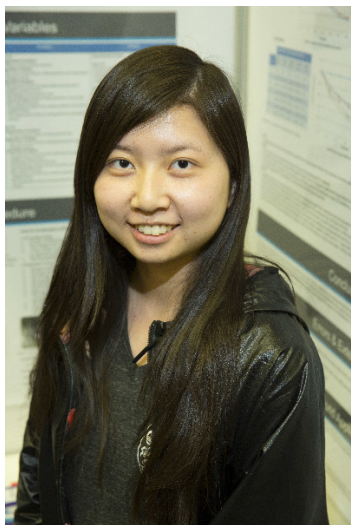


CWSF 2014 - Windsor, Ontario



Qiang Wei Chen

NanoPower

Challenge: Environment

Category: Senior

Region: Greater Vancouver

City: Vancouver, BC

School: West Point Grey Academy

Abstract: In this research, the feasibility of using nanometer clay to eliminate CH₂O was investigated. Then, the photo-catalytic efficiency of the four different kinds of nanometer clays was compared to explore the optimum nanomaterial for nanometer clay. Finally, the relation between the percentage of nanomaterial and the efficiency of the clay was examined to explore the optimum dosage of nano-particle.

Biography

I have always been inquisitive and innovative. I always have a penchant for exploring different possibilities. The inspiration for my project stems from a personal experience. When I visited my friend's new house last November, I was struck by the pungent smell that emanated from the newly painted walls. After staying for an hour, I started to feel nauseous. I did some research on paint afterwards and found that it was the formaldehyde in the paint that caused my nausea. In order to fulfill my curiosity, I further researched into indoor formaldehyde and traditional ways of treating it. I found that photo-catalytic material is the most effective in treating formaldehyde. Thus, I decided to test the effectiveness of formaldehyde degradation of different types of nanomaterial, which can act as photo catalysts. Although my project supported my hypotheses, I would like to improve my project by increasing the types of nanomaterial, testing more concentrations of nano-ZnO, and analyzing other contaminants. It was very exciting to experiment and prove my hypotheses. I recommend that students be patient with their projects even if the results are not satisfactory at first. Also, students should attempt as many trials as possible to obtain elaborate data.

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