bioMASON Inc.
January 2020

**Job:** Research Scientist - Material Science  
**Location:** Research Triangle Park, NC  
**Start Date:** Effective Immediately, Full Time

bioMASON is a unique biotechnology start-up manufacturing company with a natural process that will significantly revolutionize the building and construction industry. bioMASON employs microorganisms and chemical processes to manufacture biological cement-based building materials in ambient temperatures.

Concrete is the second most consumed substance on earth following water. The production of cement accounts for over 8% of global CO2 emissions. bioMASON is driven by scaled proof that there is a better way to reduce these emissions.

bioMASON's products include proprietary manufacturing processes and materials. bioMASON's products make it possible to manufacture in ambient temperatures using locally available materials, without using fuel or heat sources. bioMASON enables savings in energy costs and zero carbon emissions.

bioMASON offers the opportunity to manufacture biological cement materials with a revolutionary process that does not use fossil fuels. Instead, products are grown in less than 72 hours using natural biocement® as a binder for aggregates. Aggregate materials are waste and locally sourced. Biocement Products enable manufacturing to take place in ambient temperatures, using existing concrete equipment. bioMASON made products with biocements are tested in ASTM standard labs for strength and durability and exhibit higher performance.

bioMASON is distinguished by its unique technology, manufacturing costs, the use of local materials, greater environmental responsibility, customizable manufacturing process, and relatively low capital requirements.

The first commercially available product is bioLITH® Tile. The company competes in the marketplace through direct manufacturing and contracts.

bioMASON is privately held and headquartered in Research Triangle Park, North Carolina. For additional information, please go to the company’s website at www.biomason.com.

The Material Scientist is responsible for the development of simulation models and failure mode analysis of bioMASON’s composite materials. This position reports to the Director of Research & Development under the office of the Chief Technology Officer.

**Minimum Qualifications:**
- Master’s degree in Materials Science or a related field.
- Minimum 3-years’ industry experience.

**Responsibilities, Tasks and Outcomes:**
- Conduct research in the broad area of biomaterials.
- Develop testing methodologies for evaluating material performance as related to application requirements.
- Coordinate with standards organizations to develop new standards around novel materials.
- Determine research directions, come up with novel technical solutions and generally drive innovation.
- Lead technician(s), develop research strategy, helping them design and execute experiments, analyze data and present conclusions to the broader group.
- Development of functional, parametric models for predicting composite cementitious material performance based on variable inputs.
- Design and hands-on testing of experiments and apparatus for model development and validation.
- Development and implementation of non-destructive performance testing methods for cementitious materials.
- Design, development, and testing of material compositions for novel applications.
- Attracts, develops, and retains a high performing team to meet the current and evolving needs of the business through effective selection, training and development, coaching and mentoring and performance management.
- Working with the CTO and other relevant team members for LCA and EPD
- Other responsibilities as assigned by supervisor.

**Required Skills and Interests:**
- FEA, DEM, CFD, and/or other dynamic performance modeling softwares.
- Experimental design (DOE) and statistical analysis software (JMP, R, Minitab).
- Failure mode and root-cause analysis.
- Preferred working knowledge of ultrasonic pulse velocity testing.
- ASTM and ISO test methods for construction materials.
- Understanding of particle packing, rheology, percolation, and fluid dynamics.
- Ability to communicate and explain work for cross-functional team collaboration.

**The Candidate Must Be:**

- Highly organized and possess excellent attention to detail
- Creative, flexible, proactive, punctual, persistent
- A team player
- Able to self-manage
- Comfortable with a demanding, fast-paced work environment
- An excellent communicator.

**All bioMASON Employees should:**

- Consistently demonstrate honesty and integrity through personal example.
- Follow all safety policies and proactively engage in safety initiatives.
- Produce high quality work with a focus on first time right.
- Exhibit a passion and aptitude for learning with an analytical mindset.

Must have reliable transportation to the RTP/ Raleigh area.

Please send your resume and **fully completed application** to jobs@biomason.com with the heading “Material Scientist”.

The bioMASON Career application may be found on bioMASON’s website, under the “Career” tab [http://biomason.com/wp-content/uploads/2015/12/bioMASON_Application-1.pdf](http://biomason.com/wp-content/uploads/2015/12/bioMASON_Application-1.pdf)
bioMASON Inc. takes affirmative actions as an equal opportunity employer to attract, promote, and retain the most fully qualified candidates without regard to race, creed, religion, color, citizenship status, national origin, sex, age, sexual orientation, predisposing genetic characteristics, genetic information, marital status, status as a domestic violence victim, arrest record, disability, military status, disabled veteran, recently separated veteran, Armed Forces Service Medal veteran, other protected veteran or other characteristic as protected by law.
EOE M/F/D/V