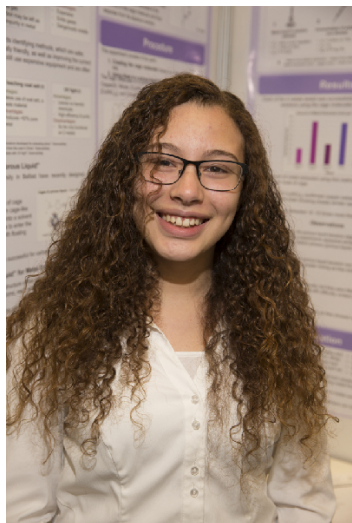


CWSF 2016 - Montreal, Quebec



Lydia Elbatarny

Caged In: A Novel Approach to Metal Extraction

Challenge: Discovery

Category: Intermediate

Region: Frontenac, Lennox & Addington

City: Kingston, ON

School: Kingston Collegiate Vocational Institute - KCVI

Abstract: This experiment explored a novel approach to extracting metals through the use of cage molecules in a porous liquid. It was predicted that cations would be attracted to the lone electron bearing nitrogens in the cage molecule, thereby permitting their capture. Copper and Cobalt were both effectively extracted, supporting this method's potential application for other metals of environmental and commercial concern.

Biography

My name is Lydia Elbatarny. I am a grade 9 student in the IB Program at KCVI, Kingston, Ontario. I always aim to excel in academics and extracurricular activities and always look for new challenges. My favourite subjects are math and science. Due to my love for science, I aspire to study medicine and become a physician. While browsing through recently published scientific articles, I was intrigued by the term "Porous Liquid". I further investigated this topic and formulated an experiment evaluating the theory of its use as a novel tool for metal extraction. I had lots of fun researching and completing my project, especially since I got to work in a research lab for the very first time! After participating in the CWSF last year, I am thrilled to be returning to compete again this year in Montreal!

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

