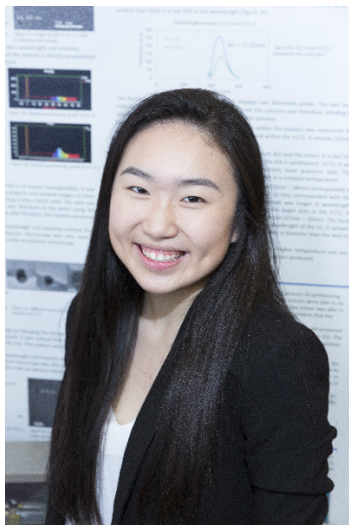


CWSF 2018 - Ottawa, Ontario



Anne Jing

The Hydrothermal Synthesis of Quantum Dots Using Gelatin

Challenge: Discovery

Category: Senior

Region: Bay Area

City: Brantford, ON

School: Assumption College School

Abstract: Quantum dots (QD) are nano sized particles that fluoresce under UV light, traditionally synthesized from cadmium—a toxic and carcinogenic material. By applying the same principle of the quantum confinement effect, carbon can be synthesized into QD; thus, decreasing the toxicity and production costs and increasing the application uses. Through experimentation, a method of synthesizing two distinct colours of QD has been developed.

Biography

My name is Anne Jing and I am a grade 11 student at Assumption College School. I volunteer throughout my school with activities ranging from tutoring my schoolmates to organizing the Relay for Life event. I am also involved in sports such as volleyball and swimming. I am fascinated and intrigued at how the universe works at a microscopic level. During a discussion with my physics teacher, I was introduced to the topic of Quantum Dots. As a curious student, this topic had gained my interest. Upon research, it is discovered that the synthesis of Quantum Dots requires cadmium—a carcinogen. As many applications can be benefited from Quantum Dots, I believe there is substitute for the tradition method of synthesizing Quantum Dots. During my experiments, many surprising results arose, results that should not occur according to the principle theory of Quantum Dots. I hope to conduct more experiments to conclude a reason for these results. I will continue this project and along with future projects with an attitude best described using the Nike slogan: "Just Do It". I believe that is the best advice I can give to anyone interested in doing a project, to just do it.

Youth Science Canada
PO Box 297
Pickering ON L1V 2R4
www.youthscience.ca / info@youthscience.ca
416-341-0040