



Doctoral Thesis: Development of a novel SiC based quantum sensor for highly sensitive B-field measurements (f/m/div)*

Job description

We are offering a doctoral thesis dealing with development of novel B-field quantum sensors based on SiC technology. Certain SiC vacancies are one of the most promising elements for achieving very sensitive B-field sensors already working at room temperature. You will get an excellent overview of the complete value chain beginning with SiC technology development to device simulation, development and characterization up to system development and measurements. Your development focus will be on SiC quantum technology, quantum device development including characterization of the SiC device structures and in the end implementation support into our B-field sensor system. Our university partner for this thesis is the University Stuttgart.

The industrial doctorate at Infineon: Pursue a doctoral degree at a university and gain professional experience simultaneously - an ideal start for your career. Advance your research with us and profit from our vast network of doctoral candidates and the expertise of a university. Mentorship is handled by both professors and dedicated Infineon experts.

The tasks within the thesis will consist of:

- **Development of a novel quantum device based on a SiC technology** for magnetic field measurements
- **Set-up of a simulation environment** for such quantum devices
- **Technology and device simulation** of test structures and target devices
- **Device layout of your defined structures** and responsibility of **device processing** in our production line
- **Set-up of a test environment and characterization** of test structures and quantum devices
- **Analysis of the measurement results** and correlation with technology splits and device structures
- Support of the **B-Field quantum sensor system set-up** together with our partners
- Support of **data analysis of system measurements**
- **Cooperation in a funded research project** of Germany for B-field quantum sensors

Full-time employment: 38.5 hrs/week
Duration: 3 years

At a glance

Location: **Villach (Austria)**
Job ID: **327646**
Start date: **Jan 01, 2022**
Entry level: **0-1 year**
Type: **Full time**
Contract: **Temporary**

Apply to this position online by following the URL and entering the Job ID in our job search:

Job ID: **327646**
www.infineon.com/jobs

Contact

Mag. Elisabeth Koestenbauer
Talent Attraction Manager



Profile

A doctoral student is a research enthusiast,

- whose interests are scientific research combined with the passion for Infineon's innovative products and applications
- who enjoys working in an industrial environment in combination with an Infineon partner university
- who appreciates open communication and the contribution of an international environment
- and is thus an excellent candidate for a further academic or industrial career after completion of their thesis

As the ideal candidate you have:

- A **master degree in physics or electrical engineering**
- A **high self motivation**
- Good **communication skills**
- A **structured way of working**
- Ideally **first experiences in leading a project**

Please attach the following documents to your application:

- Your CV
- Motivation letter
- Copy of your master degree certificate if already available
- Otherwise: copy of your latest study transcript

This position is subject to the Austrian collective agreement for workers and employees in the electrical and electronics industry. The salary for this position is EUR 2.865,00 gross p.m. (full-time basis, paid out 14 times per year).

