

Pavel Kram

Affiliation:

Czech Geological Survey, Department of Environmental Geochemistry and Biogeochemistry, Prague, Czech Republic; E-mail: pavel.kram@geology.cz; cellular phone: +420-721240261

Research interests:

Biogeochemistry, aquatic chemistry, soil chemistry, forest hydrology, computer modeling

Education:

1997 Ph.D. in Civil Engineering, Syracuse University, Syracuse, New York, USA

1985 RNDr. in Hydrogeology, Engineering Geology and Applied Geophysics, Charles University, Prague

Selected publications:

- Banwart S., Bernasconi S., Bloem J., Blum W., Brandao M., Brantley S., Chabaux F., Duffy C., Lundin L., Kram P., Nikolaidis N., Novak M., Panagos P., Ragnarsdottir K.V., Reynolds B., Rousseva S., de Ruyter P., van Gaans P., van Riemsdijk W., White T., Zhang B. (2011) Assessing soil processes and function across an international network of critical zone observatories: research hypotheses and experimental design. *Vadose Zone Journal*, in press.
- Bencokova A., Kram P., Hruska J. (2011) Future climate and flow patterns changes in Czech headwater catchments. *Climate Research*, in press.
- Kram P., Hruska J. (2010) Streamwater chemistry in three contrasting monolithologic watersheds. In: Birkle P. and Torres-Alvarado I.S. (eds.) *Water-Rock Interaction. CRC Press/Balkema, Taylor & Francis Group*, London, 257-260.
- Wright R.F., Aherne J., Bishop K., Dillon P.J., Erlandsson M., Evans C.D., Forsius M., Hardekopf D.W., Helliwell R., Hruska J., Hutchins M., Kaste O., Kopáček J., Kram P., Laudon H., Moldan F., Rogora M., Sjoeng A.M.S., de Wit H.A. (2010). Interaction of climate change and acid deposition. In: Battarbee R., Moss B., Kernan M. (eds.) *Climate change impacts on freshwater ecosystems. Blackwell Publishing*, Oxford, 152-179.
- Lischeid G., Kram P., Weyer C. (2010) Tracing biogeochemical processes in small catchments using non-linear methods. In: Muller F., Baessler C., Schubert H., Klotz S. (eds.) *Long-term ecological research – between theory and application. Springer*, Berlin, 221-242.
- Kram P., Hruska J., Driscoll C.T., Johnson C.E., Oulehle F. (2009) Long-term changes in aluminum fractions of drainage waters in two forest catchments with contrasting lithology. *Journal of Inorganic Biochemistry* 103: 1465-1472.
- Kram P., Oulehle F., Stedra V., Hruska J., Shanley J.B., Minocha T., Traister E. (2009) Geocology of a forest watershed underlain by serpentine in central Europe. *Northeastern Naturalist*, 16, Spec. 5: 309-328.
- Hruska J., Kram P., McDowell W.H., Oulehle F. (2009) Increased dissolved organic carbon (DOC) in Central European streams is driven by reductions in ionic strength rather than climate change or decreasing acidity. *Environmental Science and Technology*, 43: 4320-4326.
- Kram P., Traister E., Kolarikova K., Oulehle F., Skorepa J., Fottova D. (2008) Benthic macroinvertebrates of nine selected catchments of the GEOMON network (In Czech, English abstract). *Geoscience Research Reports for 2007*, Czech Geological Survey, Prague, 160-166.
- Kram P., Beudert B., Cervenkova J., Cech J., Vana M., Fottova D., Dieffenbach-Fries H. (2008) Daily streamwater runoff characteristics of the ICP-IM catchments (CZ01, CZ02, DE01) in the Bohemian Massif. *Finnish Environment* 28/2008: 39-47.
- Hofmeister J., Oulehle F., Kram P., Hruska J. (2008) Loss of nutrients caused by litter raking as compared with an effect of acid deposition. *Biogeochemistry* 88: 139-151.
- Oulehle F., McDowell W.H., Aitkenhead-Peterson J.A., Kram P., Hruska J., Navratil T., Buzek F., Fottova D. (2008) Long-term trends in stream nitrate concentrations and losses across watersheds undergoing recovery from acidification in the Czech Republic. *Ecosystems* 11: 410-425.
- Navratil T., Shanley J.B., Skrivan P., Kram P., Mihaljevic M., Drahotka, P. (2007) Manganese biogeochemistry in a central Czech Republic catchment. *Water, Air, and Soil Pollution* 186: 149-165.
- Navratil T., Kurz D., Kram P., Hofmeister J., Hruska J. (2007). Acidification and recovery of soil at a heavily impacted forest catchment (Lysina, Czech Republic) – SAFE modeling and field results. *Ecological Modelling* 205: 464-474.
- Aitkenhead-Peterson J.A., Alexander, J.E., Albrechtova, J., Lhotaková, Z., Huntley, R., Rock, B., Cudlin, P., Kram, P., Hruska, J., Polak, T., Oulehle, F., McDowell, W.H. (2006). Linking foliar chemistry to forest floor solid and solute phase organic C and N in *Picea abies* (L.) Karst stands in northern Bohemia. *Plant and Soil* 283: 187-201.

