

## JOB DESCRIPTION

Position	Post-doctoral Researcher – Materials Development for Functional Packaging/Coating Application	Date	April 2019
Classification	External Funding	Group	Non-Union
Dept	Verschuren Centre for Sustainability in Energy & Environment		
Reporting To	Dr. Beth Mason		

### BACKGROUND

Cape Breton University's Verschuren Centre for Sustainability in Energy and the Environment (Verschuren Centre) was created to inspire and facilitate interdisciplinary research and development, and related education and training opportunities that commercialize innovative and sustainable solutions to energy and environmental issues.

### PURPOSE

Reporting to the Chief Executive Officer of the Verschuren Centre, the successful candidate will draw on principles from materials science, biotechnology and green chemistry to pursue innovations on functional packaging, bio-product transformation, and enzyme-based synthesis/extraction. As a key member of a multi-functional R&D team, the candidate will leverage his/her expertise in polymer/materials science to work towards developing, testing, scaling up of functional packaging/coating technologies.

### SPECIFIC RESPONSIBILITIES

- Synthesize and characterize polymeric materials for functional packaging and coating applications; assist in polymer extrusion and processing.
- Develop, design, and carryout surface treatment of polymer films or nanoparticles by green chemical synthesis/process.
- Conduct analyses to characterize products produced/required by industry partners.
- Perform literature and patent searches to guide experimentation, supervise students, and write grant proposals.
- Summarize experimental strategies and data analysis in written reports and presentations for communication with peers, industry partners, and various levels of management.
- Work collaboratively in teams to brainstorm solutions to both short-term and long-term opportunities and maintain good working relationships with all team members.
- Publish research results in peer-reviewed scientific or technical journals and present results at external conferences, seminars, and/or technical meetings.

## QUALIFICATIONS and SKILLS

- PhD in chemistry/engineering/chemical engineering or related fields, with a focus on polymer chemistry or material science.
- Experience in polymer processing methods and polymer applications is preferred (plastic/biopolymer packaging and coating).
- Demonstrate broad knowledge in analytical characterizations of polymers (GPC, DSC, FTIR, SEM, DMA, capillary rheology) and property analysis (mechanical, UV-Vis. Thermal).
- Demonstrate ability to conduct independent research projects with a good track record in peer-reviewed publication.
- Demonstrate proficient verbal and written communication skills and ability to collaborate effectively in a team environment.
- Demonstrate initiative and interpersonal skills and ability to work in a highly collaborative, multidisciplinary team environment.
- Competency with statistical analysis, data processing and visualization software will be considered an asset.

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Post-doctoral Researcher

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Date

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Human Resources Department

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Date

Established:	April 2019
Evaluated:	