

Faculty Name:

Allie Obermeyer

Faculty Email:

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Lab:

Obermeyer Lab

Project Title:

Sustainable biocomposite materials of proteins and polysaccharides

Description:

Proteins have evolved to have an incredible range of functions – from superb catalysts to resilient materials. For these reasons, protein biopolymers have the potential to serve as sustainable, biodegradable materials that could potentially displace petroleum-derived plastics that currently dominate the marketplace. However, protein-based materials typically lack the performance materials properties found in traditional plastic materials. This research project seeks to develop biocompatible processes to improve the strength and ductility of protein-containing materials. To accomplish these goals, a panel of protein biopolymers based on natively evolved protein sequences will be engineered with varying assembly and crosslinking domains. The engineered proteins will be produced in a heterologous host and isolated prior to testing. Critically, these proteins will be used to create composite biomaterials that interact with and strengthen polysaccharide based materials.

Location of Research:

On Site

of hrs/week:

40

Department/Program:

Chemical Engineering

Eligibility:

BS, First Year, BS, Second Year

To apply, please contact:

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