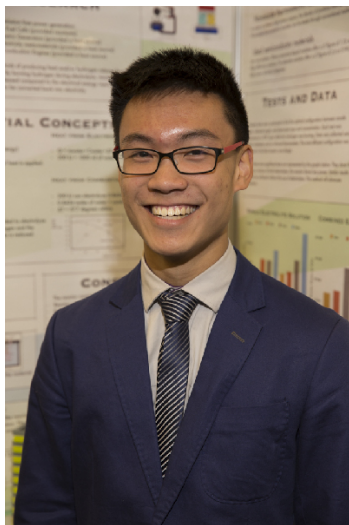


## CWSF 2016 - Montreal, Quebec



### James Ho

#### Power from the Simultaneous Burning of Hydrogen During Electrolysis

**Challenge:** Innovation

**Category:** Intermediate

**Region:** South Fraser

**City:** Surrey, BC

**School:** Semiahmoo Secondary

**Abstract:** Greenhouse gasses are a major factor in the deterioration of the global climate. Hydrogen is a potential alternative to petroleum based energy sources. I investigate the efficiency of electrolysis at high temperature by burning the emitted hydrogen immediately. This heat can be converted into electricity using external combustion engines or thermoelectric generators. (Updated)

#### Biography

My name is James Ho. I was born in Seattle, Washington, in the year 2000. After my sister, Allie, was born, my family and I moved to British Columbia, BC in 2002. At age 5, I found myself very interested in how mechanical things worked. I often took apart broken toys to see that if I could fix them. At the age of 12, I built a flying quadcopter from scratch after many soldering iron burns, fried electronics, and broken airframes. This is also the time when I joined my school band. Currently, I play the violin, the trombone, and the french horn. At the age of 13, I entered my first science fair competition with the mindset of not winning anything. However, my electromagnetic hone charger got me second place. This year, on the other hand, my high temperature electrolysis reactor put me on the Canada Wide Science Fair finalist list. If I could give one piece of advice to anyone, it would be to dream big. No matter who you are, or how others think about you or your ideas, if you follow though, your dream will become reality.

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