Snapshot: **Clean Energy and Energy Materials**
3 years (2019 – present) advanced **bioproduct materials** derived from forest and agricultural residues.
3 years (2015 – 2019) commercialization of **ion conducting polymer** for alkaline membrane electrolyzer.
6 years (2011 – 2017) research network on **fuel cells, electrolyzers and electrochemical conversion processes**.
7 years (2004 - 2011) integration of **new energy materials** into a membrane electrode assembly for fuel cell, electrolysis and battery applications.

Work in Private Sector

Pacific Rim Research Corp. **06/2011 – Present**

Managing Director

- Focused on **application of novel energy materials in electrochemical systems**.
- Developed gov't funded projects for SMEs – overseeing collaborative research agreements (>$30M).
- Negotiated a technology licensing and spin-off arrangements with research organizations.
- Developed projects and co-led implementation of multi-party collaboration agreements: the NSERC Discovery Frontiers Project: Nickel Catalysts for Electrochemical Clean Energy (Ni Electro Can, www.nielectrocan.ca, 2015 – 2019, $4M) and to the **Ca**talysis **R**esearch for **P**olymer **E**lectrolyte **F**uel **C**ells (www.CaRPE-FC.ca, 2012-2017, $8.3M).
- Lead project to establish the power-to-gas technology roadmap for Hydrogen South Africa (HySA).

Ionomr Innovations Inc **03/2015 – 03/2019**

- Co-Founder and Chief Administrative Officer (CAO)
- Developed **energy materials program** to commercialize made-in-Canada ion conducting membranes.
- Led efforts to secure > $12M non-dilutive funding sources from SDTC, IRAP, MITACS and NSERC.
- Led contracts development and implementation: IP licensing, Collaborative research contracts with upstream material suppliers and downstream technology integrators in SDTC/BC Gov't co-funding projects.

Work in University and Government Sector

University of British Columbia **07/2019 – Present**

Operations Director – BioProducts Institute

- Direct research operations, finance and human resources ($55M investment) and the Pulp & Paper Center (>$30M equipment and >75 researchers and students).
- Oversee **bioproduct materials R&D** portfolio: advanced materials derived from nanocellulose and lignin
- Responsible for >10 direct reports and interns.

Queen's University **11/2014 – 01/2020**

Project Manager, NSERC Discovery Frontiers: 'Ni Electro Can'

- Managed technical and non-technical operations of the project including finance ($4M)
- Managed **Ni-based electrocatalysts** development for fuel cells, electrolyzers and electrochemical conversions.
- Oversee device integration and performance evaluation.

National Research Council (NRC) – Institute for Fuel Cell Innovation, Vancouver **10/2004 – 12/2011**

Research Officer, Project Manager & National Program Technical Leader

- Front-end scoping of contracts, managed and delivered >$15M portfolio of projects to SMEs in the hydrogen and fuel cell sectors.
- Served as invited external independent reviewer for US-Department of Energy (DOE) Fuel Cells program in 2005 and 2008, and for Canada NSERC in 2004 and 2006.
- Supervised NRC competency team of 15 experts (PhDs and MSc).

Education

Master of Business Administration (MBA) in Entrepreneurship **01/2009 – 03/2011**

University of British Columbia (UBC)

- Recipient of BCIC Commercialization Scholar Award, 2011

PhD Chemistry **09/1999 – 10/2004**

Simon Fraser University (SFU)

Thesis: Influence of Membrane Ion Exchange Capacity on the Catalyst Layer of Proton Exchange Membrane Fuel Cell

Recipient of 3 entrance scholarships

B.Sc. Chemistry (1st class honours) **10/1996 – 05/1999**

Imperial College, University of London, UK

Other noteworthy

Publications: Lead and co-authored >20 peer reviewed articles,

Patents: Co-invent 2 patents (Canadian and Germany)

Hobbies: Jiu-Jitsu, Judo, and marathon runner