

CWSF 2011 - Toronto, Ontario



Samantha Pramanick, Adarsh Gupta

The Use of Nanocellulose in Producing a Flexible Organic Light Emitting Diode

Challenge: Innovation

Category: Senior

Region: Toronto

City: Markham, ON, Mississauga, ON

School: University of Toronto Schools

Abstract: A blend of 37% wheat straw and 63% bacterial cellulose was thermodynamically compatibilized to create a substrate for a flexible organic light emitting diode (OLED). Through electrolysis and the addition of an electroluminescence layer, an environmentally- sustainable and cost-efficient OLED was produced. The cellulosic substrate has various other medical and commercial applications, including electronic display systems and wound dressing material.

Biographies

Samantha - I'm 16 years old, and currently attend the University of Toronto Schools in grade 11. My favourite hobbies are photography, art (painting, drawing), music, and DJing. I enjoy doing volunteer work, both in my community and abroad. I love travelling, science, meeting new people, and spending time with my family and friends

Adarsh - I'm an outgoing, enthusiastic, and analytical student. I enjoy doing many extra-curricular activities. I am on the Secretariat of the Southern Ontario Model United Nations Assembly, giving me a vast array of knowledge in the field of world issues. In addition, I have great public speaking skills, as I have been consistently successful at debating tournaments. However, I also do many things apart from academics - I am also athletic. I play hockey, soccer, tennis, and skiing in organized settings. As well, I am an avid participator in the largest annually student-produced show at my school. I acted and participated in the Indian and Hip-hop d...

Awards

Value

Excellence Award - Senior - Bronze Medal Sponsor: Youth Science Canada	\$300
The University of Western Ontario Scholarship Bronze Medallist - \$1000 Entrance Scholarship Sponsor: University of Western Ontario	\$1 000
University of Ottawa Entrance Scholarship Senior Bronze Medallist - \$1000 Entrance Scholarship Sponsor: University of Ottawa	\$1 000
Total	\$2 300