**Application engineer – focused Ion Beam**

***Imec***Imec is the world-leading research and innovation hub in nanoelectronics and digital technologies. The combination of our widely acclaimed leadership in microchip technology and profound software and ICT expertise is what makes us unique. By leveraging our world-class infrastructure and local and global ecosystem of partners across a multitude of industries, we create groundbreaking innovation in application domains such as healthcare, smart cities and mobility, logistics and manufacturing, and energy.

As a trusted partner for companies, start-ups and universities we bring together close to 3,500 brilliant minds from over 70 nationalities. Imec is headquartered in Leuven, Belgium and also has distributed R&D groups at a number of Flemish universities, in the Netherlands, Taiwan, USA, China, and offices in India and Japan. All of these particular traits make imec to be a top-class employer. To strengthen this position as a leading player in our field, we are looking for those passionate talents that make the difference! Currently we are looking for a motivated **Application engineer.**

***The job***

The pinnacle of imec’s ambitions as international front player in semiconductor research is our extreme advanced 300mm pilot production line. Here we create our own developed technological production processes, which are ready to be transferred to large international IC-production companies. We deliver to our customers the necessary knowledge to produce chips with increased performance at lower costs. Transmission electron microscopy plays a crucial role in this process as the shrinking dimensions of next generation technologies requires metrology with atomic scale resolution. In this environment TEM sample preparation is solely based on focused ion beam milling.

You will be a member of the automated TEM metrology team within Semiconductor Technology and Systems (STS). The team is responsible for in-line high throughput TEM metrology at the integrated circuits level. This type of inspections are needed at different development steps to characterize, the process and materials with ever decreasing dimensions for manufacturing more powerful transistor and memories.

As application engineer you will be responsible for Focused Ion Beam (FIB) automated TEM sample preparation within STS. The major focus will be the optimization, and development of sample preparation recipes as to realize high-throughput and high quality TEM inspections in the 300mm p-line.

As application engineer you will have the following key responsibilities:

* You are responsible for the FIB sample preparation for the automated inline TEM metrology suite whereby sample thickness is expected to scale down with next technology generations to less 20-30 nm
* You develop recipes for automated sample preparation from full wafer with a proprietary script developers kit. You will interact closely with process engineers to define the recipes based on the mask layouts and their metrology requirements
* You assist with the preventive maintenance and alignments of the dual beam FIB/SEM tools
* You assist automated TEM metrology inspections done by imec staff and will interact closely to optimize the TEM report quality
* You devise and supervise the work of ETM operators and technicians
* You will work in a dynamic multidisciplinary and multicultural environment in close cooperation with researchers, hardware and process engineers, industry assignees, tool suppliers, device and process experts

**You**

You have a PhD degree in materials science/ chemistry/ physics/ engineer or a related discipline and demonstrated experience in a R&D semiconductor environment. You have at least 2 years’ experience in the area of electron microscopy, preferable for semiconductor related specimens. Experience with Digital Micrograph scripting, and Matlab equivalents is an asset. You are interested in working hands-on in a clean room environment. You are able to work in a fast-paced setting, to multi-task and to prioritize assignments. You have to have good communication, computer, typing, and organizational skills. You are prepared to work in a shift system (predominantly early-late with some flexibility for urgent situations).

***We***

In exchange for your talent, passion and expertise, you will join a multicultural and high-tech company, with challenges there for the taking. Our flexible, progressive and informal working environment offers you a range of possibilities to take initiative and show responsibility. This is your opportunity to contribute to the technology that will determine the society of tomorrow. imec supports and guides you in this process; not only with words but with concrete actions. Through imecAcademy, 'our corporate university', we are actively investing in the further development of all our employees to assure their technical and personal growth. Your valuable contribution and that of your colleagues make imec a top player in its field. Your energy and commitment are therefore appreciated by means of an attractive and competitive salary with many fringe benefits.

Interested in more details? Explore our website (www.imec.be) and be convinced!

***Are you our new Application Engineer? Apply now!***

Apply online at [www.imec.be/jobs](http://www.imec.be/jobs).