



Startup: Coral Innovations

Startup Website: www.coral-innovations.com

Startup Description:

Coral Innovations is a pioneering force in the realm of nanotechnology, dedicated to creating sustainable solutions for environmental challenges. Our mission is to harness nanotechnology-based solutions for practical applications in environmental remediation, including water and wastewater treatment, resource recovery, and pollution mitigation in real-world systems.

Project Title:

Applied Nanotechnology R&D for Water & Environmental Remediation

Project Description:

We are seeking a motivated intern with a strong interest in applied science and engineering to assist us in product research & development, particularly for our NanoMedia™ product line. The intern will be responsible for contributing to lab-scale research & development for our products, and may also assist in the production, operation, and data analysis of pilot studies. Potential projects could include 1) studying heavy metal capture performance using our NanoMedia™ Metals, 2) optimizing recovery of phosphate using our NanoMedia™ Nutrients, and 3) studying new organic chemical capture using our NanoMedia™ Organics. Through this internship, students will gain hands-on experience in applied nanomaterials research, experimental design, and data-driven decision making in a startup environment.

Project Expectations:

- Using the in-house developed flow reactor for nanomaterials synthesis
- Designing and conducting lab-scale studies on product performance
- Assisting in efforts towards pilot studies through production, installation, data analysis and interpretation
- Keeping detailed records of protocols, experiments, results, and analysis
- Collaborating with other team members to design and implement experiments.
- Presenting results and providing recommendations for future experiments.
- Working under the guidance of experienced scientists and engineers in a structured lab environment

Desired Candidate Experience:

Currently enrolled in an undergraduate or graduate program in materials science, chemical engineering, or related field

- Basic laboratory skills (Any wet chemistry experience preferred)
- Strong analytical and problem-solving skills
- Strong written and verbal communications skills
- Experience with water treatment technologies is a plus, particularly filtration media



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Training & Mentoring Opportunities:

Initial Meeting:

- The intern will meet with the project supervisor to discuss the project goals and objectives, as well as the expectations for the internship.
- The intern will be provided with a project overview, including relevant background information, literature review, and experimental protocols.
- The intern will be given a tour of the lab facilities and introduced to the lab equipment and procedures.

Weekly Progress Meetings:

- The intern will be involved in the weekly update meetings to discuss progress, any challenges encountered, and next steps.
- The supervisor will provide guidance and feedback on the results and data analysis.
- The intern will also have the opportunity to ask questions and receive feedback on any challenges they may be facing.
- Opportunities to take ownership of defined sub-projects and contribute to experimental decision-making

Data Analysis and Interpretation:

- The intern will be trained on nanocomposite synthesis, conducting lab studies, and will receive guidance on the interpretation of results.

Research Presentations:

- The intern will be required to give presentations on their research progress and findings to the lab group and other relevant stakeholders.
- The supervisor will provide feedback on the intern's presentation skills and will help the intern to improve their communication and presentation skills.

Final Report and Presentation:

- The intern will be required to prepare a final report and give a final presentation on their research project.
- The supervisor will provide feedback on the report and presentation and will help the intern to prepare for the final submission.

Evaluation and Feedback:

- At the end of the internship, the supervisor will provide the intern with an evaluation and feedback on their performance.
- The intern will also have the opportunity to provide feedback on their mentoring experience and the internship program.
- Top-performing interns may be considered for continued part-time or future internship opportunities.

Overall, the intern will also gain exposure to how early-stage technology transitions from lab development to pilot-scale deployment and commercialization