CHMI-24-06: Adhesive Bonding and Sustainability

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This project focuses on advancing sustainable adhesive technologies by developing de-bondable adhesive systems and incorporating bio-based materials into thermosetting resins. The goal is to enable easier repair, maintenance, and recycling of bonded structures, particularly in large-scale applications like wind turbines. The research integrates manufacturing, materials science and data science to analyze existing data and guide the development of adhesives that can be deactivated using heat or other triggers. By combining innovative materials with scalable solutions, the project aims to reduce waste and support circular economy practices in industries such as renewable energy and transportation.