

# Laser Process Engineer

Halo Industries, Inc.

Palo Alto, California, United States



## *About*

At Halo Industries, we are reinventing a decades-old manufacturing process that wastes billions of dollars every year, while simultaneously enabling entirely new products and unprecedented performance. We are developing a novel laser-based technology for the production and processing of technical materials used in several rapidly growing industries, including semiconductor, solar, 5G, display, and power electronics.

Our company spun out of Stanford University in 2014 and is funded by a combination of venture capital, government projects, and strategic corporate partners. We are a growing team of engineers, scientists, and business professionals looking to accelerate our entry into the market by adding experienced, motivated team members to guide our development efforts and help scale the company into a dominant global player.

## *Description*

As a Laser Process Engineer, you will have the following responsibilities:

- Operate and maintain laser materials processing setups and procedures
- Conduct hands-on experiments to characterize underlying physical effects in novel optical systems
- Use data analysis and simulation to propose design improvements based on experimental results
- Identify causal relationships between observed performance and design parameters
- Interpret empirical data and reconcile it with first principles via analytical and/or numerical simulations
- Summarize and present experimental results to team members
- Work in a team and contribute to the implementation of next-generation industrial semiconductor manufacturing equipment

## *Qualifications*

The ideal candidate is a recent PhD (or an MS with 3-5 years of work experience) in Physics, Applied Physics, Optics, or Material Science focusing on the development and experimental application of optical or laser devices and systems. In addition, the candidate would have the following specific qualifications:

- Understanding of optical physics fundamentals and how they apply to laser materials processing
- Strong hands-on skills in the alignment, test, and characterization of optical devices and laser systems
- Proficiency in the understanding of experimental data
- Experience with free-space optics
- Programming experience in Matlab or Python for data collection, data analysis, and instrument control
- Excellent communication skills
- The ability to work well in an interdisciplinary team environment, collaborating with mechanical engineers and materials experts

## *Bonus*

- Experience with semiconductor materials
- Experience in optical system design
- Familiarity with optical simulation tools and techniques, including ray tracing software
- Experience with fiber optics

## *Preferred Education & Experience*

A PhD in Physics, Applied Physics, Optics, Material Science, or related field or an MS with 3-5 years of work experience.