

## CWSF 2008 - Ottawa, Ontario



### Hydrogen Storage Using Steel Wool

**Division:** International / Automotive

**Category:** Intermediate

**Region:**

**City:** ,

**School:**

**Abstract:** The hypothesis of this project is that the reversible reaction in which  $2\text{Fe} + 3\text{H}_2\text{O}$  is converted into  $\text{Fe}_2\text{O}_3 + 3\text{H}_2$  could be used to store hydrogen. Steam is passed over heated steel wool, releasing hydrogen (which powers a hydrogen fuel cell). The process is reversed by passing hydrogen, produced by solar-powered electrolysis of water, over heated iron oxide.

Awards	Value
The University of Western Ontario Scholarship Gold Medallist - \$2000 Entrance Scholarship Sponsor: University of Western Ontario	\$2 000
Honourable Mention - Automotive - Intermediate Sponsor: AUTO21	\$100
Gold Medal - Physical & Mathematical Sciences - Intermediate Sponsor: Encana Corporation	\$1 500
Total	\$3 600