

Carbon

Staff Research Scientist

REDWOOD CITY, CA / ENGINEERING - MATERIALS DEVELOPMENT / FULL-TIME

Working at the intersection of hardware, software and molecular science, we are committed to delivering on the promise of 3D printing, enabling commercial customers to go beyond basic prototyping to 3D manufacturing. Our company is built on the idea that diverse fields of study must come together to solve intractable problems. We have grand ambitions to create technology that will influence industry around the world.

We are looking for a highly motivated research scientist to join our Materials team at Carbon, who will play a key role in the commercialization of Carbon's new resin products. This candidate will be working in a dynamic team with people across different groups of the company, and act as the key QA person to determine test methods and specifications, as well as shelf life for Carbon's new resin products. As the bridge between the Materials team and the Operation team, the candidate will also help to improve resin batch to batch consistency to ensure product requirements are constantly met with resin manufactured at scale.

Responsibilities:

- Evaluate the design, measurement, and process robustness of new Carbon resins to estimate and understand the impact of batch to batch variation of resin manufactured at scale on product performance.
- As a part of the resin development team, lead DFMEA and PFMEA on Carbon's new resin products during the resin commercialization process.

- Connect liquid level polymer resin properties with 3D printed part mechanical and accuracy properties.
- Design experiments to assess the material property response of various individual variables that could be part of the resin formulation, printing or post processes in a complex material system.
- Lead the determination of resin specifications and test methods that will be used for both internal and external QC purposes.
- Working with a cross-functional team, help to identify the root cause of any resin related problem that came up during resin scale up or after commercialization. Design tests to evaluate hypotheses and drive process improvements accordingly.


Requirements:

- Advanced degree in Polymer Science, Chemistry, Chemical Engineering, Materials Science, or related field with 5-10 years of industrial experience with a focus on quality assurance or product spec setting is required. Outstanding BS/MS level with 10+ years industrial experience will also be considered.
- Hands-on experience with a broad range of polymer material characterization techniques in both liquid and solid form is required, including: viscosity, color, GPC, FTIR, DSC, TGA, tensile and tear with Instron, DMA, etc.
- Experience with UV-curing chemistry and/or polyurethane chemistry is highly preferred.
- Ability to draw conclusions and come up with actionable next steps from ambiguous and incomplete data sets.
- Excellent organizational skills and an eye for detail.
- Ability to thrive in a dynamic and fast paced environment, handle multiple priorities, organize workload, and meet deadlines.
- Strong analytical skills with good data tracking and presentation ability. Strong oral and written communication skills.

#LI-MD1

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