

Doc. No. 3

Brett Schatz

From: Nicole Baker <nbaker@rjleegroup.com>
Sent: Monday, December 30, 2024 10:36 AM
To: Brett Schatz
Cc: Michael Deible, Ph.D.
Subject: Michael Deible, Ph.D. CV
Attachments: Deible Michael J_091024.pdf

Good Morning Mr. Schatz,

Please find attached Dr. Michael Deible's CV.

Please let us know if you need anything else.

Best,

Nicole Baker
Executive Assistant
nbaker@rjleegroup.com

Main: 1.724.325.1776
Direct: 1.724.387.1900
Web: rjleegroup.com

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Michael J. Deible, Ph.D.

Education

- » Ph.D., Physical Chemistry, University of Pittsburgh, Pittsburgh, PA, 2015
- » B.S., Chemistry Education, Indiana University of Pennsylvania, Indiana, PA, 2008

Employment History

- » Principal Investigator, RJ Lee Group, Pittsburgh PA, 2023-Present
- » Consulting Scientist, RJ Lee Group, Pittsburgh PA, 2017–2023
- » Assistant Professor, United States Military Academy, West Point NY, 2015–2017
- » Teacher, New Town High School, Baltimore, MD, 2008–2010
- » Laboratory Technician, Environmental Service Laboratories, Indiana, PA, 2007–2008
- » Military Police, Pennsylvania Army National Guard, Baghdad, Iraq, 2004-2005

Summary

- » PFAS practice lead for a new laboratory department from instrument purchase through accreditation and routine analysis
- » Testifying expert in arbitration matter related to material identification
- » Experience with analysis of environmental contaminants, particularly PFAS and Microplastics in support of field investigations and remediation technology development
- » Litigation support for matters related to patent infringement, PFAS, and other areas, with activities including material identification and characterization using multiple analytical methods, field sampling, and expert witness support.
- » Experienced in the use of multiple analytical techniques such as GCMS, LCMS, FTIR, SEM, Raman, and TGA/DSC to classify materials
- » Develops and employs experimental design to address challenging, non-standard chemical questions
- » Experienced corrosion scientist in the field of detection, bench top experiments and failure analysis
- » Employs failure analysis methods to determine root cause of failures
- » Extensive study of the effect on interaction energies when changing the steering function of quantum Monte Carlo calculations
- » Designed graphene electrodes for studies of electron transfer kinetics
- » Applied cyclic voltammetry and scanning electron microscopy to characterize ultra-sharp platinum electrodes
- » Bolstered experimental results with finite element simulations of electron transfer kinetics
- » Adept at leveraging supercomputing assets and laboratory techniques in tandem

Professional Memberships

- » American Chemical Society, member
- » ASTM International, member; Voting member D-19: Water committee; Vice chair for D19.06: Organic Contaminants in Water

Publications and Presentations:

Deible, M., L. Miller, R. Hale, W. Lipps, "Update on ASTM WK88581 - New Test Method for Determination of Extractable Per- and Polyfluoroalkyl Substances (PFAS) in Solid Matrices by Solvent Extraction followed by Liquid Chromatography Tandem Mass Spectrometry (LC/MS/MS)", American Home Furnishings Regulatory Summit, Colfax, NC, 2024.

Deible, M., K. Rickabaugh, "Considerations for Sample Preparation for Particle-by-Particle Microplastic Analysis of Water Samples", ASTM Organized Symposium on Microplastics Analytical and Reference Standards -- Opportunities to Advance Microplastic Science, Seattle, WA, 2022.

Perricone, M.J., M. Deible, K.E. Wagner, and C.M. Hefferan, "Sensitization Behavior of Alloy C-276 as a Function of Mu Precipitation". Paper C2019-13421. Recent Experiences with Nickel, Titanium, Zirconium and other Corrosion Resistance Alloys. CORROSION 2019. Nashville, TN. March 2019.

Hefferan, C.M., M. Deible, M.J. Perricone, and K.E. Wagner, "Grain Boundary Corrosion of Alloy C-276 using Orientation Imaging via Electron Backscatter Diffraction Microscopy (EBSD)". Paper C2019-13418. Recent Experiences with Nickel, Titanium, Zirconium and other Corrosion Resistance Alloys. CORROSION 2019. Nashville, TN. March 2019.

Gasperich, K., M. Deible, K.D. Jordan, "H₄: A model system for assessing the performance of diffusion Monte Carlo calculations using a single Slater determinant trial function", *The Journal of Chemical Physics* 147 (7), 074106, 2017.

Deible, M.J., K.D. Jordan, "Exploration of Brueckner orbital trial wave functions in diffusion Monte Carlo calculations", *Chemical Physics Letters* 644, 117-120, 2016.

Alexander, R., M. Altamirano, S. Batdorj, M. Brooks, P. Brun, A. Del Angel, A. de la Rosa, C. Brewer, and M. Deible "System for Corrosion Inspection and Monitoring," *Ind. and Sys. Eng. Rev.*, 4(2), 82, 2016.

Deible, M.J., "Overview of Corrosion Activities in the Department of Civil and Mechanical Engineering at the United States Military Academy", Technical Corrosion Collaboration, Penn State, PA, 2016.

Deible, M.J., Kessler, K.E. Gasperich, K.D. Jordan, "Quantum Monte Carlo calculation of the binding energy of the beryllium dimer," *J. Chem. Phys.*, 143 (8), 084116, 2015.

Deible, M.J., "Calculating the adsorption energy of organic corrosion inhibitors on an iron substrate", DOD Allied Nations Corrosion Conference, Pittsburgh, PA, 2015.

Deible, M.J., O. Tuguldur, K.D. Jordan, "Theoretical Study of the Binding Energy of a Methane Molecule in a (H₂O)₂₀ Dodecahedral Cage," *J. Phys. Chem B*, 118 (28), 8257, 2014.

Wang, F., M.J. Deible, K.D. Jordan, "Benchmark Study of the Interaction Energy of an (H₂O)₁₆ Cluster: Quantum Monte Carlo and Complete Basis set Limit MP2 results," *J. Phys. Chem. A*, 117

(32), 7606, 2013.

Xu, J., M.J. Deible, K.A. Peterson, K.D. Jordan, "Correlation Consistent Gaussian Basis Sets for H, B-Ne with Dirac-Fock AREP Pseudopotentials: Applications in Quantum Monte Carlo Calculations," *J. Chem. Theory Comput.*, 9 (5), 2170, 2013.

Deible, M.J., "Quantum Monte Carlo benchmarks for weak non-covalent interactions", International Workshop on Quantum Monte Carlo, Apuan Alps Center for Physics, Italy, 2013.

Amemiya, S., N. Nioradze, P. Santhosh, M.J. Deible, "Generalized Theory for Nanoscale Voltammetric Measurements of Heterogeneous Electron-Transfer Kinetics at Macroscopic Substrates by Scanning Electrochemical Microscopy," *Anal. Chem.*, 83 (15), 5928, 2011.