Exponent®
Engineering & Scientific Consulting


# Matthew Galazzo, Ph.D.

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## Professional Profile

Dr. Galazzo is a materials scientist and engineer with specialties in electrochemistry, polymer chemistry, and materials characterization. He has extensive experience in electrochemical device fabrication and characterization through careful design, selection, and tuning of material interfaces. Dr. Galazzo also brings expertise in a suite of advanced imaging and characterization techniques including SEM/TEM with EDS, XRD, NMR, FTIR, Raman, UV-Vis, Fluorometry, DSC, TGA, and electrochemical characterization (amperometry, voltammetry, EIS, etc.)

Prior to joining Exponent, Dr. Galazzo received his Ph.D. in Interdisciplinary Materials Science from Vanderbilt University. His research involved developing energy harvesting and storage devices by interfacing photosynthetic protein functional groups and redox sites with various metals and semiconductors to improve electron transfer. As part of this work, he fabricated prototype redox flow batteries, solar cells, and CO2 catalysts. This work involved extensive polymer synthesis, nanoparticle synthesis, metal and semiconductor deposition, and microfluidic fabrication. For his master's degree, Dr. Galazzo designed and tested post-synthesis modifiable polymers as alternatives to fluorinated polymer membranes for hydrogen fuel cell applications.

## Academic Credentials & Professional Honors

Ph.D., Interdisciplinary Materials Science, Vanderbilt University, 2025

M.A., Chemistry, Fisk University, 2019

B.S., Chemical Engineering, California State Poly University, Pomona, 2017

National Science Foundation Graduate Research Fellowship Program (NSF-GRFP) Honorable Mention, 2019

## Prior Experience

Graduate Research Assistant, Vanderbilt University, 2019-2025

Graduate Research Assistant, Fisk University, 2017-2019

## Publications


Stacks B; Esteban-Linares A; Galazzo M; Li D. Direct observation of carbon slurry flow behavior and its effect on electrochemical performance in a microfluidic electrochemical flow capacitor. Nanoscale 2024; 16:1807-1816.

**Presentations**

Galazzo M, Miller E, Jennings GK; Cliffel D. Photosystem I-Cu2(PO3)(OH)3 Nanoplatelets for CO2 Reduction. Oral Presentation, Fisk University, Nasvhille, TN, 2023.

Galazzo M, Miller E, Jennings GK; Cliffel D. Photosystem I-Cu2(PO3)(OH)3 Nanosheets for CO2 Reduction. Oral Presentation, Vanderbilt University, Nashville, TN, 2023.

Galazzo M, Zlibut E, Arnett N. Post Synthesis Modifiable Polymers via Cyanuric Chloride Derivatives for Fuel Cell Applications. Oral Presentation, 46th National Organization of Black Chemists and Chemical Engineers Annual Meeting, Orlando, FL, 2018.

Galazzo M, Zlibut E, Arnett N. Post Synthesis Modifiable Polymers via Cyanuric Chloride Derivatives. Oral Presentation, 256th American Chemical Society National Meeting. Boston, MA, 2018.

## Peer Reviews

Journal of the Electrochemical Society

Proceedings of the National Academy of Sciences