

HISTORY OF CHEMISTRY – DOES IT MATTER?p. 5

Southwest

RETORT

**December
2009**

TABLE OF CONTENTS

Fifty Years Ago	2
History of Chemistry – Does It Matter?	5
Letters to the Editor	6
Chem Gems & Joules	7
NCW at Tarleton State University	7
Around-the-Area	9
University of Arkansas	9
Heart o' Texas	9
South Plains	9
Dallas-Fort Worth	9
Call for Doherty & Schulz Nominations	9
January D-FW Meeting Notice	11

INDEX OF ADVERTISERS

American Polymer Standards Corp	3
ANA-LAB	4
Huffman Laboratories	3
Minuteman Press	3
University of Texas @ Dallas	8
Texas A&M University-Commerce	3

**!!Be among the first to know
what's happening in D-FW!!**

**Point your browser
to the D-FW Section
Website for**

- **Announcements**
- **Current Events**
- **Meetings**

<http://www.acsdfw.org>

***Sponsor
Members***

**Alcon
Laboratories
OxyChem**

FIFTY YEARS AGO IN THE SOUTHWEST RETORT

The banquet speaker at the ACS Southwestern Regional Meeting held in Baton Rouge Dec. 3-5 was **Dr. Joseph V. Charyk**, Assistant Secretary of the Air Force for Research and Development, speaking on the US missile and space program. The ACS tour speaker for November was **Dr. James R. Arnold** of the University of California at La Jolla.

Newly elected officers of the Dallas-Fort Worth ACS Section are: **Thomas Burkhalter**, Chairman; **Robert Higgins**, Chairman-Elect; **W. R. Foster**, Secretary; **Ed Meyer**, Treasurer; and **Paul Stouffer** and **Henry D. Pope**, Councilors.

At Baylor **Dr. A. G. Pinkus** attended the NMR and EPR workshops at Varian Associates in Palo Alto Oct. 19-23. **Dr. Thomas C. Franklin** attended the 116th meeting of the Electrochemical Society in Columbus, OH 18-22.

Dr. Edward S. Amis of the University of Arkansas was selected as the recipient of the Southern Chemist Award for 1959. This award is to honor distinguished service to chemistry in the South and to focus national attention on the scientific progress of this region. **Dr. Jacob Sacks** lectured at the Medical School of the University of North Dakota on Oct. 12 on the topic "Some Observations on the Mechanism of Insulin Action." The speaker at the first meeting of the U of A ACS Section for the academic year was **Dr. J. L.**

Franklin who talked on "Ion-Molecule Reactions in the Gas Phase."

The new University of Texas Mass Spectrometry Laboratory was dedicated on Sept. 22. The director of the new laboratory is **Dr. James E. Boggs**. The purchase of the Consolidated 21-102 mass spectrometer was made possible by a grant from Amoco Chemicals Corp.

Speakers at Humble's Lectures in Science and Engineering Program for 1959-1960 include **Drs. W. F. Libby, J. H. Hildebrand, Cheves Walling, W. H. R. Shaw, Miklos Hetenyi**, and **Stanley Corrsin**.

****Continued from page 10****

Secretary, **Trish Smith**; Councilor, **Tom Strom**; Alternate Councilor, **Rasika Dias**. Other officers are: **Denise Merkle**, Chair; **Urszula Wettermark**, Past Chair; **Kirby Drake**, Treasurer; **Angela Wilson** and **Linda Schultz**, Councilors; and **Jeff Kelber**, Alternate Councilor.

Meeting-in-Miniature. The 43rd Annual Meeting-in-Miniature will be held on Saturday, April 16, at the UT-Dallas Conference Center. More details will be available in the January issue.

University of North Texas. Dr. Angela Wilson has been appointed to the Editorial Board of the *Journal of Physical Chemistry*. The Davidson Lecturer on Feb. 5 will be Nobel Laureate **Roald Hoffmann**. **Jim** and

****Continued on Page 12****



Southwest Retort

*Published for the advancement of
Chemists, Chemical Engineers
and Chemistry in this area.*

Published by

The Dallas-Fort Worth Section, with the cooperation of five other local sections of the American Chemical Society in the Southwest.

