

## Scientist with OPV Reliability Experience

Next Energy Technologies (NEXT) is looking for a Scientist with expertise in OPV reliability for advanced device development of semi-transparent photovoltaic windows. We are seeking highly motivated applicants who pride themselves on outstanding work. Successful applicants can expect exceptional opportunities and an exciting work environment where creativity, empathy, excellence and optimism are core values.

Employment Type: Full Time

Location: Santa Barbara, CA

### Job Summary:

The primary job tasks are based on the development, fabrication, characterization, testing, and optimization of transparent organic solar cells and materials in an R&D environment. You will provide a key role in understanding and mitigating primary degradation pathways in organic semiconductor devices and materials. Your experimental work will focus on both the optical stability and the stable performance for modules through accelerated testing and outdoor exposure. You will help meet color, transparency, haze, and efficiency milestones and help discover new product advancements. Deep understanding of device physics and experience in organic photovoltaics (OPV) and device fabrication required to help lead innovation of device materials, structure, interfaces, and processing is required. You will help transition successful innovations towards pilot production.

### Key Responsibilities:

- Experimental Design
- Develop and improve device structures and materials.
- Develop and improve device processing options and parameters.
- Guide device design using device physics and calculations.
- Device fabrication.
- Device characterization.
- Capturing, handling, transferring data and reporting experimental result.
- Optical and electrical measurements of thin films and devices.
- Systematic investigation of degradation pathways and kinetics.
- Post mortem analysis to reveal root cause failure effects in weathered devices.
- Characterize thin films and thin film devices exposed to accelerated aging conditions.
- Carry out ASTM, IEC, UL standardized reliability tests for IGUs and PV modules.
- Design and carry out other internal reliability tests.
- Calibrate and perform routine maintenance of Accelerated Test systems.
- Capturing, handling, and reporting experimental results to engineering and management.
- Develop data analysis to characterize and predict reliability
- Organize device fabrication and testing
- Work with technicians to support device fabrication and testing
- Work with external suppliers to acquire materials
- Work with external partners including academic and industrial partners
- Work nationally recognized testing laboratories for 3rd party certification of ASTM, IEC, UL tests.
- Work with external testing laboratories for accelerated testing.
- Designing, commissioning, operating and maintaining equipment.
- Collaborate with internal teams to support pilot production.
- Collaborate with internal teams to support designing new molecular structures.
- Collaborate with internal teams to support encapsulation and back-end development
- General laboratory duties.
- Other duties as assigned.

### Requirements:

- Education: Ph.D. degree in Physics, Materials Science, Engineering, Chemistry or related discipline.
- Ability to excel in a team environment
- Extensive experience fabricating and optimizing laboratory scale OPV.
- Demonstrated excellence in the field of organic photovoltaics.
- Extensive experience in OPV stability and reliability
- Must have deep familiarity with OPV literature including:
  - OPV reliability and stability literature.
  - Solution processed OPV
  - Active layer materials.
  - All other functional layer materials (transparent conductors, HTLs, ETLs, recombination layers, wetting layers, etc.).
  - Processing options (morphology optimization, green solvents, etc.).
  - Optical properties and effects (ex. the effects of n and k on different device layers).
- Track record of innovation and perseverance in the face of challenges.
- Confident in navigating ambiguity and creating new ways of doing things.

Salary/Benefits:                      NEXT offers competitive salary and benefits

To apply for this position e-mail a resume of your background and qualifications to:  
jobs.devicescientist@nextenergytech.com

**Equal Opportunity Employer Statement:** Next Energy Technologies, Inc. is an Equal Opportunity Employer (EOE) that values and respects the importance of a diverse and inclusive workforce. It is the policy of the company to recruit, hire, train and promote persons in all job titles without regard to race, color, religion, sex, age, national origin, veteran status, disability, sexual orientation, or gender identity.