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Chemical Demonstrations: Wooing Students into Chemistry

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CHEMICAL DEMONSTRATIONS: WOOING STUDENTS INTO CHEMISTRY

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It is no hidden secret that the U.S. will desperately require increasing numbers of chemists and other chemically knowledgeable personnel with which to continue scientific research in chemistry and chemically related fields including medicine and microbiology. Such research will provide the necessary information with which to feed the growing high technology sector of our economy and help improve the quality of life around the globe.

Geared toward the ends of attracting more young high school aged students into chemistry and chemistry related fields, this educationally focused work is based on studies delving into the crucially important question: Why do students like or dislike chemistry? Using this question and prior research on this topic gathered from sources including The Journal of Chemical Education, The Journal of Research in High School Science and Mathematics, The Science Teacher, and many others as a guideline, ideas were generated on how to introduce students to the seemingly magical world of chemistry and to make the subject itself more interesting, palatable, and hands-on through the use of chemical demonstrations that target students' senses by using light, color and sound to produce sensory stimulating effects.

Demonstrations that are chemically relevant to high school chemistry classes have been put together so as to be easily observed, discussed, and enjoyed for the complete benefit of the student and at low cost to any high school science department. Work completed includes demonstrations dealing with acid-base chemistry, gas laws, and the physical and chemical properties of hydrogen and carbon dioxide, as well as specific chemical concepts such as density.