Vol. 62 December, 2009 No. 4

Editorial and Business Offices:

Editor: E. Thomas Strom, 1134 Medalist Dr., Dallas, TX 75232, 214-376-9602; FAX 817-272-3808; tomstrom@juno.com

Managing Editor: Mary Teasdale, PO Box 461051, Garland, TX 75046; 972-276-9376; owlcritic75@yahoo.com

Business Manager: Kirby Drake, 9715 Dartridge, Dallas, Texas, 75238-1827; 214-553-9810; kdrake@fulbright.com

Southwest Retort (USPS 507880) is published monthly, September through May by the Dallas-Ft. Worth Section of the American Chemical Society, Inc., for the ACS Sections of the Southwest Region. Subscription rates are \$3.24 per year. Periodical postage paid at Dallas, Texas. **POSTMASTER:** Send address changes to American Chemical Society, Southwest Retort, Box 3337, Columbus, Ohio 43210.

Elemental Analysis

CHNOS Ash
ICP · AA · ICP/MS
TOC · TOX · BTU
Problem Solving

HUFFMAN

LABORATORIES, INC.
Quality Analytical Services Since 1936

Phone: (303) 278-4455
FAX: (303) 278-7012
chemistry@huffmanlabs.com
www.huffmanlabs.com



- Full Color & BW Printing
- Business Cards
- Letterhead
- Envelopes
- Flyers
- Carbonless Forms
- Booklets
- Postcards



972.313.3428

mmpirv@flash.net

www.irving.minutemanpress.com

**Minuteman Press of Irving
proudly supports and
prints the Southwest Retort**

Texas A&M University-Commerce Quality Chemistry

The advantages of a small college
at a major national university

www.tamu-commerce.edu

- * GPC/SEC Analysis * GPC/SEC Polymer Standards
* GPC/SEC Columns * Waters™ 150C Parts

Request your free catalog online

www.ampolymer.com

American Polymer Standards Corporation

8680 Tyler Blvd., Mentor, OH 44060

Phone: 440-255-2211 Fax: 440-255-8391

22 Ti 47.867	23 V 50.942	24 Cr 51.996	25 Mn 54.938	26 Fe 55.845	27 Co 58.933	28 Ni 58.69	29 Cu 63.546	30 Zn 65.38	31 Ga 69.723	32 Ge 72.64	33 As 74.922	34 Se 78.96	35 Br 79.904
40 Zr 91.224	41 Nb 92.906	42 Mo 95.94	43 Tc (98)	44 Ru 101.07	45 Rh 101.07	46 Pd 106.90	47 Ag 107.87	48 Cd 112.41	49 In 114.82	50 Sn 118.71	51 Sb 121.76	52 Te 127.60	53 I 126.90
72 Hf 178.49	73 Ta 180.95	74 W 183.84	75 Re 186.21	76 Os 190.23	77 Ir 192.22	78 Pt 195.08	79 Au 196.97	80 Hg 200.59	81 Tl 204.38	82 Pb 207.2	83 Bi 208.98	84 Po (209)	85 At (210)
104 Rf (261)	105 Db (262)	106 Sg (266)	107 Bh (264)	108 Hs (277)	109 Mt (268)	110 Ds (271)	111 Rg (272)	112 Cn (285)	113 Nh (286)	114 Uuq (289)	115 Fl (289)	116 Lv (293)	117 Ts (294)
57 La 138.91	58 Ce 140.12	59 Pr 140.91	60 Nd 144.24	61 Pm (145)	62 Sm 150.36	63 Eu 151.96	64 Gd 157.25	65 Tb 158.93	66 Dy 162.50	67 Ho 164.93	68 Er 167.26	69 Tm 168.93	70 Yb 173.04

ANA-LAB

CORP.®

THE COMPLETE SERVICE LAB

Quality Analytical & Environmental Services Since 1965

ANA-LAB CORPORATION
2600 Dudley Road • P. O. Box 9000
Kilgore, Texas 75663-9000
903-984-0551 • Fax: 903-984-5914
www.ana-lab.com • Email: corp@ana-lab.com

Ana-Lab Corporation is an employee-owned organization which provides superior, innovative and cost effective solutions for clients through exceptional science, processes and people. With a staff of experienced, professional and talented chemists and technicians supported by sophisticated laboratory testing equipment, Ana-Lab is the preferred environmental testing laboratory serving clients nationwide.

