

DIRK BARON

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California State University, Bakersfield
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PROFESSIONAL EXPERIENCE

Chair, Department of Geological Sciences (July 2014 – present)
California State University, Bakersfield, California.

Professor of Geology (2005-present)
California State University, Bakersfield, California.

Project Director, Title V, Part B U.S. Department of Education Grant and Founding Director of the CSUB Graduate Student Center (2009 – 2011)
California State University Bakersfield, California.

Chair, Department of Physics and Geology (2007 – 2010)
California State University Bakersfield, California.

Associate Professor of Geology (2001-2005)
California State University Bakersfield, California.

Assistant Professor of Geology (1997-2001)
California State University Bakersfield, California.

Project Hydrogeologist (1989-1991)
Squier Associates, Lake Oswego, Oregon.

Geologist (1988-1989)
U.S. Army Corps of Engineers, Portland District, Portland, Oregon.

EDUCATION

Postdoctoral Scholar in Environmental Engineering Science, California Institute of Technology, Pasadena, California; 1996-1997.

Ph.D. in Environmental Science and Engineering, Oregon Graduate Institute of Science & Technology (now part of the Oregon Health & Science University), Portland, Oregon; 1996.

M.S. in Geology, Portland State University, Portland, Oregon; 1990.

Vordiplom in Geology, Freie Universität Berlin, Berlin, Germany; 1986.

HONORS AND AWARDS

2010-2011 California State University, Bakersfield - Faculty Research Award

2013 California State University, Bakersfield - Community Engagement Award

2014-2015 California State University, Bakersfield - Faculty Leadership and Service Award

PROFESSIONAL REGISTRATION

California Registered Professional Geologist, License No. 7962

PUBLICATIONS AND PRESENTATIONS (* indicates student author)

Google Scholar <http://scholar.google.com/citations?user=qpnRLAAAAAJ&hl=en>

Peer-Reviewed Journal Articles

- Külköylüoğlu O., Palacios-Fest M.R., Baron D., and Sarı N. (2015) Monthly variations in the shell structure of two freshwater ostracod (Crustacea) species in Karapınar Spring (Bolu, Turkey). *Turkish Journal of Zoology*, **39**. <http://www.csub.edu/~dbaron/OkanKetal2015.pdf>
- Külköylüoğlu O., Palacios-Fest M.R., Dettman D.L., Baron D., and Sarı N. (2015) Comparison of monthly changes in Mg/Ca ratio between two freshwater Ostracoda (Crustacea) in a rheocene spring (Karapınar Spring, Bolu, Turkey). Accepted for publication *Hydrobiologia*, January 2015.
- Soukup D., Buck B., Gossens D., Ulery A., McLaurin B., Baron D., and Teng Y. (2012) Arsenic concentrations in dust emissions from wind erosion and off-road vehicles in the Nellis Dunes Recreational Area, Nevada, USA. *Aeolian Research*, **5**, 77-89. www.csub.edu/~dbaron/Soukup_et_al_2012.pdf
- Remus J.J., Harmon R.S., Hark R.R., Potter I.K., Bristol S.K. Baron D., Haverstock G.*, and East L.J. (2012) Advanced signal processing analysis of laser-induced breakdown spectroscopy data for the discrimination of obsidian sources. *Applied Optics*, **51**, B1-B9. www.csub.edu/~dbaron/Remus_et_al.pdf
- Remus J.J., Gottfried J.L., Harmon R.S., Draucker A.*, Baron D. and Yohe R. (2010) Archaeological applications of LIBS: An example from the Coso Volcanic Field, CA using advanced statistical signal processing analysis. *Applied Optics* **49**, C120-C131.
- Gottfried J.L., Harmon R.S., Draucker A.*, Baron D., and Yohe R.M. (2009) LIBS as an Archaeological Tool - Example from Coso Volcanic Field, CA. *Proceedings of the 24th International Applied Geochemistry Symposium*, University of New Brunswick, Canada. Lentz D.R., Thorne K.D., and Beal K-L, Editors, **2**, 807-810
- Negrini R., Baron D., Gillespie J., Horton R., Draucker A.*, Durham N.*, Huff J.*, Philley P.*, Register C.*, Parker J., and Haslebacher T. (2008) A middle-Pleistocene lacustrine delta in the Kern River depositional system: structural control, regional stratigraphic context, and impact on groundwater quality. Pacific Section of the American Association of Petroleum Geologists Publication MP48, 95-111. www.csub.edu/~dbaron/Negrini_et_al_2008.pdf
- Baron D., Negrini R.M, Golob E.M.*, Miller D., Sarna-Wojcicki A., Fleck R., Hacker B., Erendi A. (2008) Geochemical correlation and ⁴⁰Ar/³⁹Ar dating of the Kern River Ash and related tephra: Implications for the stratigraphy of petroleum-bearing formations in the San Joaquin Valley, California. *Quaternary International*, **178**, 246-260. www.csub.edu/~dbaron/Baron_et_al_2008.pdf

