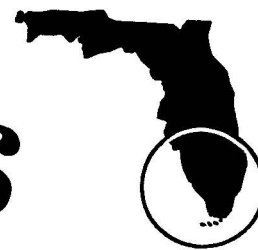




SoFlacs



Vol. 23, No. 2

South Florida Section ACS

April 2013

Section Seminar Meetings

Friday, April 12, 5:00 PM

Miami Country Day School, Smurfit Hall
601 NE 107 Street, Miami

Dimitri Tamalis, Ph. D.

Chemistry Department, Florida Memorial University

**Naturally Occurring Radioactive Materials (NORM)
From a Texas Oil Site**

Naturally occurring radioactive materials (NORM) contain radionuclides, such as radium, thorium, and uranium. The existence of naturally occurring radioactive materials remains an issue for oil and gas exploration because once the material becomes concentrated through human activity, it becomes a radioactive contamination hazard or radioactive waste. The naturally occurring radioactive elements dissolve in low concentrations, but are spread over a large volume of material, usually contaminated soil. Pipes and tanks used to handle large volumes of produced water at some oil-field sites are coated with scale deposits that contain radium. This work determined the concentrations of heavy metals linked with NORM. Experiments were conducted using epithermal and thermal neutron activation analysis (NAA) and Compton suppression for radioactivity counting. Results have confirmed the presence of elevated amounts of ²²⁶Ra, ²²⁸Ra and other metals along with their decay products in radioactive scale, soil, and solid.

Friday, May 3, 5:00 PM

FMU-FIU auditorium, Florida Memorial University
15800 NW 42nd avenue, Miami Gardens

Joseph Graham, M.S.

The Nuclear and Radiation Engineering Program
The University of Texas at Austin

**Nuclear Chemistry: A Synthesis of Radionuclides and
Analytical Chemistry**

Analytical chemistry has played an important role in nuclear science and technology ever since the earliest radiation experiments were conducted at the turn of the century. The isolation and discovery of many actinides and other synthetic elements were made possible through the combined use of nuclear reactors, separation chemistry and radiation detection techniques. Separation chemistry has also played a crucial role in the evolving nuclear industry, both in reducing mixed radioactive wastes and recycling spent nuclear fuel. The subfield of radiation chemistry - the study of the physicochemical effects of ionizing radiation - was largely born out of the need to explain the biological effects of radiation as well as corrosion processes in nuclear reactors. Complimentary to the use of analytical chemistry in nuclear fields, the properties of radionuclides have been employed in the development of radiochemical techniques; techniques that use radiation measurements to non-destructively quantify elements and compounds in a specimen. This seminar is intended as a primer on the properties of radionuclides and various aspects of nuclear chemistry as applied to science and industry.

S O F L - A C S A W A R D S B A N Q U E T

Saturday, April 20

6:30 PM Reception and Poster Session

7:00 PM Dinner and Awards

Wolfe Student Center Room 223, FIU Biscayne Bay Campus
3000 N.E. 151st Street, North Miami

Cost: \$30.00 ACS members & guests; \$15.00 Students

Send reservation form with check payable to SoFL-ACS by

Monday, April 15 to:

Dr. Leonard Keller, Department of Chemistry
FIU University Park Campus, Miami, FL 33199
FAX 305 348-3772, kellerl@fiu.edu

Name _____

Address _____

School if _____
a student _____

Number of reservations: _____ @ \$30.00 = \$ _____

_____ @ \$15.00 = \$ _____

Total enclosed \$ _____

SOUTH FLORIDA CHEMISTRY OLYMPIAD

During March, over 300 high school chemistry students participated in the National Chemistry Olympiad qualifier exam administered at Nova Southeastern University (Dr. Vic Shanbhag), FIU-Biscayne Bay (Dr. Milagros Delgado), Cypress Bay High (Clara Russo), Pincrest School (Cheryl Doolittle), South Fork High (Donna Fitzpatrick), Marjory Stoneman Douglas High (Teresita Chipi), and Dr. Michael Crop High (Carlos Montero). Based on the results of that exam, 12 students qualify for the next round: the nationwide National Chemistry Olympiad (NChO) exam and lab practical that will be held on Sunday, April 14 at Nova Southeastern University. Based on those results, 20 students nationwide will be selected to go to an intense three-week training camp at the US Air force Academy in Colorado Springs. Four will then be selected to go on to International Chemistry Olympiad (IChO), July 15-24, 2013 in Moscow, Russia. Congratulations to the following South Florida students (and their chemistry teachers) who qualify to take the national exam:

| <u>Student</u> | <u>High School</u> | <u>Teacher</u> |
|-----------------------|------------------------------|----------------------|
| Vineet Nadkarni | St. Andrew's School | Paula Martin |
| Daniel Galvez | Cypress Bay High School | Clara Russo |
| Yujia Zhou | Miami Palmetto High School | Yuria Sharp |
| Samuel Kerr | Boca Raton High School | Sana Ahmed |
| Netgie Laguerre | Dr. Michael Krop High School | Carlos Montero |
| Qiwei Lin | Dr. Michael Krop High School | Jack Trafon |
| Richard Li | John A. Ferguson High School | Nattalia Guevara |
| Sanchit Bhattacharjee | John A. Ferguson High School | Nattalia Guevara |
| David Graff | Pine Crest School | Dagmara Podkosielyny |
| Christoph Sachse | Pine Crest School | Wendy Harrigan |
| Nicholas Gloria | Deerfield Beach High School | Heidi Hester |
| Harshath Gupta | American Heritage School | Dawn Gregor |

