



2016 NOBCChE National Science Fair Abstract

Category: **Physical Science**

Title: **Cadmium Zinc Telleride**

Cameron Robinson

Senior Level (High School)

New Century High School

This summer we were learning about radiation and radioactive detectors. We had to observe and learn about a crystal that could detect such radiation. Once we completed perfecting our crystals, we had to learn how to use them. We used the process of sputtering to attach a contact to the semiconductor crystal, CZT. A contact is a material that makes the electricity flow easily and controlled through the crystal. The material of choice was gold because of the chemical properties it possesses. When we started to talk about deposition we discussed turning a gas into a solid. When you compound argon gas to make a plasma on top of the crystal, it creates a solid surface that can be used for testing and use. This is a crucial part in making radioactive detectors because it helps control the flow of electricity.

The National Organization for the Professional Advancement of Black Chemists and Chemical Engineers (NOBCChE) National Science Fair is a poster competition in which students present an independent completed research project. Each contestant in the Science Fair must demonstrate their ability to conduct a research project by:

- Submitting an abstract of 150 words or less on an individual research project in one of the following **four categories: physical science, math & engineering, consumer science, or biological science.**
- Presenting the results of the research in a poster format, including answering questions from judges; and submitting a written report during the poster presentation.
- For more information, visit www.nobccheSTEMwkd.com.