- Drouet C., Pass K.L.*, Baron D., Draucker S.*, and Navrotsky A. (2004) On the thermochemistry of solid solutions between jarosite, natrojarosite, and alunite. *Geochimica et Cosmochimica Acta*, **58**, 2197-2205. www.csub.edu/~dbaron/Drouet_etal_2004.pdf
- Drouet C., Navrotsky A., and Baron D. (2003) On the thermochemistry of solid solutions between jarosite and its chromate analog. *American Mineralogist*, **88**, 1949-1954. www.csub.edu/~dbaron/Drouet_etal_2003.pdf
- Baron D. and Palmer C.D. (2002) Solid solution/aqueous solution interactions between jarosite and its chromate analog. *Geochimica et Cosmochimica Acta*, **66**, 2841-2853. www.csub.edu/~dbaron/Baron_and_Palmer_2002.pdf
- Baron D. and Hering J.G. (1998) Analysis of metal-EDTA complexes by Electrospray Mass Spectrometry. *Journal of Environmental Quality* **27**, 844-850.
- Baron D. and Palmer C.D. (1998) Solubility of $\text{KFe}(\text{CrO}_4)_2 \cdot 2\text{H}_2\text{O}$ at 4-75°C. *Applied Geochemistry* **13**, 961-973. www.csub.edu/~dbaron/Baron_and_Palmer_1998.pdf
- Baron D. and Palmer C.D. (1996) Solubility of $\text{KFe}_3(\text{CrO}_4)_2(\text{OH})_6$ at 4-35°C. *Geochimica et Cosmochimica Acta* **60**, 3815-3824. www.csub.edu/~dbaron/Baron_and_Palmer_1996b.pdf
- Baron D., Palmer C.D. and Stanley J.T. (1996) Identification of two Fe-chromate precipitates in a Cr(VI)-contaminated soil. *Environmental Science & Technology* **30**, 964-968. www.csub.edu/~dbaron/Baron_etal_1996.pdf
- Baron D. and Palmer C.D. (1996) Solubility of jarosite at 4-35°C. *Geochimica et Cosmochimica Acta* **60**, 185-195. www.csub.edu/~dbaron/Baron_and_Palmer_1996a.pdf
- Baron D., Scofield D.H., Johnson A.G., Malin R.D., and Graham J.D. (1991) Three-dimensional modeling of groundwater flow and temperatures at Bonneville Dam, Oregon. *Proceedings, 1991 Geotechnical Engineering Congress*, American Society of Civil Engineers, 1186-1197.

GRANTS, CONTRACTS, AND FUNDRAISING

Lead Principal Investigator or Fundraiser (~\$2 million total; most grants include indirect costs)

MRI: Acquisition of an X-Ray Diffractometer for Multi-Disciplinary Research and Research Training at California State University, Bakersfield. National Science Foundation. Awarded \$198,000 September 2014.

Dual-Credit Physical Geology Classes: A Strategy for Improving the "Pipeline" from High Schools into University Geology Programs. Chevron. Awarded \$180,000 as a match for the NSF grant with the same title. 2015.

