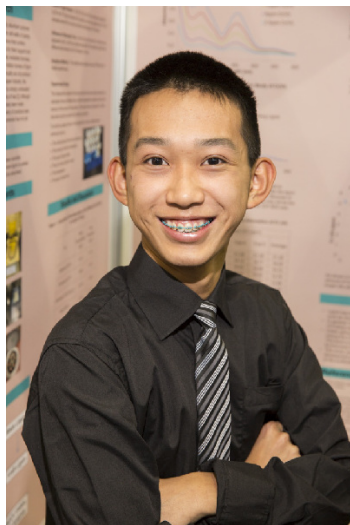


CWSF 2015 - Fredericton, New Brunswick



Jay Chen

Lignin Adsorption: An Innovative Approach to Water Purification

Challenge: Environment

Category: Intermediate

Region: Northwestern Ontario

City: Thunder Bay, ON

School: Sir Winston Churchill C.V.I.

Abstract: Water is a necessity for life in our world, but it often becomes polluted. One process used in water purification is adsorption. Lignin is an abundant polymer which comes from plants. In this project, lignin is used as an adsorbent to purify water contaminated with chromium (VI). The experimental results indicated that lignin can effectively remove toxic chromium (VI) ions, promising for waste water treatment.

Biography

My name is Jay Chen, and I am a Grade 10 student attending the IB program at Sir Winston Churchill C.V.I. in Thunder Bay, Ontario. At school my favourite subjects include math, English, and music. I enjoy figure skating, and I have reached Level 9 piano. Another hobby of mine is volunteering, and I often volunteer at various events around the city. In the future, I wish to go into the medical field, though I am still unsure of what specific program and career to choose. This project was inspired after I volunteered at the local university and learned a lot about different scientific procedures. I combined this with my previous researched knowledge of lignin and created this project. For further experiments, I plan to test even more different ions with lignin adsorption, as well as check to see if it can adsorb any other types of substances. My advice to other students would be to enjoy creating your project as much as you can. Try to make sure it is a fun learning experience rather than an annoying task to finish because that ruins the whole point of science fair.

Awards

Value

Excellence Award - Intermediate - Bronze Medal Sponsor: Youth Science Canada	
Western University Scholarship Bronze Medallist - \$1000 Entrance Scholarship Sponsor: Western University	\$1 000
Total	\$1 000