

Incorporating Gas Chromatography and CHN Elemental Analysis into the Undergraduate Science Laboratory Curricula

The author gratefully acknowledges the financial support of the National Science Foundation Course, Curriculum, and Laboratory Improvement program (CCLI. <http://www.nsf.gov/div/index.jsp?div=DUE>) to purchase a high-end capillary gas chromatograph (GC) and Carbon Hydrogen Nitrogen (CHN) elemental analyzer (award ID: DUE-0310264).

www.nsf.gov



Presentations

PowerPoint files for the presentations listed below can be accessed from the folders entitled **GC presentations** and **CHN presentations**. Descriptions of the acronyms used to identify folders and PowerPoint files are:

- ACS = American Chemical Society
- NERM = Northeast Regional Meeting
- NORM = Northwest Regional Meeting
- WRM = Western Regional Meeting
- SWRM = Southwest Regional Meeting

In October 2005 the Department of Chemistry at Northern Arizona University in Flagstaff, AZ invited the PI (SJD) to give a presentation discussing the development and implementation of the GC and CHN lab activities.

In addition to the above below is a list of the titles of oral and poster presentations given by the PI (SJD) at regional and national meetings of the American Chemical Society (ACS, www.acs.org), the largest scientific organization in the world.

ACS Southwest/Rocky Mountain Regional Meeting, Tucson, AZ October 2006

- *Gas Chromatography in General Chemistry: Why Wait for Organic?*
- *CHN Elemental Analyzer Labs: Successes and Future Activities*

ACS National Meeting, San Francisco, CA September 2006

- *Assessment of Student Knowledge of Gas Chromatographic Instrumentation Before Its Use*

ACS Northwest Regional Meeting, Reno, NV June 2006

- *CHN Analyzer Labs in General Chemistry and Environmental Science*
- *It's a Gas: Chromatographic Monitoring of Microbe Activity in Lake and River Mud*

ACS Western Regional Meeting, Anaheim, CA January 2006

- *Learning GC by Doing It, Not Reading About It*
- *Gas Chromatography in General Chemistry: Why Wait for Organic?*

ACS Northwest Regional Meeting, Fairbanks, AK June 2005

- *An Experimental Approach for Students to Learn about Factors Affecting Retention Time in Gas-Liquid Chromatography*
- *Analysis of Gasoline and Fuel System Products: An Introduction to Gas-Liquid Chromatography in General Chemistry*

ACS Northeast Regional Meeting, Fairfield, CT July 2005

- *CHN Elemental Analyzer Labs: Successes, Failures, and Future Activities*
- *Gas Chromatography in General Chemistry: Why Wait for Organic?*