



## **Job Description 2020-05**

**Position:-**Industrial Post-Doctoral Fellow

**Location:** Edmonton, AB

### **Specific Responsibilities:**

Applied Quantum Materials Inc., (AQM) is an Edmonton, Alberta, based company. We are seeking a knowledgeable and motivated professional who excels in a multi-disciplinary team environment. The successful candidate will assume a full-time employment role as an Industrial Post-Doctoral Fellow partially supported by a secured Mitacs Elevate Postdoctoral Fellowship. With your commitment and drive you will be part of a team that is changing the world with the creation, development, and integration of new advanced nanomaterials.

Ideal candidates will be creative individuals who think “outside-the-box”, work independently, and have a keen desire to work together to support a professional team dedicated to make a meaningful difference in introducing new technologies and applications into the marketplace. The candidate should thrive on performing well within a stimulating and fast-paced environment.

The successful candidate must display the core values of integrity, commitment, and collaboration while working at a high level of excellence and taking personal accountability for their actions. The position will remain open until a suitably qualified candidate is identified.

### **Company Background:**

AQM was founded with the mission to commercialize functionalized silicon-based nanomaterials and polymers. Our business model is to design, synthesize, functionalize and manufacture custom nanomaterials and chemical precursors for our clients.

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 their skills through ongoing project development.

### **Position –Industrial Post-Doctoral Fellow**

- Project management as required to meet client needs and defined by AQM management and the Academic Partner;
- Laboratory equipment set-up, purchase materials, manage inventory, and laboratory maintenance;
- Project tasks assigned by the management team and Academic Partner;
- Maintain the highest safety protocols;
- Oversee project resources - specific equipment and apparatus requirements, including all chemicals, raw materials for assigned projects;

- Support employment policies and procedures for technical employees (including approval of timesheets, competency reviews, development plans and performance management);
- Supervise junior employees as identified by AQM management.
- Participate and support in the recruitment and retention of technical employees;
- Oversee characterization equipment usage, reporting in accordance with company policies and procedures;
- Other duties that may arise from time to time and may be assigned to the Employee.
- Assist senior management in determining techniques, equipment and production rates for cost study purposes;
- Represent the company at meetings with clients as required;
- Writing of progress reports, technical reports and proposals for clients and management team.

### **Knowledge, Experience and Analytical Skills**

- Requires a Ph.D. in Chemistry or related discipline with research experience in nanomaterials and polymer development.
- Expertise in the synthesis of inorganic nanostructures including silicon/silica and other materials.
- Expertise in the surface modification and functionalization of nanostructured silicon, silica, metals, and metal oxides.
- Expertise in polymer synthesis and processing.
- Expertise in high temperature, solid-state material synthesis.
- Experience with nanofabrication techniques and lithography.
- An experienced and capable individual who motivates other staff, leads by example, acts with integrity, mentors others, and is committed to working in a team environment.
- Experience with the following analytical techniques preferred: Multinuclear liquids NMR spectroscopy, electron microscopy (SEM and TEM), atomic force microscopy (AFM), X-ray diffraction analysis (powder and single crystal), X-ray photoelectron spectroscopy (XPS), UV-Vis, FTIR, and Raman spectroscopy, mass spectrometry, gel-permeation chromatography.
- Experience with solid-state NMR spectroscopy will be viewed as an asset.
- Exceptional and demonstrated creativity.
- Excellent demonstrated communication skills (both verbal and written), interpersonal skills, strong planning skills, and outstanding problem solving skills are essential.
- Must be able to participate in and lead highly effective teams.
- Proficiency of Microsoft Office, ChemDraw, and Microsoft SharePoint computer software.

If you are an enthusiastic person interested in industrial applications with a demonstrated track record, please send your CV and cover letter including addresses for 3 referees to: [contact@aqmaterials.com](mailto:contact@aqmaterials.com)