SOIL POLLUTION* 104: 167-180.

Palaeoecological and Quaternary Research Journals

Heiri, O., **Koinig, K.A.**, Spoetl, C., Barrett, S., Brauer, A., Drescher-Schneider, R., Gaar, D., Ivy-Ochs, S., Kerschner, H., Luetscher, M., Moran, A., Nicolussi, K., Preusser, F., Schmidt, R., Schoeneich, P., Schworer, C., Sprafke, T., Terhorst, B., Tinner, W., 2014. Palaeoclimate records 60-8 ka in the Austrian and Swiss Alps and their forelands. *Quaternary Science Reviews* 106, 186-205.

Catalan J., Pla-Rabés S., Wolfe A.P., Smol J.P., Rühland K.M., Anderson N.J., Kopáček J., Stuchlík E., Schmidt R., **Koinig K.A.**, Camarero L., Flower R.J., Heiri O., Kamenik C., Korhola A., Leavitt P.R., Psenner R. and Renberg I. 2013. Global change revealed by palaeolimnological records from remote lakes: a review. *JOURNAL OF PALEOLIMNOLOGY*: 1-23.

Ilyashuk E., **Koinig, K.A.**, Heiri O., Ilyashuk B., Psenner R., 2011. Holocene temperature variations at a high-altitude site in the Eastern Alps: a chironomid record from Schwarzsee ob Sölden, Austria. *QUATERNARY SCIENCE REVIEWS* 30: 176-191; doi: 10.1016/j.quascirev.2010.10.008

Schmidt R., Kamenik C., Tessadri R. and **Koinig K.A.** (2006): Climatic changes from 12,000 to 4,000 years ago in the Austrian Central Alps tracked by sedimentological and biological proxies of the lake sediment core. *JOURNAL OF PALEOLIMNOLOGY*. 35

Hirt A.M., Lanci L. and **Koinig K.A.** 2003. Mineral magnetic record of Holocene environmental changes in Sägistalsee, Switzerland. *JOURNAL OF PALEOLIMNOLOGY*.: 321-331.

Koinig K.A., Shotyk W., Lotter A.F., Ohlendorf C. and Sturm M. 2003. 9000 years of geochemical evolution of lithogenic major and trace elements in alpine lake sediments - the role of climate, vegetation and land-use history. *JOURNAL OF PALEOLIMNOLOGY*.: 307-320.

Koinig K.A., Kamenik C., Schmidt R., Agustí-Panareda A., Appleby P., Lami A., Prazakova M., Rose N., Schnell O.A., Tessadri R., Thompson R. and Psenner R. 2002. Environmental changes in an alpine lake (Gossenköllesee, Austria) over the last two centuries - the influence of air temperature on biological parameters. *JOURNAL OF*

PALEOLIMNOLOGY. 28: 147-160.

Schmidt R., **Koinig K.A.**, Thompson R. and Kamenik C. 2002. A multi proxy core study of the last 7000 years of climate and alpine land use impacts on an Austrian mountain lake (Unterer Landschitzsee, Niedere Tauern). *PALAEOGEOGRAPHY, PALAEOCLIMATOLOGY, PALAEOECOLOGY* 187: 101-120.

Cameron N.G., Birks H.J.B., Jones V.J., Berge F., Catalan J., Flower R.J., Garcia J., Kawecka B., **Koinig K.A.**, Marchetto A., Sanchez-Casillo P., Schmidt R., Sisko M., Solovieva N., Stefkova E. and Toro V. M. 1999. Surface-sediment and epilithic diatom pH calibration sets for remote European mountain lakes (AL:PE Project) and their comparison with the Surface Waters Acidification Programme (SWAP) calibration set. *JOURNAL OF PALEOLIMNOLOGY*. 22: 291-317.

Book chapters (peer reviewed)

Auer, I.; Foelsche, U.; Böhm, R.; Chimani, B.; Haimberger, L.; Kerschner, H.; **Koinig, K.A.**; Nicolussi, K.; Spötl, C.; Dienhofer, G.; Godina, R.; Hofstätter, M.; Jurkovic, A.; Kaiser, A.; Kirchengast, G.; Koch, E.; Ladinig, A.; Matulla, Ch.; Olefs, M.; Potzmann, R.; Schöner, W.; Simic, S.; Spangl, W.; Weilguni, V. (2014): *Vergangene Klimaänderung in Österreich*. Chapter *Past Climate Change of the "Austrian Climate Report"*. In: Kromp-Kolb, Helga; Nakicenovic, Nebojsa; Steininger, Karl; Gobiet, Andreas; Formayer, Herbert; Köppl, Angela; Prettenthaler, Franz; Stötter, Johann; Schneider, Jürgen; Austrian Panel on Climate Change: Österreichischer Sachstandsbericht Klimawandel 2014. Wien: Verlag der Österreichischen Akademie der Wissenschaften, ISBN 978-3-7001-7699-2, S. 227 - 300. doi:10.1553/aar14s227

Koinig K.A., Schmidt R., Sommaruga Wögrath S., Tessadri R. and Psenner R. 1998. Acidification processes in high alpine lakes. In: Haigh M.J., Krecek J., Rajiwar G.S. and Kilmartin M.P. (eds.), *Integrated Ecological Management in Headwaters*. Balkema Publishers, Rotterdam, The Netherlands : 45-54.

