The Blue Ridge Chemist

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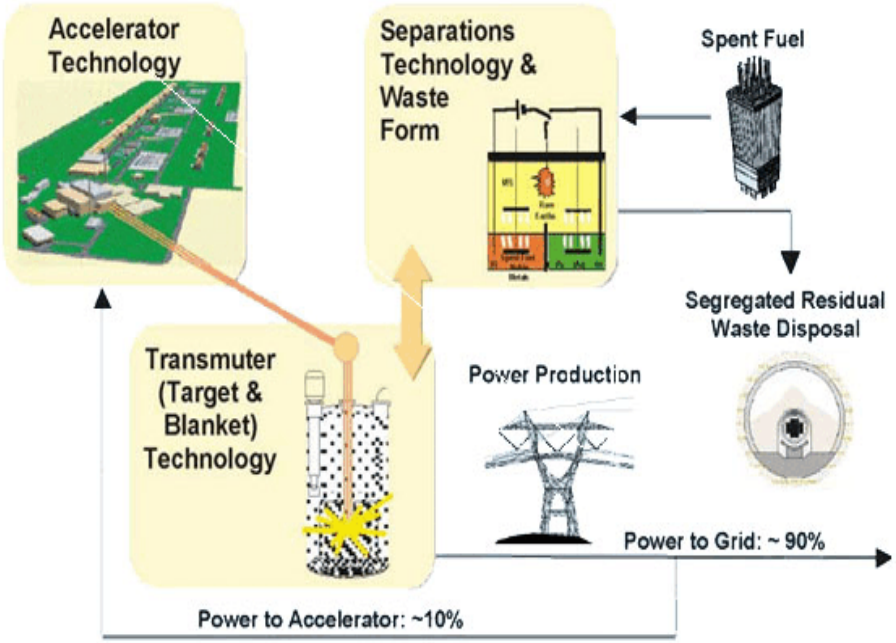

Dr. George Lester received the Gene Wise Award

Virginia Military Institute Hosts the March Meeting

http://membership.acs.org/V/VBR

VIRGINIA BLUE RIDGE SECTION
AMERICAN CHEMICAL SOCIETY

615th SECTION MEETING
Hosted by Virginia Military Institute

Tuesday, March 25, 2008

PROGRAM:

5:30-6:30	Social Time, lounge of Moody Hall
6:30-7:30	Dinner, Moody Hall Activities Room
7:30-8:30	Talk, Moody Hall Activities Room

The social time will take place in the lounge area (top floor) of Moody Hall, and the dinner and talk will take place in the Activities Room of Moody Hall. Dr. George R. Lester will be talking on "Alternative Energy Sources for the 21st Century: Some Myths (Misses) and a Hit".

Dinner will be beef burgundy with rice, vegetarian lasagna, Caesar salad, green beans Almandine, Italian vegetable medley, rosemary roasted potatoes, German chocolate cake, rolls, and iced tea, coffee. Cost for the dinner is $14.00, with students and retired ACS members being half price.

Reservations for the dinner must be made by WEDNESDAY, MARCH 19, SIX DAYS before the meeting, by contacting Anita Cruze at 540-464-7244, or by e-mail to cruzeaf@vmi.edu, or by mail to Anita Cruze, Department of Chemistry, 303 Science Hall, Virginia Military Institute, Lexington, VA 24450.

Cover adapted from A Roadmap for Developing Accelerator Transmutation of Waste (ATW) Technology, A Report to Congress, DOE/RW-0519, October 1999. http://128.138.136.233/about_us/archives/projects/gccs/2002/jvc/pdf-docs/doe_rw-0519.pdf

Alternative Energy Sources for the 21st Century: Some Myths (Misses) and a Hit

The presumed national goals of increasing energy independence and decreasing greenhouse gas emissions have stimulated the production of corn for fermentation to ethanol for use as a motor fuel, as well as the production of biologically derived fuels by processes including fermentation. (It will be suggested that these processes are mainly converting coal to a liquid auto fuel by an agricultural route instead of the conventional coal conversion processes such as those used by the Germans during World War II.)

These goals have also justified a national campaign (Crusade?) for fuel cell vehicles, operating on hydrogen 'which do not need gas or oil' and which is the 'most available element in the world', emitting nothing but 'pure' water vapor, fueled by the (non-existent) 'Hydrogen Superhighway of fuel cell filling stations' envisioned by California Governor Schwartzenegger.

These mythologies will be considered and perhaps even debunked somewhat. It will be suggested that the increasing (scarcity?) price of oil over the next decades will lead to fuels produced from coal and also cause an increase in the percentage of gasoline and diesel hybrids. Eventually the price will reach the levels where electricity from solar, wind (indirect solar), and clean-and-safe nuclear, delivered to battery powered autos by conventional transmission lines, will be the major source of our mobility.

Accelerator Driven Transmutation Technology for the profitable conversion of long-lived nuclear waste products, for electric power generation from thorium, and for production of tritium by a fail-safe process is now in development here and across the world. This technology has the potential to be a significant source of our energy in the coming decades, well before fusion processes become important.

