BIOGRAPHICAL SKETCH FOR CRAIG S. CRIDDLE

A. Professional preparation

Utah State University, B.S., Civil and Environmental Engineering, 1982
Utah State University, M.S., Civil and Environmental Engineering, 1984
Stanford University, Ph.D., Civil and Environmental Engineering, 1990

B. Academic appointments

2014-present	Director, Codiga Resource Recovery Center, Stanford University
2005-present	Professor, Department of Civil and Environmental Engineering Stanford University
2003-2005	Associate Professor, Department of Civil and Environmental Engineering Stanford University
1998-2003	Associate Professor, Department of Civil and Environmental Engineering Michigan State University
1989-1998	Assistant Professor, Department of Civil and Environmental Engineering Michigan State University

Honors and awards

Leavell Family Faculty Scholar, School of Engineering, Stanford University, 1998-2001
Withrow Distinguished Scholar Award, College of Engineering, Michigan State University1996-97
Faculty Award, 3M Company, 1992
Outstanding Doctoral Thesis Award, CH2MHill, Inc., and the Association of Environmental Engineering Professors, 1990

C. Products

Woo, S-G., H. L. Sewell, and C. S. Criddle. 2022. Phylogenetic diversity of NO reductases, new tools for *nor* monitoring, and insights into N_2O production in natural and engineered environments, Front. Environ. Sci. Eng. 16(10: 1276

El Abbadi, S. H., E. D. Sherwin, A. R. Brandt, S. P. Luby, and C. S. Criddle, 2021. Displacing fishmeal with protein derived from stranded methane. Nature Sustainability 5:47–56. DOI 10.1038/s41893-021-00796-2

Shin, S., S. H. Tilmans, F. Chen, and C. S. Criddle, 2021. Temperate-climate energy-positive anaerobic secondary treatment of domestic wastewater achieved at pilot-scale. Water Research 204: 117598.

Brandon, A. M. and C. S. Criddle, 2019. Can biotechnology turn the tide on plastics? Current Opinions in Biotechnology 57:160-166.

Xie, X., M. Ye, P.-C. Hsu, N. Liu, C. S. Criddle, and Y. Cui. 2013. A microbial battery for efficient energy recovery. Proc. National Acad. Science 110(40): 15925-15930.

Scherson, Y. B., G. F. Wells, S.-G. Woo, J. Lee, J. Park, B. J. Cantwell, and C. S. Criddle, 2013. Nitrogen removal with energy recovery through N_2O decomposition. Energy & Environ Sci 6:241-248.

Pieja, A. J., E. R. Sundstrom, and C. S. Criddle, 2011. Poly-3-hydroxybutyrate metabolism in the Type II methanotroph *Methylocystis parvus* OBBP. Applied Environ. Microbiol. 77(17): 6012-6019.

Watson, O. A. Cirpka, S. Fendorf, J. Zhou, P. Kitanidis, P. M. Jardine, and C. S. Criddle. 2006. Pilot-scale bioremediation of uranium in a highly contaminated aquifer II: evidence of U(VI) reduction and geochemical control of U(VI) bioavailability. Environ. Sci. Technol. 40 (12): 3986-3995

Dybas, M. J. D. W. Hyndman, R. Heine, K. Linning, J. Tiedje, T. Voice, R. Wallace, D. Wiggert, X. Zhao, R. Artuz, and C. S. Criddle, 2002. Development, operation, and long-term performance of a full-scale biocurtain utilizing bioaugmentation. Environ. Science and Technol 36: 3635-3644.

Key, B., R. Howell, and C. S. Criddle, 1997. Fluorinated organics in the biosphere. Environ. Science and Technol.31 (9): 2445-2454.

D. **Synergistic Activities:**

- From 1996 to 1998, Prof. Criddle initiated and led a large field-scale test of bioaugmentation for carbon tetrachloride remediation supported by the State of Michigan and the NSF Center for Microbial Ecology at Michigan State University. This project involved faculty from several disciplines, graduate students, postdoctoral researchers, and consultants. The National Ground Water Association named it Outstanding Remediation Project for 2002.
- San Francisco cartoonist Larry Gonick worked collaboratively with Prof. Criddle to produce The Cartoon Guide to Chemistry (2005), a popular supplement for high school and freshman-level University chemistry courses.
- From 2000 to 2006, Prof. Criddle served as Project Director for a field-scale uranium sequestration project at the US Department of Energy Field Research Center at Oak Ridge, TN. This project involved researchers from academia and government labs, consultants, many students, and a research engineer (staff).
- From 2016 - present, Prof. Criddle has served as the Division Lead for the Biofuel and Biomaterial Manufacturing Division of the NASA Center for the Utilization of Biological Engineering in Space (CUBES). This project has involved many faculty, graduate students, postdoctoral researchers, and one research scientist (staff).
- From 2018 to present, Prof. Criddle has served as Principal Investigator for pilot-scale testing of a novel anaerobic membrane bioreactor system at the Stanford Codiga Resource Recovery Center (funding from the Singapore Public Utilities Board) and at Silicon Valley Clean Water (funding from the California Energy Commission). This on-going project has involved many faculty, graduate students, postdoctoral researchers, and one research engineer (staff). The American Academy of Environmental Engineers and Scientists has awarded these projects the Grand Prize for University Research (title: “Efficient anaerobic treatment of domestic wastewater enabling net energy production and low waste biosolids”).