

Special Meeting in Honor of Dr. Ed Neparko  
Wednesday 10 Nov 2010

## ENERGY FROM CHEMISTRY THROUGH THE AGES A DEMO PRESENTATION

Dr. John Fortman  
*Wright State University*

Man's first and greatest chemical invention—fire—began a parade of uses of combustion reactions to produce heat, light, mechanical energy, and electricity, as well as to cook food, refine metals, and produce materials. Voltaic cells and batteries gave man other ways to use chemical reactions to produce other forms of energy and do work. Chemiluminescence now gives man a way to produce light without fire, heat, or electricity. Chemical demonstrations will be done which illustrate the principles and applications of fires and explosions, voltaic cells, and luminescence. Analogies will be made to the internal combustion engine. Short video clips may be shown of applications and bloopers.

**6:00-7:00 pm Social Hour**  
**7:00-8:00 pm Dinner**  
**8:00-9:00 pm Presentation**

**Southwestern Oklahoma State University**  
East Ballroom, 2<sup>nd</sup> floor of the Student Center  
Campus Dr., Weatherford, OK 73069  
<http://www.swosu.edu/resources/map/>

### Buffet Menu

teriyaki marinated chicken breast & fried shrimp  
garlic cheddar mashed potatoes  
green bean casserole  
assortment of cold salads  
New Orleans bread pudding w/lemon sauce (dessert)  
coffee and tea

### Cost

\$20 members  
\$5 students

### RSVP Deadline

Monday, Nov 8<sup>th</sup>, 5 pm  
Contact: Nick Materer  
405-744-8671

[materer@okstate.edu](mailto:materer@okstate.edu)

*RSVP is NOT required to attend the presentation.*

### Dr. John Fortman Biographical Sketch

John Fortman received the 2007 Helen M. Free Award for Public Outreach. He is Professor Emeritus of Chemistry at Wright State University where he retired in 2001 after 36 years of teaching freshman and inorganic chemistry. In 1998 he was appointed the Robert J. Kegerreis Distinguished Professor of Teaching and won seven different teaching awards over the years at Wright State. In 1998 he received the CMA Catalyst Award for Outstanding Teaching of College Chemistry. Dr. Fortman received his B.S. from the University of Dayton in 1961 and his Ph.D. in physical inorganic chemistry from the University of Notre Dame in 1965. He has published over 50 papers in chemical education in addition to his research publications. With Rubin Battino he has produced a seven DVD set which contains ten hours of chemical demonstrations for use at middle school through college levels plus a live show and blooper outtakes. For over 30 years he has done chem demo outreach shows for middle and high school students in the Dayton area and continues to inspire and fascinate over 8000 students each year with at least 19 shows. He has done workshops on teaching and demonstrations around the country. He has designed

alternative courses for general chemistry, elementary chemistry and chemistry for elementary education majors. His course for non-science students was cited as a model in the 1990 AAAS report on "The Liberal Art of Science: Agenda for Action". The alternative general chemistry course was developed while he was a member of the General Chemistry Task Force of the ACS Division of Chemical Education and starts with organic and biochemistry moving through materials and finishing with energy while empathizing applications and bringing in only those principles that are needed as they are necessary. The course has been characterized as being taught inside-out, upside-down, and backwards. His interests in addition to demonstrations and course content and organization include the use of analogies and videotaped material. John has been an ACS member since 1962 and was Councilor for the Dayton Local Section from 1996 to 2004. Since he became an ACS Tour Speaker in 1991 he has given over 356 section talks, visiting 170 of the 190 different local sections while doing 76 tours including all 29 different tours at least once. He has presented in all 50 states and Puerto Rico.