

**Opportunity Title:** ORNL Innovation Crossroads TCPoly Engineering Post-Bachelor's Research Associate

**Opportunity Reference Code:** ORNL18-99-EESD

**Organization** Oak Ridge National Laboratory (ORNL)

**Reference Code** ORNL18-99-EESD

**Description** The Post-Bachelor's Research Associate will work closely with TCPoly, a company within the Innovation Crossroads program at Oak Ridge National Laboratory, to fabricate and test thermally conductive polymer composites for additive manufacturing applications.

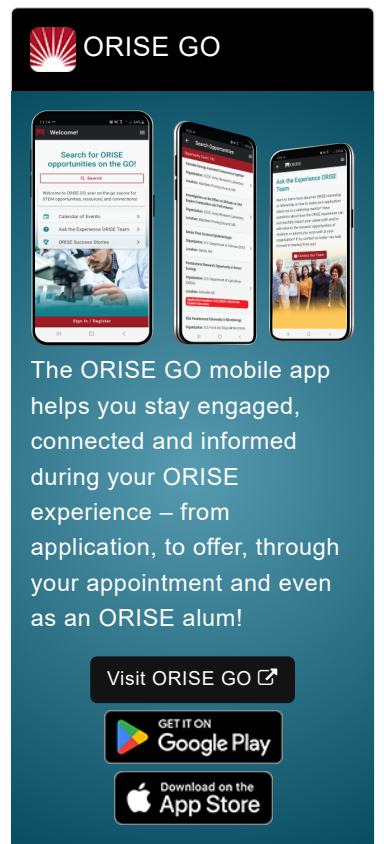
**Activities:**

- Compound new formulations using a twin-screw extruder
- Extrude composite formulations into 3D printing filaments
- Use commercial FDM 3D printing to print samples for thermo-mechanical testing
- Perform materials characterization, testing and associated data reduction
- Iterate on formulations to improve printability, thermal, and mechanical properties

- Qualifications**
- Bachelor's degree in chemical, materials, mechanical, or systems engineering completed in the last three years
  - Passion for energy, environmental sustainability, and advanced manufacturing technologies
  - Experience working in a hands-on experimental laboratory
  - Excellent written, oral, and presentation communication skills
  - Excellent critical-thinking skills and the ability to independently develop creative ideas
  - Ability to manage time wisely and map out experimental plans to meet deadlines
  - Demonstrated ability to contribute collaboratively to a team
  - Demonstrated ability to design engineered systems
  - Preferred experience with 3D printing, heat transfer, and polymer composite formulations

The ORNL Post-Bachelor's Research Associates Program is administered by Oak Ridge Associated Universities through its contract with the U.S. Department of Energy to manage the Oak Ridge Institute for Science and Education (ORISE).

- Eligibility Requirements**
- **Citizenship:** U.S. Citizen Only
  - **Degree:** Bachelor's Degree.
  - **Discipline(s):**
    - **Engineering** (4👁️)



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