

Publications list for Stephen R. Parker, Department of Chemistry and Geochemistry,

Montana Tech of The University of Montana, Butte, MT.

- Williams, G.P.¹, Petteys, K.¹, Gammons, C. H., **Parker, S. R.** (submitted, in review) An investigation of acidic head-water streams in the Judith Mountains, Montana, USA. *Applied Geochemistry*.
- Gammons, C.H., Henne, W.¹, Poulson, S.R., **Parker, S. R.**, Johnston, T.B.¹, Dore, J.S., Boyd, E.S. (2014) Stable Isotopes Track Biogeochemical Processes under Ice Cover in a Shallow, Eutrophic Lake. *Biogeochemistry*. 120, 359-379.
- Gammons, C.H., Nimick, D.A., **Parker, S.R.** (2014) Diel Cycling of Trace Elements in Streams Draining Mineralized Areas—A Review. *Applied Geochemistry* 283, 3-17, DOI: <http://dx.doi.org/10.1016/j.apgeochem.2014.05.008>
- **Parker, S.R.**, Darvis, M.N.¹, Poulson, S.R., Gammons, C.H., Stanford, J.A. (2014) Dissolved oxygen and dissolved inorganic carbon stable isotope composition and concentration fluxes across several shallow floodplain aquifers and in a diffusion experiment. *Biogeochemistry*, 117, 539-552, DOI 10.1007/s10533-013-9899-0
- Gammons, C.H., Pape¹, B.L., **Parker, S.R.**, Poulson S.R., Blank, C. (2013) Geochemistry, water balance, and stable isotopes of a “clean” pit lake at an abandoned tungsten mine, Montana, USA. *Applied Geochemistry*, 36, 57-69, doi.org/10.1016/j.apgeochem.2013.06.011.
- **Parker, Stephen R.**, Christopher H. Gammons, M. Garrett Smith¹, Simon R. Poulson (2012) Behavior of stable isotopes of dissolved oxygen, dissolved inorganic carbon and nitrate in groundwater at a former wood treatment facility containing hydrocarbon contamination. *Applied Geochemistry*, 27, 1101-1110, doi:10.1016/j.apgeochem.2012.02.035.
- Smith, M. Garrett¹, **Stephen R. Parker**, Christopher H. Gammons, Simon R. Poulson, F. Richard Hauer (2011) Tracing dissolved O₂ and dissolved inorganic carbon stable isotope dynamics in the Nyack aquifer: Middle Fork Flathead River, Montana, USA. *Geochim. Cosmochim. Acta*. 75, 5971-5986, doi:10.1016/j.gca.2011.07.033
- Nimick, David A., Christopher H. Gammons, and **Stephen R. Parker**, (2011) Diel Biogeochemical Processes and Their Effect on the Aqueous Chemistry of Streams: A Review. *Chemical Geology*, 283, 3-17, doi: 10.1016/j.chemgeo.2010.08.017.
- Gammons, Christopher H., John N. Babcock¹, **Stephen R. Parker**, Simon R. Poulson, (2011) Diel cycling and stable isotopes of dissolved oxygen, dissolved inorganic carbon, and nitrogenous species in a stream receiving treated municipal sewage. *Chemical Geology*, 283, 44-55, doi: 10.1016/j.chemgeo.2010.07.006.
- **Parker, S. R.**, Gammons, C. H., Poulson, S. R., Weyer¹, C. L., Smith¹, M. G., Babcock¹, J. N., Oba, Y., (2010) “Diel behavior of stable isotopes (18-O & 13-C) of dissolved oxygen and dissolved inorganic carbon in Montana, USA rivers, and in a mesocosm experiment”, *Chemical Geology*, 269, 22-32, doi:10.1016/j.chemgeo.2009.06.016.
- **Parker, S. R.**, Poulson, S. R., Weyer¹, C. L., Smith¹, M. G., Bates¹, K. N., (2010) “Temporal variability in the concentration and stable carbon isotope composition of dissolved inorganic and organic carbon in streams”, *Aquatic Geochemistry*, 16, 61-84, doi 10.1007/s10498-009-9068-1.

