

Position: Staff Scientist – Metrology
Job Status: Regular Full Time
Department: R&D
Location: Burnaby, BC, Canada
Reports to: Manager, Research & Development

The Position:

As Staff Scientist you will be responsible for analysis and quality assurance of nano-replication techniques through characterization for of nano-optical and meta-material devices. The technology you will work on extends beyond conventional IC and MEMS-type devices, including polymer and non-standard substrates, yet requires knowledge of the fundamental electro-mechanical modeling, design optimization, layout, test, evaluation and debugging of prototypes, and design for mass production. Experience with optical (OM), scanning electron (SEM), and atomic force (AFM) microscopy are considered strong assets. The position is heavily hands-on in laboratory and cleanroom work environments. You will contribute to our collective research by working with other scientists, engineers, and production specialists to improve and develop new nano-manufacturing processes and devices. The company depends on you and your team to ensure a high-level fidelity in micro/nanostructure replication from lab or wafer scale processes used for scale-up to roll-to-roll mass production steps. The position involves versatile, creative thinking, inclusive teamwork, and detailed execution of characterization steps including OM, SEM and AFM sample preparation, cross-sectional analysis, EDAX, and spectrometry as required.

Key Responsibilities:

- Metrology – Collecting and measuring data and executing nano-characterization processes. Performing OM, profilometry, SEM and AFM measurements on silicon and nanoimprinted flexible substrates.
- Nano-fabrication – Learning and understanding micro- and nano-scale imprinting processes used at Nanotech to better interpret metrology results.
- Communication – Maintaining and updating documentation such as standard operating procedures (SOPs). Delivering regularly scheduled reports to your manager on time and at a high-quality standard. Communicating processes to R&D and production staff.
- Organization – Ensure all materials are filed following agreed conventions and are easily accessible.
- Travel – Opportunity to travel between Vancouver and Ottawa for knowledge transfer and training.

Qualifications and Experience:

- Education – M.Sc. or equivalent in physics, chemical, electrical or materials engineering and sciences.
- Experience - 3+ years of hands-on experience in nano-characterization imaging techniques. Experience in a Class 1000 (or higher) cleanroom environment considered an asset.
- Technical – Hands on experience with optical microscopy, profilometry, SEM, AFM, EDAX equipment and techniques; familiar with cleanroom safety and hazardous materials handling protocols.
- Characteristics - We appreciate self-learners with strong interpersonal skills. As a valued member of our team, we will work together to develop a shared culture of inclusivity, loyalty, and trust.



About us

Where ideas and innovation meet.

Nanotech Security Corp. is a leading innovator of nano-optic image technologies used in anti-counterfeiting applications. With billions of security features in circulation, Nanotech's products include secure and memorable security labels, stripes, patches, and colour-shifting films for currency authentication and brand protection.

KolourOptik is a patented technology that is exclusive to the government and banknote market and combines sub-wavelength nanostructures and microstructures to create modern overt security features with a unique and customizable visual effect. KolourOptik pure plasmonic colour pixels produce full colour, 3D depth, and movement used in security stripes and threads that are nearly impossible to replicate. At less than 5 microns thick, KolourOptik products seamlessly integrate into banknotes and other secure government documents.

LiveOptik is a patented technology that utilizes innovative nano-optics one tenth the size of traditional holographic structures to create next generation overt security features customized to our customers' unique requirements. LiveOptik delivers multi-colour, 3D depth, movement, and image switches for secure brand protection stripes, threads, and labels that are nearly impossible to replicate.

Nanotech strives to create a corporate culture that values input and encourages individuals to express themselves in a team environment.

To Apply

Applications will be accepted until the position is filled. Please email your resume to careers@nanosecurity.ca, include a cover letter, and use the position title in the subject line of your email. Only candidates considered for an interview will be contacted. Thank you for your interest in this position, we look forward to hearing from you!

Note: *We will **not** be accepting candidates from **recruitment agencies** at this time. Only Candidates who are eligible to accept employment in Canada **WITHOUT** sponsorship will be considered.*