

## Session Program

10-16 Jun 2018



Canadian Association  
of Physicists

Association canadienne  
des physiciens et physiciennes

## 2018 CAP Congress / Congrès de l'ACP 2018

***DCMMP Poster Session & Finals: Poster  
Competition and Mingle Session with Industry  
Partners (28) / Employers | Session d'affiches  
DPMCM et finales: Concours d'affiches et  
rencontres avec partenaires industriels et  
employeurs (28)***

Dalhousie University

## Tuesday 12 June

18:00

### DCMMP Poster Session & Finals: Poster Competition and Mingle Session with Industry Partners (28) / Employers | Session d'affiches DPMCM et finales: Concours d'affiches et rencontres avec partenaires industriels et employeurs (28)

**Poster Session** | **Location:** Dalhousie University, SUB McInnes Hall

#### POS-13 Failure-mode history-dependence in single crystal NMC532 / graphite Li ion cells

**Speaker**

Jessie Harlow

#### POS-14 Metallic Li and Na Anodes for Next Generation Li and Na Metal Batteries

**Speaker**

Yang Zhao

#### POS-15 Digital photocorrosion of GaAs/AlGaAs: a quest for fabrication of defect-free III-V nanostructures

**Speaker**

Mr Mohammad Reza Aziziyan

#### POS-16 Using Atomic Force Microscopy to Characterize Energy Storage Materials

**Speaker**

Mr Aaron Mascaro

#### POS-17 Analysis of "Rollover Failure" of Lithium-ion Cells

**Speakers**

Dr Xiaowei Ma, Prof. Jeff Dahn

#### POS-18 Study of Al<sub>2</sub>O<sub>3</sub> Coated Positive Electrode Materials

**Speaker**

Vivian Murray

#### POS-19 Carbon allotropes grafted with poly (pyrrole) derivatives via living radical polymerizations: electrochemical analysis of nano-composites for energy storage

**Speaker**

Dr Anna Ignaszak

#### POS-20 Structural, Electrochemical and Thermal Properties of Nickel-rich Li<sub>Nix</sub>M<sub>ny</sub>Co<sub>z</sub>O<sub>2</sub> Materials

**Speaker**

Ning Zhang

#### POS-21 Revealing the unwanted reactions in lithium-ion cells with isothermal microcalorimetry

**Speaker**

Mr Stephen L. Glazier

#### POS-22 What is the use of a lithium-ion battery that has zero volts?

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|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Speaker</b><br/>Yulong Liu</p>                                                                                                                                                                                                    |
| <p><b>POS-23 Li-ion Differential Thermal Analysis; an in-situ method for studying changes to electrolyte</b></p> <p><b>Speaker</b><br/>Michael Bauer</p>                                                                                |
| <p><b>POS-24 Applying State-of-the-art Machine Learning Methods to Analyse Electrolyte composition of Lithium-ion Cells using Fourier-Transform Infrared Spectroscopy</b></p> <p><b>Speaker</b><br/>Samuel Buteau</p>                   |
| <p><b>POS-25 Impedance Growth in Lithium-Ion Pouch Cells</b></p> <p><b>Speaker</b><br/>Rochelle Weber</p>                                                                                                                               |
| <p><b>POS-26 The effect of 1,3-Dimethyl-2-imidazolidinone (DMI) as an additive in Lithium-ion cells.</b></p> <p><b>Speaker</b><br/>Mr Roby Gauthier</p>                                                                                 |
| <p><b>POS-28 3D-to-2D transition of phonon transport in nanomaterials: a first-principles analysis</b></p> <p><b>Speaker</b><br/>Patrick Strongman</p>                                                                                  |
| <p><b>POS-29 Computational and Experimental Investigations of Inverse Perovskites as Thermoelectric Materials</b></p> <p><b>Speaker</b><br/>Dr Jan-Hendrik Pöhls</p>                                                                    |
| <p><b>POS-30 Photoacoustic FTIR as an isotopic analysis technique</b></p> <p><b>Speaker</b><br/>Stephen Campbell</p>                                                                                                                    |
| <p><b>POS-31 Exploration of 2D materials for high-efficiency thermoelectric conversion</b></p> <p><b>Speaker</b><br/>Mr Cameron Rudderham</p>                                                                                           |
| <p><b>POS-32 Assessment of the Performance of Four Dispersion-Corrected DFT Methods Using Optoelectronic Properties and Binding Energies of Organic Monomer-Fullerene Pairs</b></p> <p><b>Speaker</b><br/>Prof. Jolanta B. Lagowski</p> |
| <p><b>POS-33 Standing helimagnons in MnSi thin films</b></p> <p><b>Speaker</b><br/>Mr Nicholas Ilow</p>                                                                                                                                 |
| <p><b>POS-34 Synthesis of inverse tetragonal Heusler alloys</b></p> <p><b>Speakers</b><br/>Mr David Kalliecharan, Mr Jason McCoombs</p>                                                                                                 |

**POS-35 Tracking Liquid Electrolyte Changes Throughout Lithium-ion Cell Lifetime****Speaker**

Ms Lauren Thompson

**POS-36 Vein glorious graphite for Li-ion Batteries****Speaker**

Dr Shane Beattie

**POS-37 Effect of Addition of Lanthanum on the Hydrogen Storage Properties of TiFe Alloy****Speaker**

Mr Md Meraj Alam

**POS-38 Investigating the Removal of Layered Double Hydroxides in  $[\text{Ni}_{0.80}\text{Co}_{0.15}]_{0.95-x}\text{Al}_{0.05+x}(\text{OH})_2$  ( $x = 0, 0.05$ ) Prepared by Coprecipitation****Speaker**

Aaron Liu

**POS-39 An Organic Anode Enabling High Concentration and Cell Potential of An All-Organic Redox Flow Battery****Speaker**

Mr Fahad Alkhayri

**POS-40 Propriétés thermochromes des couches minces de  $\text{VO}_2$  et de  $\text{VO}_2$  dopées de tungstène (W) par une nouvelle technique.****Speaker**

Komi Koumbenou

**POS-58 Study of a field-tunable colloid-polymer solution (SMC Poster)****Speaker**

Shivani Semwal

19:30