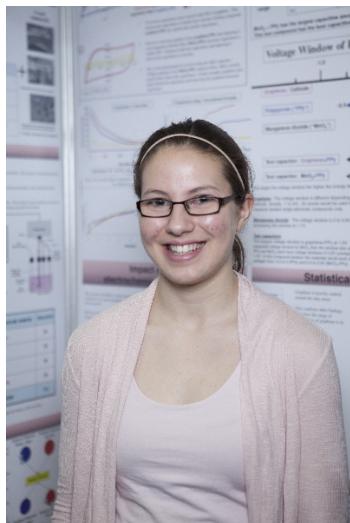


CWSF 2013 - Lethbridge, Alberta



Lauren Reid

New compound MnO₂+PPy increases redox reactions to improve capacitive behaviour

Challenge: Energy

Category: Senior

Region: Durham

City: Uxbridge, ON

School: O'Neill C.V.I.

Abstract: Recent research is based on the presumption that graphene is the ideal electrode material. However, evidence does not support this presumption. A new material designed in this research, MnO₂+PPy, has a higher capacitance and lower resistance, offering more potential. Given the importance of electrochemical supercapacitors in research initiatives, the use of this compound would result in higher capacitance, lower resistance, and less environmental impact.

Biography

My love of knowledge has always driven me to keep asking questions and it is with this drive I complete every aspect of my life. Science and mathematics are a large part of who I am, and I hope to study engineering and management in university. I have really enjoyed competing in science fairs, including 2 national and 2 international science fairs. Music and sports are two of my many interests and I play competitive soccer with a great team, Whitby Iroquois. Hopefully I can continue to play soccer for many years to come. I would also love to earn my private pilot license before I graduate from high school but, for now, I will continue to attack life with passion and curiosity while following my dreams. Helping me with this are my amazing friends and wonderful family.

Awards

Value

S.M. Blair Family Foundation Award - Senior Sponsor: S.M. Blair Family Foundation	\$1 000
Excellence Award - Senior - Gold Medal Sponsor: Youth Science Canada	\$700
Dalhousie University Faculty of Science Entrance Scholarship Senior Gold Medallist - \$5000 Entrance Scholarship Sponsor: Dalhousie University, Faculty of Science	\$5 000
UBC Science (Vancouver) Entrance Award Senior Gold Medallist - \$4000 Entrance Scholarship Sponsor: The University of British Columbia (Vancouver)	\$4 000
University of Manitoba Entrance Scholarship Senior Gold Medallist - \$5000 Entrance Scholarship Sponsor: University of Manitoba	\$5 000
University of Ottawa Entrance Scholarship Senior Gold Medallist - \$4,000 Entrance Scholarship Sponsor: University of Ottawa	\$4 000
Western University Scholarship Gold Medallist - \$4000 Entrance Scholarship Sponsor: Western University	\$4 000
Total	\$23 700