CONGRATULATIONS

The following persons have achieved the remarkable milestone of 50 or 60 years as ACS membership and will be honored at the awards banquet:

60-Year Members

Mrs. Maureen F. Bonanno.....Naples
Mr. Richard J. Haberlin.....Naples
Mr. Anton A. Komarek.....Port Charlotte
Dr. Milton J. Linevsky.....Coconut Creek
Mr. Richard W. Robertson.....Bonita Springs
Dr. Ramon F. Rolf.....Bonita Springs
Dr. Carl Snyder.....South Miami
Mr. Theobaldo Tames.....Coconut Creek
Mr. Victor H. Weiss.....Boynton Beach
Mr. Harold J. Zabsky.....Miami
Dr. Harold Zinnes.....Wellington

50-Year Members

Dr. Robert J. Bianchi.....Boynton Beach
Dr. Francis A. Daniher.....Bonita Springs
Dr. R. Bruce Dunlap.....Miami Shores
Dr. Paul Ellgen.....Fort Myers
Dr. Abraham N. Fenster.....Lake Worth
Mr. David M. Florence.....Boynton Beach
Dr. Paul F. Guehler.....Naples
Dr. Arthur W. Herriott.....Miami
Dr. James A. Kennelley.....Tequesta
Mr. Paul U. Labine.....West Palm Beach
Dr. Steven A. Roman.....Miami
Dr. Douglas B. Seba.....Key West
Dr. Robert E. Servis.....N. Miami Beach
Dr. Kathleen C. Taylor.....Fort Myers
Mr. Barry Topcik.....Tamarac
Ms. Beatrice Goldschmidt Werden.....Boca Raton

CONGRATULATIONS TO:

the ACS Student Chapters at Barry University, FIU-University Park and FIU-Biscayne Bay each for being selected as ACS "Award Winning" Student Chapters for the many various chemistry related activities and community service programs that they performed in the 2011-2012 academic year. These chapters will be recognized and honored on April 7, at the ACS national meeting in New Orleans.

ACS SCHOLARS FROM SOUTH FLORIDA

Since 1995 the ACS Scholars Program has awarded \$10 million in direct scholarships to more than 2500 underrepresented students in the chemical sciences with excellent academic records and financial need. African Americans comprise 52% of the recipient pool, Hispanic/Latino students represent 42%, and Native American students at 6%. The hallmark of the program is that it strives to find a mentor for each Scholar, coordinated by our own Zaida Morales-Martinez (Mamma Z). As a result, the program retains 80% of the students entering it. It is clear that the ACS Scholars Program has had a major role in literally transforming the face of chemical education. To date, over 1300 students have graduated with a bachelor's degree in a chemical science. Of those students, 44% have gone on to graduate school, 35% have entered the chemical science workforce and 142 have obtained a PhD degree with 192 currently enrolled in PhD programs. The following students from the South Florida Section are currently ACS Scholars for their studies of chemistry or chemically related sciences at their respective universities. Congratulations to:

| | | |
|---------------------|-------------------------|-------------------------|
| Melissa Barona | Chemical Engineering | University of Miami |
| Daniel Lumpuy | Biological Chemistry | Florida International U |
| Julie Marcelus | Chemistry | Florida Atlantic Univ. |
| Kimberlee Osborne | Chemistry | Florida International U |
| Alejandro Krauskopf | Chemical Engineering | MIT |
| Onaje LaMont | Chem & Biomolecular Eng | Georgia Tech |

2013 Officers of South Florida ACS

Past Chair: Dr. Uma Swamy, Department of Chemistry & Biochemistry, FIU, University Park, Miami, FL 33199 (305) 348-2601; swamyu@fiu.edu.

Chair: Dr. Dimitri Tamalis, Department of Health and Natural Sciences, Florida Memorial University, Miami Gardens, FL 33199 (305) 626-0267; dimitri.tamalis@fmuniv.edu

Chair-Elect: Dr. Dimitri Tamalis, Florida Memorial University, Miami Gardens, FL 33054 (305) 626-0267; dtamalis@fmuniv.edu

Secretary: Milagros Delgado, Department of Chemistry, FIU Biscayne Bay, AC1-382A, North Miami, FL 33181, (305) 919-5966; delgadom@fiu.edu.

Treasurer: Leonard Keller, Department of Chemistry, FIU, University Park, Miami, FL 33199, (305) 348-3081; kellerl@fiu.edu.

National Councilors: Zaida Morales-Martinez (2015), (305) 386-3206, moralesz@fiu.edu; Milagros Delgado (2013), FIU, (305) 919-5966, delgadom@fiu.edu; George Fisher (2013), Barry University, (305) 899-3430, gfisher@mail.barry.edu.

Alternate Councilors: George Duncan, Broward County Sheriff's Crime Lab, (954) 831-6147, george_duncan@sheriff.org; Vic Shanbhag, Nova Southeastern University, (954) 262-8331, shanbhag@nova.edu; Michael J. Elliott, Florida Memorial University, (305) 626-3704, melliott@fmuniv.edu.

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EDITOR and BUSINESS MANAGER: George Fisher, Department of Chemistry, Barry University, 11300 N.E. 2nd Ave., Miami Shores, FL 33161, (305) 899-3430, FAX (305) 899-3479; e-mail: gfisher@mail.barry.edu.



AMERICAN CHEMICAL SOCIETY
South Florida Section
Department of Chemistry
Barry University
11300 NE 2nd Ave.
Miami Shores, FL 33161