

## CWSF 2011 - Toronto, Ontario



### Naima Raza

#### The NEWspaper Fuel: Enhancing Cellulosic Ethanol Production

**Challenge:** Energy

**Category:** Junior

**Region:** Lambton County

**City:** Sarnia, ON

**School:** Errol Road E.S.

**Abstract:** Newspaper, a biomass, was used to create cellulosic ethanol by hydrolyzing and fermenting into ethanol. Organosolv and oxidative delignification pretreatment steps were applied on newspaper prior to hydrolysis, along with unpretreated newspaper and sugar-based ethanol controls. Results showed greatest cellulosic ethanol production from organosolv pretreated newspaper; the cellulosic ethanol production process using newspaper was improved as this methodology has not been reported in literature.

#### Biography

Hi! My name is Naima. I'm a grade 8 student at Errol Road Public School. This was my fourth regional science fair, and my second time attending the CWSF. I love science, but I also have many other interests. I enjoy playing and listening to music - I'm currently in grade 7 piano. Some of my favourite sports include basketball, volleyball, soccer, track and field and badminton. My friends and family are some of the most important people to me, and I especially love hanging out with my friends! I also participate regularly in speech, essay and poem contests. In the future, I'd like to pursue dermatology or biology, but mainly do what I'm passionate about and find a way to contribute to society!

#### Awards

#### Value

Renewable Energy Award - Junior Sponsor: Ontario Power Generation	\$500
Challenge Award - Energy - Junior Sponsor: Youth Science Canada	\$500
Excellence Award - Junior - Gold Medal Sponsor: Youth Science Canada	\$1 500
The University of Western Ontario Scholarship Gold Medallist - \$4000 Entrance Scholarship Sponsor: University of Western Ontario	\$4 000
<b>Total</b>	<b>\$6 500</b>