Nanofabrication Engineer

Edmonton, Alberta
Full-time, Permanent position, 40-hour work week
Benefits: Medical, dental, vision, and paid vacation.
Closing Deadline: Until filled

Company Description

AQM is a product development company, located in Edmonton, Alberta, Canada, that manufactures innovative nanomaterials for research and commercial markets. Our mission is to develop high performance nano-enabled products, based on sustainable and innovative solutions, that advance and improve society. We manufacture Group 14 nanomaterials and nanocomposites for a wide range of applications including: lithography, quantum dot sensors, energy, medical devices, and optical systems. We're passionate about what we do and are looking for smart, energetic, and self-motivated individuals to join our innovative team. Since our founding in 2016, AQM has developed a broad customer base for its products, with sales, and product development collaborations in more than 23 countries.

Job Description

The Nanofabrication Engineer position requires working on a wide range of projects for government, academic, and industrial clients. The candidate will be working in a clean-room environment to carry out fabrication, and materials characterization to support the company's R&D activities. We are seeking individuals with an engineering level education and experience who can support our lithography activities.

The applicant will work with the nanomaterial synthesis team to fabricate tailored products that provide increases in performance, new properties, or enable products that would not be possible without the incorporation of nanomaterials. At AQM we are accelerating different technologies to market and the candidate will participate in all aspects of commercialization including project planning, applied R&D, scale-up, transfer to manufacturing, quality control, and commercial production.

We offer the successful candidate the opportunity to work within a culture of highly motivated, talented individuals who are dedicated to the company's mission. This job provides wide-ranging responsibilities due to numerous product applications and the opportunity to enhance one's skills through ongoing project development. With your creativity and commitment, you will be part of a team that is transforming the world with the integration of new nanomaterials. The successful candidate must display the core values of integrity, commitment, professionalism, collaboration, working at a high level of excellence, and taking personal accountability for their actions.

Qualifications

- B.Sc., M.Sc., or Ph. D. degree in electrical or materials engineering with experience in nanomaterials fabrication, with basic training, and experience in MEMS or semiconductor fabrication.
- Expertise in the synthesis of inorganic nanostructures including silicon/silica, quantum dot, metal/metal oxide, polymer, core-shell nanoparticles, and composite materials.
- Experience with analytical, physical, inorganic materials chemistry laboratory procedures, techniques, and equipment, such as scanning electron microscopy (SEM), atomic force microscopy (AFM), optical microscopy, ellipsometry, and profilometry.
- Cleanroom work experience is highly sought after in this position.
- Ability to multi-task, handle frequently changing job functions, rapidly learn new techniques and approaches, and operate new tools quickly in a stimulating and fast-paced high-tech environment.
- Excellent communication (both verbal and written), interpersonal, strong planning, and outstanding problem-solving skills are required.
- Must hold Canadian citizenship or permanent residency card.
- Manual dexterity and fine mechanical aptitude.

Knowledge, Experience and Analytical Skills

- An experienced and capable leader who motivates staff, leads by example, acts with integrity, mentors' others, and is committed to working in a team environment.
- Hands-on experience in microfabrication techniques including UV and e-beam lithography, PVD and CVD deposition (sputtering, evaporation, PECVD, ALD, etc.), wet and plasma etching (metal and semiconductor wet etching, ICP/RIE, DRIE, etc.)
- Experience with the following analytical techniques preferred: electron microscopy (SEM and TEM), atomic force microscopy (AFM), X-ray diffraction analysis (powder and single crystal), X-ray photoelectron spectroscopy (XPS), UV-Vis and FTIR spectroscopy, multinuclear and variable-temperature NMR spectroscopy, mass spectrometry, gas chromatography, liquid chromatography, gel-permeation chromatography.
- Experience with quality control and assurance (QC/QA) standards.
- The candidate will be responsible for brainstorming new ideas for products, developing proposals, and communicating early-stage concepts both internally and externally.
- Proficiency of Microsoft Office computer software.

Application Process

Qualified candidates should submit a resume and cover letter in Word or PDF form to Human Resources at contact@aqmaterials.com The cover letter should include information and specific examples on how your previous experience relates to the job requirements and your availability. You will not be considered without a cover letter.

We thank all applicants for their interest; however, only those individuals selected for an interview will be contacted.