

MEET THE GUEST EDITOR

James Cizdziel

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Dr. James Cizdziel is an Assistant Professor in the Department of Chemistry and Biochemistry at the University of Mississippi. He received degrees from the State University of New York at Buffalo (B.S. in Analytical Chemistry, 1991) and the University of Nevada, Reno (Ph.D. in Environmental Science and Health, Environmental Chemistry Track, 1998). Prior to attending graduate school he was laboratory manager at Buffalo Tungsten Incorporated (1991-1993). His dissertation research, under Dr. Vernon Hodge, and associated journal publications examining attic dust as a historical record of air pollution are recognized as ground-breaking and innovative. He served as a National Research Council Postdoctoral Associate at the U.S. Environmental Protection Agency (EPA), National Exposure Research Laboratory from 1998-2000. His research there resulted in some of the first papers on the determination of Hg in environmental and biological samples using automated combustion-atomic absorption spectrometry. In 2000, he was hired as Senior Scientist at the Harry Reid Center for Environmental Studies at the University of Nevada, Las Vegas. There he led a team of researchers who, among other things, utilized ICP-MS to measure trace elements in groundwater from near Yucca Mountain and the Nevada Test Site for various modeling studies. While in Las Vegas, he was active in the American Chemical Society, holding positions of Chair and Councilor in the Southern Nevada Section. He also served on the ACS National Committee for Technician Affairs. In 2008, he moved to Oxford, Mississippi to join the faculty at Ole Miss. He has been principal investigator on grants from the U.S. National Science Foundation (NSF), EPA, and the Department of Energy. Recently, he was awarded an NSF grant to develop an ICP-MS facility for the U.S. Mid-South region. His research interests are in the area of analytical, environmental, and forensic chemistry. He is particularly interested in environmental monitoring and fingerprinting using isotope based methods. He is also interested in the biogeochemical cycling of Hg and supervises a state-of-the-art Hg laboratory. Often what counts in science is novelty. To that end, he enjoys developing new measurement techniques or applying analytical methods in novel ways. For example, he published the first work on determining Pb in blood by laser ablation ICP-MS of filter paper spotted with blood.

SELECTED PUBLICATIONS

- [1] Gamage, S.V.; Hodge, V.F.; **Cizdziel, J.**; Lindley, K. Determination of vanadium (IV) and (V) in southern Nevada groundwater by ion chromatography-inductively coupled plasma mass spectrometry. *Open Chem. Biomed. Methods J.*, **2010**, *3*, 10-17.
- [2] **Cizdziel, J.**; Brown, G.; Tolbert, C. Direct analysis of environmental and biological samples for total Hg with comparison of sequential atomic absorption and fluorescence measurements from a single combustion event. *Spectrochim. Acta Part B*, **2010**, *65*, 176-180.
- [3] **Cizdziel, J.**; Ketterer, M.E.; Farmer, D.; Faller, S.; Hodge, V. ^{239}Pu - ^{240}Pu - ^{241}Pu fingerprinting of plutonium in western US soils using ICPMS: solution and laser ablation measurements, Special Issue: stable isotopes in analytical chemistry. *Anal. Bioanal. Chem.*, **2008**, *390*, 521-530.
- [4] **Cizdziel, J.**; Guo, C.; Yu, Z.; Steinberg, S.; Johannesson, K. Chemical and colloidal analyses of natural seep water collected from the exploratory studies facility inside Yucca Mountain USA. *Environ. Geochem. Health.*, **2008**, *30*, 31-44.
- [5] **Cizdziel, J.**; Wei, Y.; Stetzenbach, K.; Hodge, V.; Cline, J.; Howley, R.; Phillips, F. Recent measurements of Chlorine-36 in Yucca Mountain rock, soil, and seepage. *J. Radioanal. Nuclear Chem.*, **2008**, *275*, 133-144.
- [6] **Cizdziel, J.** Determination of lead in blood by laser ablation ICP-TOF-MS analysis of blood spotted and dried on filter paper: a feasibility study. *Anal. Bioanal. Chem.*, **2007**, *388*, 603-611.
- [7] Pollard, J.; **Cizdziel, J.**; Stave, K.; Reid, M. Selenium concentrations in water and plant tissues of a newly formed arid wetland in Las Vegas, Nevada. *J. Environ. Monit. Assess.*, **2007**, *135*, 447-457.
- [8] **Cizdziel, J.**; Farmer, D.; Hodge, V.; Lindley, K.; Stetzenbach, K. $^{234}\text{U}/^{238}\text{U}$ isotope ratios in springs and groundwater from southern Nevada: a comparison of alpha counting and magnetic sector ICP-MS. *Sci. Total Environ.*, **2005**, *350*, 248-260.
- [9] **Cizdziel, J.**; Zhou, X. Sources and concentrations of mercury and selenium in compartments within the Las Vegas Wash during a period of rapid change. *Environ. Monit. Assess.*, **2005**, *107*, 81-99.
- [10] Gremillion, P.; **Cizdziel, J.** Caudal fin mercury as a predictor of fish-muscle mercury. *Environ. Chem.*, **2005**, *2*, 96-99.
- [11] Turner, M.; Rudin, M.; **Cizdziel, J.**; Hodge, V.F. Excess plutonium in soils near the Nevada Test Site, USA. *Environ. Pollut.*, **2003**, *125*, 193-203.
- [12] **Cizdziel, J.**; Pollard, J.; Hinners, T.; Heithmar, E.; Cross, C. Mercury concentrations in fish from Lake Mead related to fish size, condition, trophic level, location and consumption risk. *Arch. Environ. Contam. Toxicol.*, **2002**, *43*, 309-317.