CHOATE

Bita Motavaf, PhD

Staff Scientist

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Practice Areas

Intellectual Property Protection

Education

Pennsylvania State University
PhD (2022) Chemical Engineering

University of Tehran
BS (2015) Chemical Engineering

Dr. Bita Motavaf assists Choate's life sciences clients by utilizing her background in chemical engineering to help with the preparation and prosecution of patent applications, as well as freedom-to-operate and patentability analyses.

Industry Experience

Prior to joining Choate, Bita worked at Vertex Pharmaceuticals as a Process Engineering Senior Specialist. Here, she represented technical operations in cross-functional teams for managing small molecule drug product manufacturing, involving commercial process validations, technology transfers, QBD design, and accountability for commercial production, while ensuring adherence to GMP regulations. Additionally, Bita also worked at Boehringer-Ingelheim Pharmaceuticals as a Co-Process API Technologist, where she developed a versatile particle engineering platform to enhance the physical properties, such as flowability, particle size distribution, and dissolution of crystalline Active Pharmaceutical Ingredients.

Bita received her PhD in Chemical Engineering from Pennsylvania State University. As a Doctoral Student in the lab of Professor Phillip E. Savage, she investigated sustainable solutions for production of green energy from food waste (biofuel precursor) via Hydrothermal Liquefaction (HTL). She designed optimum HTL formulations for efficient production of biocrude oil from food waste, developed a kinetic model for the HTL of food waste enabling products yields prediction, and conducted novel experiments screening a wide range of catalysts to enhance the quality and quantity of HTL products.

Publications and Presentations

- "Review and Assessment of Models for Predicting Biocrude Yields from Hydrothermal Liquefaction of Biomass," co-author, *Royal Society of Chemistry,* March 2024
- "Recovery of Energy and Nitrogen via Two-Stage Valorization of Food Waste," first author, *I&EC research,* March 2022
- "Hydrothermal Carbonization of Simulated Food Waste for Recovery of Fatty Acids and Nutrients," first author, *Bioresource Technology*, September 2021
- "Screening Potential Catalysts for the Hydrothermal Liquefaction of Food Waste," first author, *Energy & Fuels*, May 2021
- "Effect of Process Variables on Food Waste Valorization via Hydrothermal Liquefaction," first author, *ACS ES&T Engineering,* January 2021