Ph.D.

Zachary Fishman

Email: Zachary.fishman@yale.edu ◆ **Cell:** (917) 837-3630 ◆ **Status:** United States Citizen
Permanent Address: 126 Grymes Hill Road, Staten Island, New York 10301
School Address: 226 Bishop Street, 2nd floor, New Haven, CT 06511

OBJECTIVE

To apply chemical and environmental engineering practices to improve fields utilizing nanomaterial technology

EDUCATION

Ph.D.: Yale University, New Haven, CT — Fall 2012 – Fall 2017 (expected)
- Chemical and Environmental Engineering | Adviser: Dr. Lisa D. Pfefferle

Bachelor of Science: Rensselaer Polytechnic Institute, Troy, NY — May 2012
- Chemical and Biological Engineering | Dean's List | GPA: 3.43

Laboratory Experience

Nanomaterial Synthesis and Catalysis Lab, Dr. Lisa D. Pfefferle, Yale University — Fall 2012 – Present
Chemical Biology Lab, Dr. Peter M. Tessier, RPI — Spring 2010 – Summer 2011
Neural Biology Lab, Dr. Probal Banerjee, College Of Staten Island — Summer 2009

PESENTATIONS & PUBLICATIONS

Publications:

Fishman, Z.S., He, Y., Yang, K., Rudshteyn, B., A. Lounsbury, Zhu, J., Zimmerman, J.B., Batista, V.S., Pfefferle, L.D., "Hard Templating Ultrathin Polycrystalline Hematite Nanosheets and the Effect of Nanodimension on CO_2 to CO Conversion via the Reverse Water Shift Reaction" *In preparation.*

Fishman, Z.S., Rudshteyn B., He, Y., Liu, B., Chaudhuri, S., Askerka, M., Haller, G.L., Batista, V.S., Pfefferle, L.D., "Fundamental Role of Oxygen Stoichiometry in Controlling the Band Gap and Reactivity of Cupric Oxide Nanosheets" *J. Am. Chem. Soc.*, 138 (34), 10978–10985 (2016).

Novek, E.J., Shaulsky, E., Fishman, Z.S., Pfefferle, L.D., and Elimelech, M.,"Low-Temperature Carbon Capture Using Aqueous Ammonia and Organic Solvents" *Environ. Sci. Technol. Lett.,* 3 (8), 291–296 (2016).

Gilbertson, L.M., Albalghiti, E.M., Fishman, Z.S., Perreault, F., Corredor, C., Posner, J.D., Elimelech, M., Pfefferle, L.D., Zimmerman, J.B., "Shape-Dependent Surface Reactivity and Antimicrobial Activity of Nano-Cupric Oxide" *Environ. Sci. Technol.,* 50, 3975-3984 (2016).

Ladiwala, A.R, Perchiacca, J.M., Fishman, Z.S., Bhattacharya, M., Domigan, B., Dordick, J.S., Tessier, P.M., "Polyphenolic disaccharides endow proteins with unusual resistance to aggregation" *Biotech. Bioeng*., 109(7), 1869-74 (2012).

Ladiwala, A.R, Mora-Pale, M., Lin, J.C., Bale, S.S., Fishman, Z.S., Dordick, J.S., Tessier, P.M., "Polyphenolic glycosides and aglycones utilize opposing pathways to selectively remodel and inactivate toxic oligomers of amyloid β" *ChemBioChem*, 12, 1749 (2011).

Presentations:

The 14th Annual Langer Symposium: Finding the Forest from the Flora, *oral presentation* (2016), "Super Hydrophobic Copper Oxide Nanosheets"
252nd ACS National Meeting, *oral presentation* (2016), "Tuning the Band Gap and Reactivity of CuO Nanosheets"