¹ authors were Montana Tech students at time of project work.

- Gammons, C. H., Duaiame, T. E., Poulson, S. R., **Parker, S. R.**, (2010) “Geochemistry and stable isotopes of acid mine drainage from abandoned underground coal mines, central Montana, USA”, *Chemical Geology*, 269, 100-112, doi:10.1016/j.chemgeo.2009.05.026
- **Parker, S.R.**, Gammons, C. H., Pedrozo, F.L., Wood S. A., (2008) Diel changes in metal concentrations in a geogenically acidic river: Rio Agrio, Argentina. *J. Volcanology & Geothermal Research*, 178, 213-232. doi:10.1016/j.jvolgeores.2008.06.029
- Gammons, C.H., Nimick, D.A., **Parker, S.R.**, Snyder¹, D. M., McCleskey, R.B., Amils, R., Poulson, S.R., (2008) Photoreduction fuels biogeochemical cycling of iron in Spain's acid rivers. *Chemical Geology*, 252, 202-213, doi.10.1016/j.chemgeo.2008.03.004.
- Gammons, C. H., **Parker, S. R.**, Pedrozo, F. L., (2008) The Rio Agrio Basin, Argentina: A natural analog to watersheds affected by acid mine drainage. *Mining Engineering*, 60(4), 74-78.
- **Parker, S. R.**, Gammons, C. H., Jones, C.A., (2007) Role of hydrous iron oxide formation in attenuation and diel cycling of dissolved trace metals in a stream affected by acid rock drainage, *Water, Air, Soil Pollution.*, 181, 247-2663.
- Gammons, C. H., Grant¹, T. M., Nimick, D.A., **Parker, S.R.**, DeGrandpre, M. D., (2007) Diel changes in water chemistry in an arsenic-rich stream and treatment-pond system. *Science of the Total Environment*, 384, 433-451.
- **Parker, S. R.**, Gammons, C. H., Poulson, S. R., DeGrandpre, M. D., (2007) Diel changes in pH, dissolved oxygen, nutrients, trace elements, and the isotopic composition of dissolved inorganic carbon in the upper Clark Fork River, Montana, USA. *Applied Geochemistry*, 22, 1329-1343.
- Nimick, D.A., McCleskey, R. B., Gammons, C.H., Cleasby, T.H., **Parker, S.R.**, (2007) Diel Mercury-Concentration Cycles in Streams Affected by Mining and Geothermal Discharge. *Science of the Total Environment*, 373(1), 344-355.
- Wood S. A., Gammons C. H., **Parker S. R.**, (2006) “The behavior of REE in naturally and anthropogenically acidified waters”, *Journal of Alloys and Compounds* 418, 161-165.
- **Parker, S. R.**, Poulson, S. R., Gammons, C. H., DeGrandpre, M. D., (2005) “Biogeochemical Controls on Diel Cycling of Stable Isotopes of Dissolved O₂ and Dissolved Inorganic Carbon in the Big Hole River, Montana”, *Environmental Science and Technology*, 39(18), 7134-7140.
- Gammons, C.H., Nimick, D.A., **Parker, S.R.**, Cleasby, T.E., McClesky, R.B., (2005) “Diel behavior of iron and copper in a mountain stream with acidic to neutral pH: Fisher Creek, MT, USA”. *Geochim. Cosmochim. Acta*, 69(10), 2505-2516.
- **Stephen R. Parker**, Andrea A. Stierle, Bret R. Niedens, Donald B. Stierle, (2000) “Identification of a Phenylalanine Decarboxylase from the Taxol producing fungus, *Penicillium raistrickii*”, *Intermountain Journal of Science*, 6(2), 95-101.
- Bret R. Niedens, **Stephen R. Parker**, Andrea A. Stierle, Donald B. Stierle, (1999) “First fungal aromatic L-amino acid decarboxylase from a paclitaxel-producing *Penicillium raistrickii*, *Mycologia*”, 91, 619-626.