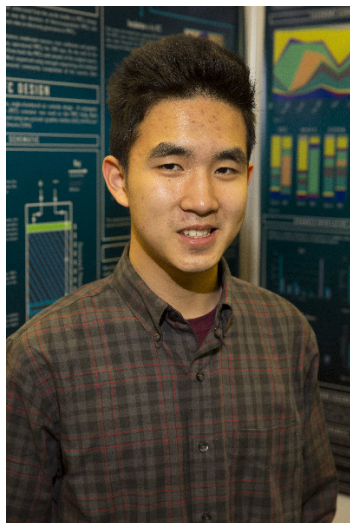


## CWSF 2014 - Windsor, Ontario



### Austin Wang

#### Analyzing Changes in Bacterial Communities in Microbial Fuel Cells

**Challenge:** Discovery

**Category:** Intermediate

**Region:** Greater Vancouver

**City:** Vancouver, BC

**School:** David Thompson Secondary

**Abstract:** Microbial fuel cells (MFCs) are devices that utilize microorganisms to generate power. The objective of this project is to better understand how power density and relative abundances of bacteria species in MFCs change over time. Such information may yield insights into the dynamics of microbial communities in MFCs and its roles in power generation. This may lead to improved reactor designs and greater power outputs.

#### Biography

Austin Wang is a grade 10 student at David Thompson Secondary in Vancouver, BC. He is an aspiring scientist, competitive athlete and passionate musician. He played high school basketball, as well as soccer, track and field, and cross-country. Austin has played piano for 10 years, cello for 3 years, and was part of jazz and concert bands as a flutist and alto saxophonist. In his spare time, Austin enjoys composing original music. Recently, he won the Golden Key International Piano Composition Competition. Austin will perform his composition at the World Young Composer's Recital in Vienna, Austria this summer. Passionate about global issues, and an enthusiastic participant of Model United Nations, Austin is the founding president of his school's Model UN club. Currently, Austin does research into the microbial dynamics of microbial fuel cells (MFCs). As a novel electricity generation technology, Austin believes that MFCs have great potential in reducing our carbon emissions, and in providing power for third world and developing nations. Austin believes his research will yield new insights into the internal functions of MFCs and will lead to improved reactor designs and the eventual commercialization of this technology. Austin plans to study physics or biotechnology in universit...

#### Awards

#### Value

Excellence Award - Intermediate - Silver Medal Sponsor: Youth Science Canada	\$300
Western University Scholarship Silver Medallist - \$2000 Entrance Scholarship Sponsor: Western University	\$2 000
Total	\$2 300