Koinig K.A., Psenner R. and Schmidt R. 1999. Effects of air temperature changes and acid deposition on the pH history of three high alpine lakes. In: In Mayama S., Idei M. and Koizumi I. (eds.) (eds), *Proceedings of the 14th International Diatom Symposium 1996*. Tokyo, Japan. Koeltz Scientific Books, Koenigstein: 467-478

Koinig, K.A.; Psenner, R.; Tessadri, R. (2010): Early atmospheric pollution recorded in the sediments of high mountain lakes in the vicinity of mining areas. In: Anreiter, P.; et al. (editors): *Mining in European History and its Impact on Environment and Human Societies*. Proceedings for the 1st Mining in European History-Conference of the SFB HiMAT (12.-15.11.2009, Innsbruck). Innsbruck: innsbruck university press (IUP), S. 75 - 80.

Non peer reviewed

Koinig, K.A.; Starnberger, Reinhard; Spötl, Christoph (Hrsg.) (2014): *DEUQUA 2014*. 37. Hauptversammlung der deutschen Quartärvereinigung, Abstractband. 24.9.2014 - 29.09.2014, Innsbruck. Innsbruck: innsbruck university press (IUP) (= Conference Series). ISBN 978-3-902936-50-9. <http://diglib.uibk.ac.at/urn:nbn:at:at-ubi:3-353>

Psenner, R.; Ilyashuk, E.; **Koinig, K.A.** (2012): *La misura dell'ambiente: dall'Antropocene all'Olocene*. In: *Multiverso* 11

Sommaruga-Wögrath S., **Koinig, K. A.**, Bidner T., Fried J., Pfister P., Schaffner E., Sattler B., Sommaruga R., Tartarotti B., Psenner, R. (1998): *Versauerungsentwicklung von 70 Hochgebirgsseen 1985-1995*. (Acidification processes in 70 high alpine lakes 1985 – 1995). Bundesministerium für Land- und Forstwirtschaft, Wien. 1998

Recent Abstracts with ISBN

Koinig, K.A.; Drescher-Schneider, R.; Hirt, A.; Ilyashuk, E.; Lami, A.; Tessadri, R.; Psenner, R. (2010): Soil development as trigger for lake productivity in a high alpine ecosystem. In: Geophysical Research Abstracts, Vol. 12, EGU2010-13025, 2010.

(open access: <http://meetingorganizer.copernicus.org/EGU2010/EGU2010-13025.pdf>)

Koinig, K.A.; Ilyashuk, E.; Hirt, A.; Tessadri, R.; Lami, A.; Drescher-Schneider, R.; May, B.; Wagenbach, D.; Psenner, R. (2008): A multi-proxy approach allows disentangling oxic from anoxic and acid from alkaline conditions during warm and cold periods in a high alpine lake. In: Geophysical Research Abstracts, Vol. 10, EGU2008-A-10656, 2008

(open access: <http://www.cosis.net/abstracts/EGU2008/10656/EGU2008-A-10656.pdf>)

Ilyashuk, E.A.; Heiri, O.; **Koinig, K.A.** (2008): Holocene climatic changes in the Austrian Alps inferred from fossil chironomid assemblages. In: Geophysical Research Abstracts, Vol. 10, EGU2008-A-05428, 2008

(open access: <http://www.cosis.net/abstracts/EGU2008/05428/EGU2008-A-05428-1.pdf>)

Hirt, A., **Koinig, K.A.** (2007): Magnetic Fingerprint for Holocene Climate Change in a High Alpine Lake. In: Eos Trans. AGU, 88(52), Fall Meet. Suppl., Abstract GP53B-1215

(open access: <http://www.agu.org/meetings/fm07/waisfm07.html> - search for Koinig or Hirt)

Oral Presentations at Conferences

I frequently give presentations at international conferences, workshops and meetings with over 30 oral presentations since 1994, over 15 invited lectures, over 20 poster presentations. Generally these presentations are given in English and often for a large audience of up to several hundred people.

Organization of Meetings, Workshops, Conferences

Since 2012, I have been co-organizing two international workshops (Quaternary climate change), two meetings (Diatoms and Quaternary), and one special session (Climate change in high alpine and arctic lakes).

Outreach and public relations

Over the last few years, I was interviewed several times by the national broadcaster for Ö1, Ö1 Kinderuni, Tirol Heute (TV station), and for national and local newspapers (Standard, Krone, Tirol Tageszeitung, Oberländer Bote). Our study about the climate impact on high alpine lakes was part of a "Universum" featured in autumn 2011. I also frequently presented the results of my research projects to the public during public talks, public days at the university, or school activity days at the university.