Dr. George R. Lester
Adjunct Professor, Northwestern University,
and President, George Lester, Inc

Dr. George R. Lester, President of George Lester, Inc., is a consultant on catalysts in environmental and energy conservation applications. He is also an Adjunct Professor in the Center for Catalysis and Surface Science of Northwestern University, Evanston, Illinois. Dr. Lester retired in 1996 as Senior Research Fellow at AlliedSignal after almost thirty-eight years with AlliedSignal, Signal Companies, UOP, and Universal Oil Products Company. He is known internationally for his contributions to heterogeneous catalysis - most notably for his involvement in the development of the original automotive exhaust catalysts and for extensions of that technology to create new business opportunities in environmental, air purification, and energy-conservation applications. He holds 46 US Patents and has authored over 50 technical publications. He chaired the Gordon Research Conference on Catalysis in 1991, and in 1992 was elected a Fellow of the Society of Automotive Engineers for his contributions to automotive exhaust emissions control. He represented AlliedSignal on the White House Policy Dialogue Committee to Reduce Automobile Greenhouse Emissions in 1994-5. He was awarded the 2002 E. V. Murphree Award in Industrial and Engineering Chemistry by the American Chemical in April, 2002. Dr. Lester was a pioneer in the development of catalysts designed to destroy all three of the noxious auto exhaust pollutants (carbon monoxide, hydrocarbons and nitrogen oxides), and developed one of the earliest catalysts (LEANOX™) for destruction of nitrogen oxides in the exhaust of fuel-lean automotive and stationary engines. He was a key player in programs leading to catalysts for protection against chemical warfare attack, and is one of the inventors of the very lightweight catalytic converter that is being used for removal of ozone from the cabin pressurization air on the Boeing 777 and other airliners. Dr. Lester is a 1954 graduate of Berea College, and received the M.S. and Ph.D. degrees in Physical Chemistry from the University of Kentucky in 1956 and 1958, respectively.

Dr. George R. Lester is the recipient of the Gene Wise Award in Chemistry, Biochemistry and/or Chemical Engineering

Professor Gene Wise served on the faculty of the Virginia Military Institute for thirty-six years, five of them as head of the Chemistry Department. Prior to that he completed his undergraduate studies at Capital University and received his doctorate from Case Western Reserve University in 1950. He served in the United States Navy during both World War II and the Korean conflict. While at VMI, Dr. Wise taught physical chemistry and industrial chemistry as well as his share of general chemistry, guiding the freshman course for engineers for many years. His availability and willingness to help cadets was a hallmark for his career at the Institute. He was also actively involved in chemical research both for industry early in his career and then guiding students from area colleges in VMI's summer research program.

As a recipient in 1983 of the Distinguished Service Award from VMI, Dr. Wise was recognized for his many years of service to VMI and to the community. This effort included more than 32 years as chairman or co-chairman of the Rockbridge Christmas Basket Program, aiding the needy of the area for half his life. Additionally, he served as chairman of the Rockbridge Chapter of the American Red Cross for 22 years, and for 12 years he headed VMI campaigns in the support of United Way as well as the American Cancer Society. Colonel Wise worked with the Boy Scouts for many years and served in a number of different capacities. He was President of the Rotary Club and founded an affiliate organization, the Interact Club, at Lexington High School. Colonel Wise was posthumously awarded the Clara Barton Award from the Red Cross in 1986 (the highest award given to volunteers) and the Paul Harris Fellow Award from the Rotary Foundation of Rotary International for furtherance of understanding between peoples of the world in 1990.

His interest in and dedication to the Virginia Blue Ridge Section of the American Chemical Society was evident in his willingness to serve as an officer for several years, leading up to his chairmanship in 1963. He then served as Alternate Councilor from 1966 to 1974 and then as Councilor for the rest of his career.

Sixteenth Annual Undergraduate/High School Poster Session

The Virginia Blue Ridge Section of the American Chemical Society is sponsoring its sixteenth Annual Undergraduate/High School Poster Session as a part of the April 17, 2008 meeting at Radford University. Poster boards will be provided.

If you have a student or students, who will be participating, submit the following information by e-mail to Chris Hermann (chermann@radford.edu) by April 1, 2008. All students and faculty will get e-mail confirmation.

Name of Project: _____

_____

Name(s) of Student(s): _____

Affiliation (name of high school, college, or university): _____

_____

Class of Student(s) (freshman, sophomore, junior, senior): _____

Student(s) e-mail address: _____

Advisor's Name, Address, Telephone Number, and e-mail address:

_____

_____

_____

_____

Poster board with tripod or table will be provided. Please specify what you need

___ poster board (size of poster is _____ in wide by _____ in high)

___ table needed

Directions to Virginia Military Institute

Take Exit 188B off I-81 onto Route 60 west, continuing into Lexington. At the 6th light turn right on Main Street and immediately move to the left lane. Go three blocks and make a hard left turn onto Jefferson Street. Immediately move into the right lane and turn right onto Letcher Avenue. Proceed to the VMI Parade Ground. Moody Hall is on the left corner. Parking is available in front of the building. Social time, dinner and talk are in the Activities Room of Moody Hall.

Map of VMI

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Salem, VA 24153
Permit No. 31

THE BLUE RIDGE CHEMIST
Vern Miller, Editor
Roanoke College
Salem, VA 24153

The next Blue Ridge Section meeting will be Tuesday, April 17 at Radford. The speaker will be Dr. Justin Barone, speaking on "Building Biopolymer Structures from Protein Building Blocks". The contact person is Chris Hermann.