

My research activities have dwindled over the last 10 years as I have focused more time on administrative activities. I am not actively seeking either research funding or graduate students. I nevertheless remain interested in environmental engineering problems and sustainability issues, especially those related to water and waste.

My current doctoral student, Zeinab Akbarishahabi, is examining microbial fuel cells. This is a new area for me but follows from my interest in sustainable systems and our recognition that even municipal wastewater contains a great deal of potential energy (see Shizas and Bagley, 2004). Microbial fuel cell technology has been extensively studied but not widely applied. This tells me that we may be missing something technically. In any case, I am enjoying learning more about this technology.

My most recent doctoral graduate, Dr. Judd Larson, examined the anaerobic hydrolysis of cellulose as a model for anaerobic degradation of municipal solid waste. We are currently preparing additional papers from his work (the first is currently in press, see Larson and Bagley, 2022).

If you have difficulty tracking down a paper in the list below that is of interest to you, please send me an e-mail.

**Journal Papers Published and In Press** (61 total, students in bold)

**Larson, J.A.**, and D. M. Bagley. 2022. Sessile and planktonic microbial taxonomy of a methanogenic cellulolytic enrichment reactor sourced from the organic fraction of municipal solid waste. *Journal of Environmental Engineering*, ASCE, In press.

Huang, Z., X. He, C. Nye, D.M. Bagley, M. Urynowicz, and M. Fan. 2021. Anaerobic treatment of produced water from petroleum production using an anaerobic digestion inoculum from a brewery wastewater treatment facility. *Journal of Hazardous Materials*, 407, 5 Apr 2021, <https://doi.org/10.1016/j.jhazmat.2020.124348>.

Zhang, J., Z. Wang, L. Chu, R. Chen, C. Zhang, S. Toan, D.M. Bagley, J. Sun, S. Dong, and M. Fan. 2021. Unified photoelectrocatalytic microbial fuel cell harnessing 3D binder-free photocathode for simultaneous power generation and dual pollutant removal. *Journal of Power Sources*, 481, 1 Jan 2021, <https://doi.org/10.1016/j.jpowsour.2020.229133>

Song, X., Y. Wu, X. He, D.M. Bagley, H. Adidharma, W. Wang, and M. Fan. 2021. Performance and characteristics of continuous, fluidized bed pyrolysis of reed black liquor. *Separation and Purification Technology*, 254, 1 Jan 2021, <https://doi.org/10.1016/j.seppur.2020.117573>

Dong, S., L. Cui, Y. Tian, L. Xia, Y. Wu, J. Yu, D.M. Bagley, J. Sun, and M. Fan. 2020. A novel and high-performance double Z-scheme photocatalyst ZnO-SnO<sub>2</sub>-Zn<sub>2</sub>SnO<sub>4</sub> for effective removal of biological toxicity of antibiotics. *Journal of Hazardous Materials*, 399, 15 Nov 2020. <https://doi.org/10.1016/j.jhazmat.2020.123017>

Jacobson, A., D.M. Bagley, J. Dewey, and M. Fan. 2020. Titanium Oxyhydroxide – A new effective candidate for resolving the challenging water quality issue of high alkalinity. *J. Environ. Chem. Eng.*, 8(5) Oct. 2020. <https://doi.org/10.1016/j.jece.2020.104447>

Woods, G.C., **A.H.M.A. Sadmani**, S.A. Andrews, D.M. Bagley and R.C. Andrews. 2016. Rejection of Pharmaceutically-Based *N*-Nitrosodimethylamine Precursors Using Nanofiltration, *Water Research*, 93:179-186.

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