- Novak M., Kirchner J.W., Fottova D., Prechová E., Jackova I., Kram P., Hruska J. (2005) Isotopic evidence for processes of sulfur retention/release in 13 forested catchments spanning a strong pollution gradient (Czech Republic, Central Europe). *Global Biogeochemical Cycles* 19: Art. No. GB4012, 14 pp.
- Laudon H., Hruska J., Kohler S. and Kram P. (2005) Predicting episodic stream water acidification and recovery in a heavily impacted catchment. *Environmental Science and Technology* 39: 3197-3202.
- Majer V., Kram P., Shanley J.B. (2005) Rapid regional recovery from sulfate and nitrate pollution in streams of the western Czech Republic – comparison to other recovering areas. *Environmental Pollution* 135: 17-28.
- Shanley J.B., Kram P., Hruska J., Bullen T.D. (2004) A biogeochemical comparison of two well-buffered catchments with contrasting histories of acid deposition. *Water, Air, and Soil Pollution: Focus* 4/2-3: 325-342.
- Hruska J., Kram P. (2003) Modelling of long-term changes of streamwater chemistry in two catchments with contrasting vulnerability to acidification. *Hydrology and Earth System Sciences* 7: 525-539.
- Folster J., Bishop K., Kram P., Kvarnas H., Wilander A. (2003) Time series of long-term annual fluxes in the streamwater of nine forest catchments from the Swedish Environmental Monitoring Program (PMK 5). *Science of the Total Environment* 310: 113-120.
- Lorz, C., Hruska J., Kram P. (2003) Modeling and monitoring of long term acidification in an upland catchment of the Western Ore Mountains, SE-Germany. *Science of the Total Environment* 310: 153-161.
- Hruska J., Moldan F., Kram P. (2002) Recovery from acidification in Central Europe - observed and predicted changes of soil and streamwater chemistry in the Lysina catchment, Czech Republic. *Environmental Pollution* 120: 261-274.
- Vesely J., Norton S.A., Skrivan P., Majer V., Kram P., Navratil T., Kaste J. (2002) Environmental geochemistry of beryllium. *Reviews in Mineralogy and Geochemistry* 50: 291-317.
- Kram P., Bishop K., Moldan F. (2001) Modeling long-term streamwater chemistry in the Berg catchment, southwestern Sweden. *Nordic Hydrology* 32: 249-264.
- Kram P., Laudon H., Bishop K.H., Rapp L., Hruska J. (2001) MAGIC modeling of long-term lake water and soil chemistry at Abborrtrasket, Northern Sweden. *Water, Air, and Soil Pollution* 130: 1301-1306.
- Hruska J., Cudlin P., Kram P. (2001) Relationship between Norway spruce status and soil water base cations/aluminum ratios in the Czech Republic. *Water, Air and Soil Pollution* 130: 983-988.
- Bishop K., Hruska J., Kram P., Kohler S., Laudon H., Lofgren S. (2001) Does acidification policy follow research in northern Sweden? The case of natural acidity during the 1990's. *Water, Air, and Soil Pollution* 130: 1415-1420.
- Kram P., Santore R.C., Driscoll C.T., Aber J.D., Hruska J. (1999) Application of the forest-soil-water model (PnET-BGC/CHES) to the Lysina catchment, Czech Republic. *Ecological Modelling* 120: 9-33.
- Kram P., Hruska J., Driscoll C.T. (1998) Beryllium chemistry in the Lysina catchment, Czech Republic. *Water, Air, and Soil Pollution* 105: 391-397.
- Hruska J., Johnson C.E., Kram P., Liao C.-Y. (1997) Organic solutes and the recovery of a bog stream from chronic acidification. *Environmental Science and Technology* 31: 3677-3681.
- Kram P., Hruska J., Wenner B.S., Driscoll C.T., Johnson C.E. (1997) The biogeochemistry of basic cations in two forest catchments with contrasting lithology in the Czech Republic. *Biogeochemistry* 37: 173-202.
- Hruska J., Johnson C.E., Kram P. (1996) The role of organic solutes in the chemistry of acid-impacted bog waters of the western Czech Republic. *Water Resources Research* 32: 2841-2851.
- Kram P., Hruska J., Driscoll C.T., Johnson C.E. (1995) Biogeochemistry of aluminum in a forest catchment in the Czech Republic impacted by atmospheric inputs of strong acids. *Water, Air, and Soil Pollution* 85: 1831-1836.
- Buzek F., Hruska J., Kram P. (1995) Three-component model of runoff generation, Lysina catchment, Czech Republic. *Water, Air, and Soil Pollution* 79: 391-408.
- Kram, P., Hruska, J. (1994) Influence of bedrock geology on elemental fluxes in two forested catchments affected by high acidic deposition. *Applied Hydrogeology* 2/2: 50-58.
- Hruska J., Kram P. (1994) Aluminium chemistry of the root zone of forest soils affected by acidic deposition at the Lysina catchment, Czech Republic. *Ecological Engineering* 3: 5-16.

Service to the scientific community and public administration:

Member of the Czech National Committee for the International Long Term Ecological Research (ILTER),
 Vice-chair of the Evaluation Panel P210 (Geophysics, Geochemistry, Geology and Mineralogy, Hydrogeology) of the Czech Science Foundation.