

**SMART Photonics B.V.** is an independent developer and producer of photonic components based on Indium Phosphide (InP). The company was started in 2012 in collaboration with Eindhoven University of Technology and is based in Eindhoven. For making the components, SMART Photonics has a new and unique generic technology for the integration of photonic components. The company is the first in the world to offer commercial access to this generic integration technology through so-called Multi Project Wafer (MPW) runs: multiple different chips for different clients on one wafer. With this technology, the PICs can be developed and produced much cheaper and faster. This new technology will follow a strong growth curve (analogous to the growth path of the electronic ICs). Thanks to SMART Photonics' unique business model, in combination with the extensive knowledge of photonics and many years of production experience, the company is well positioned to successfully respond to this. SMART Photonics is growing rapidly in size to meet the increasing demand from its customers. At the end of last year, a pilot production line was opened at the High Tech Campus and the planning is that a complete production line will be needed in 2018. On our website ([www.smartphotonics.nl](http://www.smartphotonics.nl)) you will find more background information about SMART Photonics.

## Physical Failure Analyst

Location: High Tech Campus, Eindhoven The Netherlands

40 to 32 hours a week

### Job description

Within the context of Vertical Integration Engineering you'll act as a Physical Failure Analyst. While you mainly interface with our Vertical Engineers and Technical Projects Leads, it's your primary responsibility to develop and implement predictive focus algorithm (PFA) techniques and FA capabilities for new technology nodes and products in the area of Photonic Integrated Circuits. (PIC)

In this position you will be responsible to develop and implement PFA techniques and FA capabilities for new technology nodes and products in the area of semiconductor PIC device including reverse-processing, sample preparation for Optical Fault Isolation, failure site isolation for device Physical Characterization. You will Identify root-cause for PIC product yield losses and reliability failures to drive process and design optimization in order to improve both yield and reliability.

Beside this you will also have a consulting and training role towards newly developed techniques and methods

### **We are looking for a person**

- Bachelor's degree, Master's degree or PhD in Material Science, Physics, Photonics specifically or Electrical Engineering
- At least 4 years of relevant experience in industrial or research related failure analysis, reliability engineering and chip-level physical debug.
- In-depth knowledge and hands-on experience in various failure analysis techniques and toolsets, including SEM, FIB, PIC sample preparation/de-processing techniques, etc.
- Experience on Optical and Laser Probing systems to read internal electrical signals to debug and trace down problems.
- Familiarity with mechanical and chemical chip level reverse-processing techniques
- Excellent written and verbal skills in order to lead PFA R&D projects
- Deep understanding of PIC manufacturing processes, semiconductor device physics and reliability engineering
- High degree of integrity, initiative, and attention to detail in a team playing environment.

### **We offer**

Do you want to make a difference and truly add something to our team? This opportunity to become part of a new revolution in chip technology in the field of Photonics, like micro electronics was in the '70s. At SMART Photonics you will work with talented and passionate people in an informal, sincere and open culture. Being part of a scale-up means you will have a broad and entrepreneurial role in a dynamic & exciting environment with the opportunity to grow rapidly alongside our company's growth while you truly see the results of your efforts and added value. We keep our processes simple and functional to stay agile, also in our growth from lab to fab in the coming years. Are you ready to join us and develop SMART Photonics into a market leader?

### **Interested?**

Then we'd love to receive your application! See also our website [www.smartphotonics.nl](http://www.smartphotonics.nl) for more information about the company;