Project Title: Computer Interfacing Laboratory Equipment

Project Mentor: Prof. William Polik, Chemistry

**Project Description:** Dr. Polik's research program at Hope College uses lasers, monochromators, and data acquisition hardware to measure the spectra of molecules with large amounts of energy, as it is these molecules which undergo chemical reaction. A new research opportunity is available for high school students to develop computer interfaces to state-of-the-art laboratory equipment. Students will learn how the equipment works, how to control the equipment, and how to obtain data from the equipment. They will then write a computer interface for the equipment. A graphical programming language called LabView will be used for this project. The result will be used by other research students in the research group to control their experiments and acquire data.

In addition to computer programming, high school students will attend weekly research group meetings in which experimental techniques, computational results, research results, and related research in the literature are discussed. They will be full members of the research group and work alongside undergraduate college students.

Previous experience and/or classes in computer programming are a prerequisite for this position.