



NEWSLETTER

Oklahoma Section

American Chemical Society

Volume 15 Number 5

<http://membership.acs.org/O/Oklahoma/>

October 1, 2009

Chemistry and Biochemistry Of Coffee

Saturday - Oct 24, 2009

Java Dave's

10 NE 10th Street

Oklahoma City OK

405.236.0272

Dr. Joe A Vinson

Professor of Chemistry

The University of Scranton

Scranton PA 18510-4626

Did you know that every day over 11 billion cups of coffee are drunk, making coffee the number two beverage consumed here on Earth? That coffee is also the second most valuable commodity after oil? This talk will examine the fascinating history of coffee from its beginnings in prehistoric time, interesting mythologies, and the reasons for its popularity in various cultures. The botany of the coffee plant, its cultivation in over 50 countries, the chemistry of the coffee bean, and the roasting process will be discussed. We will examine some of the more than 1000 chemical compounds that give coffee its aroma, taste and potential health properties. Caffeine, an important ingredient, will be scrutinized as to its positive and negative attributes. The biochemistry of the polyphenolic antioxidants in coffee will be featured and related to disease. Finally the health aspects of this amazing and complicated beverage will be discussed which will include mental acuity, physical performance, and disease prevention. Some important questions about coffee will be answered. Should I take it before a test? Will it help me be better in exercise and sports? Is coffee good for me, and how much is too much?

[Reservation Information on Page 2] 

Schedule:

3:00 PM – 4:00 PM Social Hour: Java Dave's
10 NE 10th Street
Oklahoma City OK
<http://www.javadavescoffeeokc.com>.

4:00 PM – 5:00 PM Presentation: Large Meeting Room Upstairs

Menu: Coffee and food is available at the coffee bar.

Cost: No Cost – Free Admission-

Deadline: NO RSVP Required

Joe A. Vinson was born in Arkansas and grew up in the San Francisco Bay area. He attended college at the University of California at Berkley, where he received his B.S. in chemistry in 1963. He received a M.S. degree (in physical organic chemistry) at Iowa State University in 1966. He received a research assistantship at the Ames Lab of the Atomic Energy Commission at Iowa State and received a Ph.D. in organic and analytical chemistry in 1967 under the direction of Dr. James Fritz. After several teaching positions in Pennsylvania and a two-year stint in industry at J. T. Baker Chemical Company, he returned to academe and is now a professor of chemistry at the University of Scranton in Northeastern Pennsylvania. His research has been featured in Prevention, Psychology Today, Consumer Reports, AARP, Tufts Health & Nutrition Newsletter, US News & World Report and lampooned in a cartoon in Time magazine. He has appeared on TV-Good Morning America Sunday and radio-NPR All Things Considered and The Peoples Pharmacy, as well as being mentioned by Jay Leno and Rush Limbaugh. Dr. Vinson is the author of over 70 publications. His research interests are wide-ranging and include drug analysis in physiological fluids and the effect of vitamins, minerals, and antioxidants on nutrition and health.

Fellow Oklahoma Section ACS members:

We have begun work to update the section's bylaws. As you may or may not know, our bylaws were last updated in 1977. A bit of history will be helpful here. Our section made and submitted (9 Aug 2000) changes to our bylaws to ACS to bring them into alignment with the prevailing ACS recommended language. This process can be a bit protracted-the bylaws are a legal document. ACS responded [02 May 2001] with suggested changes. By then the principals involved in the changes had moved on, so the project languished. The next required steps are: to adopt/refute the suggested changes, get final approval from ACS, and finally submit the new bylaws to a vote of our membership. Over the intervening years, attempts had been made to finish the process, but the circle was never closed. This year, the ACS recommended language has again changed, which requires us to redraft our bylaws changes to reflect these changes. At the Executive Committee meeting [OBU, 18 Sep 2009] Chuck Rice agreed to chair the bylaws committee. We would like to have the proposed revisions finalized for Executive Committee approval and submission to ACS summer 2010.

Lloyd Bumm, Oklahoma Section ACS Chair 2009.

Section Election

Nominations for Section officers are open: [1] Chair-Elect; [2] Secretary; [3] Alternate Councilor (2 years; 2010-2011)].

Please send nominations to:

Lloyd Bumm – Section Chair or Allen Apblett – Nominations Chair

bumm@nhn.ou.edu

apblett@okstate.edu

Hot Job: Calculating Products' Pollution

Excerpts from a 09/01/09 WSJ front page story

Until a few years ago, Nuno da Silva's arcane occupation – professional pollution calculator – was of little utility to the corporate world.

But in these days of global-warming worries and greener-than thou marketing, companies suddenly can't get enough of his services. Revenue in the division he manages exploded 150% in 2008 and continue to expand this year, despite the recession. Since the beginning of 2008, he has added 13 people to is staff, bringing the number of employees to 16.

“We used to be the environmental geeks,” said Mr. Da Silva, who oversees the U.S. Division of a German consulting company **PE International**. “Now we’re mainstream.”

Concerns about greenhouse gases and other environmental hazards have spurred governments and companies to try to reduce the environmental impact of everything from auto fuels to water bottles. The first step in doing that is to assess the pollution those products impose on the Earth.

Wal-Mart Stores Inc.’s most recent environmental effort – a bid to tag all of its products with information about their environmental impact – will force hundreds of its suppliers to inventory their pollution, which many expect will create a boom for the pollution counting profession.

Enter the growing class of “pollution counters” like Mr. da Silva. Using computer models, they process information about the energy and resources consumed by making, using and disposing of a product. At each stage, a product’s effects on the soil, water and air are tracked to come up with what is known as a life-cycle assessment.

At chemical maker **DuPont Co.**, the in-house group that does life-cycle assessments has grown from three members to 10 in the past six years.