Regional Service Centers

Amarillo, TX
 806-355-3556 • Fax 806-355-3773
 Email: panhandle@ana-lab.com

Dallas, TX
 972-620-8900 • Fax 972-620-8902
 Email: northtexas@ana-lab.com

Austin, TX
 512-821-0045 • Fax 512-821-0237
 Email: centex@ana-lab.com

Brownsville, TX
 956-831-6437 • Fax 956-831-6438
 Email: rgvtex@ana-lab.com

Houston, TX
 281-333-9414 • Fax 281-333-9614
 Email: gulfcoast@ana-lab.com

Norman, OK
 405-292-6630 • Fax 405-292-3676
 Email: oklahoma@ana-lab.com

Shreveport, LA
 318-219-9300 • Fax 318-219-8300
 Email: arkla@ana-lab.com

Madison, AL
 256-461-0500 • Fax 256-461-0501
 Email: alabama@ana-lab.com



Southwest Retort

SIXTY-SECOND YEAR

December 2009

HISTORY OF CHEMISTRY – DOES IT MATTER?

Opinion by E. Thomas Strom

The ACS Division of the History of Chemistry (HIST) doesn't get much respect. Their sessions at ACS meetings are off in a corner somewhere in small, cramped meeting rooms, because the audiences are usually small. The picture that most chemists have of people in HIST is that of older guys who are not active in research. As Chair-Elect of HIST, I fit that profile all too well. I am 73 years old, and my last research paper was published in 2003 (but I am working on another ESR paper for publication). However, HIST has a history of 87 years as an ACS Division, so through the years a number of people have continued to feel that the history of chemistry is important. Present day chemical researchers are creating chemical history every day. J. L. Mack told Jeff Seeman (*Bull. Hist. Chem.*, **32**, 87-96 (2007)), "Every journal, as soon as it's published, is history of chemistry." I

believe that every reader of this magazine, whether he/she is a working chemist or a chemical student, continues to create that history.

This has been hammered home to me in recent months, because I have been reading the first drafts of a history by old friend, Professor Edward G. Janzen, retired Chair of Chemistry at the University of Guelph, Guelph, Canada. Janzen was a chemistry professor at Georgia prior to moving to Guelph and was a co-discoverer of the spin trapping technique. He and I were in graduate school at Iowa State at the same time, working on our Ph.D.s in free radical chemistry under Glen Russell. Ed's book deals with his graduate studies at Iowa State, and he thinks that a picture of what it meant to be a graduate student in the '60's would be of interest to present-day graduate students and young faculty. As I read the drafts, I realized that this was a

history of an important transition time in free radical chemistry. Before the discovery of electron spin resonance (ESR) spectroscopy, most free radical analyses were indirect, relying on product analyses. ESR allowed one to see and identify free radicals directly, both qualitatively and quantitatively. Both Ed and I had the privilege of making seminal discoveries in free radical chemistry, as we pioneered the use of the wonderful new tool. However, paradigm changes are still with us, and I am sure that some of our readers are involved in these new chemistry discoveries. In future years, you may have a chemical history to tell, and HIST symposia and journals are the places to tell it.

At its best, a HIST paper or symposium is like a good *Chemical Reviews* paper, except the people making the discoveries are personalized and highlighted. Let me give a final example of a HIST paper of a type you are unlikely to see at an organic or physical chemistry symposium. I refer to the 30 minute film *Haber*, which was one of the papers given in the HIST sessions last August. You probably know that German chemist Fritz Haber was the person who originated chemical warfare. The arguments used by the German military to convince Haber to initiate chemical warfare were remarkably like those used to justify the use of the atomic bomb. Haber's wife, herself a chemist, was distressed by these events and killed herself. The writer-director Dan Ragussis was there to answer questions afterwards about this dramatic film. It's surpris-

es like these at HIST symposia that keep me interested in the history of chemistry. The next time any of you readers attend an ACS national meeting, attend a few HIST papers. You may find yourself unwilling to leave.

Letters to the Editor

Dear Editor:

I am writing to complain about the biased reporting in *The Retort*. I have found it difficult to stomach that whereas the ACS has taken the laudable stance for the first time to honor outstanding people that have served the ACS well as ACS Fellows, *The Retort* has failed to fully report to its readers about these fellows. I am especially concerned about my colleague here at the University of Texas at Arlington who has been so honored but *The Retort* has remained especially quiet.

