MicroPower Global Corporation

MBE Lead Engineer

(Distinguished Member of Technical Staff)

Department Description

MicroPower Engineering, San Marcos, TX

MicroPower Global Corporation ("MicroPower") is a private company developing a new semiconductor device that can efficiently and cost-effectively convert heat directly into electricity, leading to significant energy savings. This is a clean, green technology which will save energy, reduce harmful emissions, and lead to the availability of substantial carbon credits for applications in industrial, transportation, consumer, aerospace, government and solar. MicroPower's Engineering department is engaged in developing this technology into cost-effective and manufacturable devices and modules.

Scope of Responsibilities/Expectations

This position will be focused on applying an understanding of materials science and clean room processes for the development of solid state thermoelectric devices and thermoelectric modules for use in next-generation green energy. The *MBE Lead Engineer* will have these fundamental responsibilities:

- Develop MBE process for novel growth layers for thermal electric compounds.
    - Design appropriate process methods to grow layers controlling Doping and Crystallinity
    - Use standard techniques to evaluate and ensure stability of growth layers.
    - Design and Perform DOEs, ANOVAs and other experiments
    - Use metrology tools (FTIR, Ellipsomter, Profilometer, 4 point probe, etc.)
    - Create and document specifications
    - Maintain preventive maintenance schedule
- Bring the MBE process into statistical control for volume manufacturing.
- Assist in the specification and development of substrate material for ingot growing process.
- Assist in the evaluation of lower cost approaches.

Specific Knowledge/Skills

The job requirements include:

- PhD in material science or relevant discipline with 7 years of experience or more with MBE.
- Significant experience creating specifications for MBE tool Characterization and bringing tool to full operational capability.
- Strong theoretical capability with pragmatic, hands-on follow through.
- Experience doing design of experiments using statistical software.
- Working knowledge of metrology tools such as XRD and STM and failure mode analysis.
- Experience in building active devices.
- Ability to manage projects and lead teams.
- Ability to interact well with a multi-disciplinary technology team in the creation of new designs and approaches.
- Excellent organizational and communication skills, both written and oral.
- Flexibility in scope of job responsibilities in a start-up environment.
- Willingness to do light travel.
- US Citizen or Permanent Resident

How to Apply

Qualified candidates should submit their resume to Mike Gardner, V.P. of Egr & Ops, at mike@micropower-global.com. Please refer to requisition number REQ 201.

MicroPower is an equal opportunity/affirmative action employer. We welcome and encourage diversity in our workforce.