Dual-Credit Physical Geology Classes: A Strategy for Improving the "Pipeline" from High Schools into University Geology Programs. Chevron. Awarded \$180,000 as a match for the NSF grant with the same title. 2014.

Dual-Credit Physical Geology Classes: A Strategy for Improving the "Pipeline" from High Schools into University Geology Programs. Chevron. Awarded \$130,000 as a match for the NSF grant with the same title. 2012.

Dual-Credit Physical Geology Classes: A Strategy for Improving the "Pipeline" from High Schools into University Geology Programs. San Joaquin Geological Society. Awarded \$4,000 as a match for the NSF grant with the same title. 2013.

Dual-Credit Physical Geology Classes: A Strategy for Improving the "Pipeline" from High Schools into University Geology Programs. Pacific Section AAPG. Awarded \$7,500 as a match for the NSF grant with the same title. 2013.

Dual-Credit Physical Geology Classes: A Strategy for Improving the "Pipeline" from High Schools into University Geology Programs. National Science Foundation. Awarded \$197,555, July 2011.

Claude Fiddler Endowment for Field Experiences Donation from the Fiddler families to the CSUB Department of Geological Sciences. \$100,000, December 2010.

Bird's Eye Detective: Using Geospatial Technologies in K-12 Teacher Training. Google Faculty Institute Program. Awarded \$23,500, August 2011.

Planning for a Math and Science Partnership in the Great Central Valley of California. National Science Foundation. Awarded \$295,848, June 2009.

Paleoclimate and flooding history in the Southern San Joaquin Valley, CA. National Science Foundation. Awarded \$410,910, April 2003.

Inductively Coupled Plasma Mass Spectrometry (ICP/MS) and Laser Ablation – Modern Analytical Instrumentation for Enhancing Recruitment, Retention, and Academic

DIRK BARON
Curriculum Vitae

Achievement of Minority Students in the Sciences and Engineering. Department of Defense Infrastructure Support Program. Awarded \$282,135, May 2000.

Solubility of $KFe(CrO_4)_2 \cdot H_2O$: Implications for risk assessment and remediation of chromium-contaminated groundwater. CSU Research Council. Status: Awarded \$5,000, June 2000.

Characterization and solubility of $FeOHCrO_4$: Implications for fate and transport of chromium in the environment. CSU Research Council. Awarded \$5,000, June 1999.

Mechanisms and products of the oxidation of MTBE by Hydrogen Peroxide. CSU Research Council. Awarded \$5000, June 1998.

Co-PI in Teams with Others (~\$6.9 million total)

CSUB Center for Research Excellence in Science and Technology. National Science Foundation. Awarded \$5.5 million, July 2011. PI Negrini.

CSUB Robert Noyce Teacher Scholarship Program – Phase I. National Science Foundation. Awarded \$897,931, July 2009. PI Gebauer.

Identification and dating of volcanic ashes from the Kern River Formation, Kern County, CA. Chevron, USA, Kern River Unit. Awarded \$38,225, September 2008. PI Negrini.

Scanning Electron Microscopy with X-Ray Microanalysis – Modern analytical instrumentation for enhancing recruitment, retention and academic achievement of minority students. US Department of Defense. PI Horton. Awarded \$200,000, June 2005.

Hydrogeology of the Kern Fan Element and Implications on Local Groundwater Management of Kern Water Bank. State of California, AB303 Local Groundwater Assistance Fund Grant. PI Negrini. Awarded \$125,334, May 2004.

Fundamental processes governing the aquifer characteristics of the Kern Water Bank: implications for other alluvial fan-type aquifers in agricultural regions with arid to semi-arid climates. Kern Water Bank Authority, State of California AB303. PI Negrini. Awarded \$122,500, July 2003

Processes governing aquifer characteristics of the Kern Water Bank. U.S. Department of Agriculture National Research Initiative. PI Negrini. Awarded \$151,000, July 2001.