

## Mallinda Chemistry Internship Spring 2020

Founded in 2014, Mallinda is a venture-backed materials company based in Denver, Colorado. Mallinda is developing novel composite materials using “malleable thermoset” polymers (vitrimers). Vitrimers are a class of material derived from thermosets and are comprised of covalent networks which can change topology by thermally activated bond-exchange reactions. These reversible bond-exchange reactions enable new rapid processing capabilities for thermosets without sacrificing mechanical properties of thermosets. Mallinda’s technology lowers the barriers to adoption of composite parts by improving the economics and reducing the environmental impact of composite part production. Our technology enables 1-minute cycle time, or less, for high volume industries like automotive. In addition, Mallinda’s resin can be depolymerized in solution for a closed loop, energy-neutral system for the recovery of resin and woven/full-length fiber from end-of-life composite products.

Mallinda is looking for interns to assist with research and development. Day-to-day activities will include:

- Formulating and synthesizing vitrimer resins
- Preparing fiber reinforcements
- Testing mechanical and thermomechanical material properties
- Data Presentations
- Resin-fabric infusion
- Finishing composite pieces
- General laboratory upkeep

### Minimum Requirements:

- Junior or Senior currently enrolled in an accredited university in the subject area of chemistry, chemical engineering, mechanical engineering, or a closely related field
- Completion of organic chemistry I *with lab*
- GPA > 3.0

### Preferred Qualifications and Experience:

- Independent research experience in an organic chemistry lab or similar.
- Experience with Dynamic Mechanical Analysis (DMA) and Universal Testing Machine (UTM i.e. Instron/MARK-10).
- Knowledge of polymer and materials science
- Synthesis experience
- Data analysis (Excel, R, JMP, Matlab, etc.)
- Strong interpersonal and communication skills

Preferred qualifications and experience are not set requirements - everyone is encouraged to apply. In addition to day-to-day lab activities, interns may have the opportunity to complete an independent project of their choice.