

## Alexander Johs

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### Education

Graz University of Technology, Austria    Chemistry    B.S., 1996  
Graz University of Technology, Austria    Biochemistry and Biotechnology    M.S. (Dipl.-Ing.), 1999  
Higher European Research Course for Users of Large Experimental Systems,  
(HERCULES), CNRS, Université Joseph Fourier, CEA, ILL, ESRF, Grenoble, France    2002  
Austrian Academy of Sciences and  
Graz University of Technology, Austria    Biophysics    Ph.D. (Dr. techn.), 2005

### Research and Professional Experience

R&D Staff, Environmental Sciences Division, Oak Ridge National Laboratory    2010-present  
Postdoctoral Research Associate, Oak Ridge National Laboratory    2007-2010  
Postdoctoral Research Associate, Austrian Academy of Sciences    2005-2006  
Graduate Research Associate, Austrian Academy of Sciences    2000-2005

### Selected professional honors and awards

2014    Stanley I. Auerbach Award for Excellence in Environmental Sciences, ORNL  
2013    Director's Award for Outstanding Team Accomplishment, ORNL  
2013    UT-Battelle Award for Scientific Research  
2003    Greta Pifat Mrzljak Graduate Research Award

### Selected publications (<https://scholar.google.com/citations?user=KKow9CYAAAAAJ>)

Cooper C.J., Zheng K., Rush K.W., Johs A., Sanders B.C., Pavlopoulos G.A., Kyrpides N.C., Podar M., Ovchinnikov S., Ragsdale S.W., Parks J.M., "Structure determination of the HgcAB complex using metagenome sequence data: insights into microbial mercury methylation", *Comm. Biol.*, 3, 320 (2020). DOI: 10.1038/s42003-020-1047-5

Date, S., Parks J.M., Rush, K.W., Wall J.D., Ragsdale, S.W., Johs A., "Kinetics of mercury methylation mediated by HgcAB", *Appl. Env. Microbiol.*, 85(13), e00438-19 (2019). DOI: 10.1128/AEM.00438-19

Whited A.M., Johs A., "The interactions of peripheral membrane proteins with biological membranes", *Chem. Phys Lipids*, 192, 51-89 (2015). DOI:10.1016/j.chemphyslip.2015.07.015

Hu H., Lin H., Zheng W., Tomanicek S. J., Johs A., Feng X., Elias D. A., Liang L., Gu B. "Oxidation and methylation of dissolved elemental mercury by anaerobic bacteria", *Nature Geoscience* 6, 751–754 (2013). DOI: 10.1038/ngeo1894

Parks J. M., Johs A., Podar M., Bridou R., Hurt R. A., Smith S. D., Tomanicek S. J., Qian Y., Brown S.D., Brandt C. C., Palumbo A. V., Smith J. C., Wall J. D., Elias D. A., Liang L., "Two Genes Essential for Bacterial Mercury Methylation", *Science* 339(6125): 1332-1335 (2013). DOI: 10.1126/science.1230667

### Patents

U.S. Patent 10,407,535, "3D Printable Liquid Crystalline Elastomers with Tunable Shape Memory Behaviors and Bio-derived Renditions", Y. Li, O. Rios, A. Johs, M. R. Kessler, September 2019

U.S. Patent 10,036,072: "Mercury Methylation Genes in Bacteria and Archaea", J. M. Parks, A. Johs, July 2018

U.S. Patent 9,650,537: "Reactive Polymer Fused Deposition Manufacturing", V. Kunc, O. Rios, L.J. Love, C.E. Duty, A. Johs, May 16, 2017

U.S. Patent 9,359,695: "Lignin-Based Active Anode Materials Synthesized from Low-Cost Renewable Resources", O. Rios, W. E. Tenhaeff, C. Daniel, N. J. Dudley, A. Johs, G. A. Nunnery, F. S. Baker, June 7, 2016