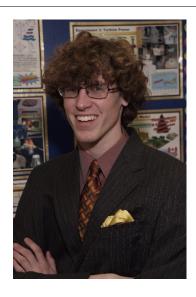




CWSF 2007 - Truro, Nova Scotia



Dustin Hughes

Hot COCO2 The Energizer Reactor

Division: Engineering & Computing Sciences / Automotive

Category: Senior Region: Timmins

City: South Porcupine, ON

School: Timmins High & Vocational School

Abstract: Fuel combustion aerosols have created a carbon cycle imbalance that

shares a strong correlation to climate change. Electricity production and automobile use are the largest environmental imbalance contributors. An experimentally based alternative fuel approach to radiolytic conversion of evolved CO2 to CO via thermo-electric generating processes is presented and has the potential to fulfill the Kyoto Protocol by reducing fossil fuel

demands and CO2 production.

Biography

I live in South Porcupine, Ontario. As a grade 12 student, I am currently a member of the varsity badminton team and I also labour as the student administrative council's Vice-President. Several of my favorite school subjects include science, mathematics and English. Outside of school I spend much of my spare time with family and friends. I am also involved in many extra-curricular activities such as cross-country skiing, snowboarding and water skiing. In the summer months I enjoy hiking, fishing, swimming and spending time at my cottage. I have received numerous medals and awards while participating in past INTEL ISEF and CWSF competitions. Currently, I am an **Executive Board member of Volunteer** Timmins, a member of the Mayor's Youth Advisory Council and the Co-Chair of Ontario Teen Leadership North. Several of my other interests include reading, sculpting, cooking and hockey. I also play the piano and violin. I one day hope to enter the field of medicine. Clearly, I lead an active lifestyle and enjoy assuming/participating in a large variety of tasks and activities.

Awards	Value
The Canadian Society for the Weizmann Institute of Science Scholarships Joseph W. and Joel Anthony Leon Kerbel Scholarship	\$9 400
Sponsor: The Canadian Society for the Weizmann Institute of Science (Weizmann Canada)	
Petro-Canada Peer Innovation Award - Senior - Ontario North & East	\$200
Sponsor: Petro-Canada	
Dalhousie University Faculty of Science Entrance Scholarship	\$4 000
Senior Gold Medallist - \$4000 Entrance Scholarship	
Sponsor: Dalhousie University, Faculty of Science	
Dalhousie University Faculty of Science Entrance Scholarship	\$2 000
Senior Silver Medallist - \$2000 Entrance Scholarship	
Sponsor: Dalhousie University, Faculty of Science	**
UBC Science (Vancouver) Entrance Award	\$2 000
Senior Silver Medallist - \$2000 Entrance Scholarship	
Sponsor: The University of British Columbia (Vancouver)	
The University of Western Ontario Scholarship	\$2 000
Gold Medallist - \$2000 Entrance Scholarship	
Sponsor: University of Western Ontario	
The University of Western Ontario Scholarship	\$1 500
Silver Medallist - \$1500 Entrance Scholarship	
Sponsor: University of Western Ontario	
Silver Medal - Earth & Environmental Sciences - Senior	\$700
Sponsor: Petro-Canada	
Gold Medal - Automotive - Senior	\$1 500
Sponsor: AUTO21	
Total	\$23 300