Although life-cycle assessment have been around since the 1970s and are fairly common in Europe, the practice has taken off in the U.S. only in the past few years, industry experts say.

But sometimes pollution counters find that just doing a calculation has little effect. For example, a life-cycle assessment done for consumer products giant **Unilever** found that smaller bottles of more-concentrated laundry detergent would save water, reduce packaging material and cut greenhouse-gas emissions from transportation.

But consumers continued to choose bigger bottles, which they assumed were a better value, said Gavin Neath, senior vice-president of global communications and sustainability at **Unilever**.

Only after Wal-Mart banned nonconcentrated detergents from its shelves did **Unilever** make inroads with its pollution-counter-approved products.

Lockerbie Bomber and Moral Outrage

Two of the letters that appeared in The Wall Street Journal in reference to the August 21, 2009 WSJ story: “A Second Lockerbie Outrage”

Once again, Adam Smith had it right 200 years ago when he said: “*Mercy to the guilty is cruelty to the innocent.*” The Scottish government should have taken another lesson from the Scottish sage.

Don Fisk

Henderson, Nev.

Perhaps the Scots would wish Mel Gibson to do a sequel to “Braveheart.” May I suggest “Meekheart”?

David Elore

Roswell, Ga.

Bon Mots

Margaret Thatcher:

"The problem with socialism is that you eventually run out of other people's money!"

Benjamin Disraeli:

On receiving an unsolicited manuscript:

"Many thanks. I shall lose no time in reading it!"

Henny Youngman:

"When I read about the evils of drinking, I gave up reading."

Kim Williams:

On women's magazines:

"Page one is a diet, page two is a chocolate cake. It's a no-win situation."

Clunkers...

I guess I must be on the wrong page...

- A vehicle at 15 mpg and 12,000 miles per year uses 800 gallons a year of gasoline.
 - A vehicle at 25 mpg and 12,000 miles per year uses 480 gallons a year.
 - So, the average clunker transaction will reduce US gasoline consumption by 320 gallons per year.
 - They claim 700,000 vehicles – so that's 224 million gallons / year.
 - That equates to a bit over 5 million barrels of oil.
 - 5 million barrels of oil is about 1/4 of one day's US consumption.
 - And, 5 million barrels of oil costs about \$350 million dollars at \$75/bbl.
 - So, we all contributed to spending \$3 billion to save \$350 million.
- How good a deal was that?

Oklahoma Chemist Award - 2010

Nominations for Oklahoma Chemist of the Year - 2010 are now being accepted.

Five [5] copies of a single nomination should be sent by no later than January 22, 2010 to:

Dr. K. Darrell Berlin-Chair
Oklahoma Chemist Awards Committee
Department of Chemistry
Oklahoma State University
Stillwater OK 74078
405.744.5950
kenneth.d.berlin@okstate.edu

Criteria and Guidelines for the Preparation of the Nomination and For Selection of the Recipient of The Oklahoma Chemist Award.

1. A nomination letter for the candidate by a colleague, friend, etc.
2. A complete, up-to-date resumé of the candidate.
3. A two-page "highlight" of the candidate's major accomplishments.
4. Five [5] letters of support for the nominee.
 - [a] Two [2] letters from colleagues at the candidate's place of employment.
 - [b] Three [3] letters from outside the candidate's place of employment. Letters from individuals with expertise in the candidate's field are especially welcomed.
1. Special information on the candidate is also solicited, especially as to how the candidate has advanced chemistry in the state of Oklahoma.
2. Candidates may be involved in research or in chemical education within the state.

kdb 

the Kilowatt August 2009

Published monthly for members of Kiwash Electric Cooperative

What are the alternatives to fossil fuel electric generation? We believe wind generation is a positive energy source, but **it is not a dependable source for all of our electricity requirements**. For those of you who believe wind is the future, please remember these facts:

- Today's wind generators operate only 32% to 38% of the time, when you consider we consume electricity 24 hours per day, 365 days per year. That leaves a lot of gaps to be filled.
- Even with a generous federal tax credit for home wind generators, the payoff for this type of equipment usually takes about 15 years. Without tax credits it takes approximately 27 years to pay off.
- The **newest wind generation**, which is being purchased for your consumption, **is approximately twice the wholesale cost of our present fossil fuel generation**.

Turbines are expensive.

One disadvantage of wind turbines is the cost. They aren't cheap and can take years to pay off.

A rule of thumb is wind turbines cost from \$3,000 to \$7,000 per kW. The price actually goes down as the turbines grow in size, but the price will still be steep. Overall, a unit can cost as much as \$25,000 to \$35,000, and if wind in the area is good, payoff can still take many years. The actual payoff time will depend on the owner's monthly kWh use.

But for those who can afford a personal wind turbine, the payback can be good, whether it's for living a more "green" lifestyle or simply to save money on utility bills in the long run.

The reprinted letters and articles as well as the editor's unsigned article[s] in this Newsletter do not necessarily reflect the views of the Oklahoma Section of the ACS.

Oklahoma Section ACS 2009 Calendar of Events:

Visit the Oklahoma ACS WWW site for the latest information.

<http://membership.acs.org/O/Oklahoma/>

October 18 – 24, 2009

National Chemistry Week

Friday, November 20, 2009

Local Section Meeting

University of Central Oklahoma - tentative

Mr. J Keith Butler – American Ordnance LLC, Trenton TN

Military Explosives

October 2009 Section Meeting

Saturday, 24 October, 2009

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10 NE 10th Street
Oklahoma City OK
405.236.0272**

Chemistry And Biochemistry Of Coffee ...

Oklahoma ACS 2009 Calendar Of Events – Other Side This Page .



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