I am writing about a gentleman who got his BS in chemistry in 1958 from the University of Iowa, his MS in nuclear chemistry from Berkeley in 1961, and then went on to get a Ph.D. in physical organic chemistry from Iowa State in 1964. He joined the Mobil Corp. as a researcher in petroleum geochemistry but was soon borrowed by the Army for a stint of two years. Upon return to Mobil, he spent the next dozen years as a research scientist becoming an expert in the use of mass spectrometry and NMR in petroleum exploration. He continued to work for Mobil in very many different areas -- among them uranium solution mining, underground coal recovery, polymer-enhanced oil recovery, profile control, and sand consolidation.

His work resulted in 25 US patents and many publications. He retired from Mobil in 1995.

Immediately upon his retirement and until now he has continuously taught organic chemistry at UT-Arlington. He has won the Doherty Award of the ACS D-FW Section in 1989, been Membership Chair of the D-FW Section for two separate periods, 1969-72, 1980-84, chaired the D-FW Section (1975), chaired the Awards Committee (1982), chaired Publicity and Printing for the ACS Regional Meeting (SWRM) in 1984 and chaired Public Relations for SWRM in 2004. He has been a Councilor for the D-FW Section twice, 1974-76 and a current tenure starting in 2004 that is still continuing. He has been serving on the ACS Committee on Economic & Professional Affairs since 2005. He is Chair-Elect of the ACS Division of the History of Chemistry for 2009-

2010. He is one of the most popular organic chemistry professors at UT-Arlington, and I am very grateful to have him as a colleague.

That is why I am writing to complain about the silence of *The Retort*. Obviously modesty has blinded his unbiased reporting skills, and he has kept you poorly informed of this singular honor that has been bestowed on him (and a small handful of others). Ladies and Gentlemen, please join me in congratulating my colleague, your Editor of *The Southwest Retort* for the past 25 years, Edwin Thomas Strom, for being among the first round of ACS Fellows. Well done and well deserved, Tom!

Sincerely yours,
Sandy Dasgupta,
Chair, Chemistry and Biochemistry,
UT-Arlington

CHEM GEMS & JOULES

National Chemistry Week at Tarleton State. The theme of National Chemistry Week (NCW) was The Elements, and the Tarleton State student affiliate chapter worked that theme hard. From Monday, Oct. 19 until Saturday, Oct. 24, they hung a large banner in the lobby of the Science Bldg. They sold popcorn all week with proceeds going to the American Cancer Society Relay for Life, raising \$60. The Oct. 22 meeting involved last minute planning for the cupcake baking and other NCW activities. That day also featured seminar presentations with theme "Tarleton Science Students Today —

Science Legends Tomorrow." Speakers were **Dr. Robert Fain**, Professor and Provost Emeritus, and undergraduates **Laura Rogers**, **Eric Poindexter**, and **Cliff Terrel**, who spoke about their research projects. On that same day from 6-10 p.m. they baked 150 cupcakes at the Sr. Citizen's Center. In return for use of the giant oven, the students agreed to help serve at the Veteran's Day Lunch Nov. 14.

On Friday, Oct. 23, the "**Periodic Table of the Cupcakes**" was featured at the Annual Mole Day Bake Sale from 8 a.m. to 2 p.m. The

****Continued on Page 12****

The University of Texas at Dallas Department of Chemistry

***Ph.D. with strengths in Nanotechnology,
Materials Science and Polymers***



***Stipend/Tuition Packages starting
at \$29,000/yr***

**Alan G. MacDiarmid
NanoTech Institute**

**Award winning
faculty**

***Excellence Fellowship
Opportunities***

UTD is a diverse and exciting research community where individualized one-on-one mentoring is the norm and scientists tackle major problems. Visit us in person or online and learn about the opportunities available to you!

Changing Lives and Creating the Future

Find out more!

web: chemistry.utdallas.edu

email: chemistry@utdallas.edu

Around-the-Area

University of Arkansas

U of A alum and past ACS president **Dr. Mary L. Good** was named an inaugural ACS Fellow. She is currently Dean of the College of Engineering at the University of Arkansas-Little Rock.

The COBRE Center for Protein Structure and Function received over \$1.5 million in supplementary funds from NIH. Four departmental faculty were honored for long service. They were **Dan Davis**, **Bill Durham**, and **Roger Koeppe** (30 yr) and **Xiao-gang Peng** (10 yr). **Suresh Kumar** gave an invited lecture at the GRASP NMR Symposium in Manhattan, KS and **Charles Wilkins** and grad student **Coy Batoy** attended the 18th International Mass Spectrometry Conference in Bremen, Germany.

Former undergraduate student **Dr. Candace Zieleniuk Rainwater** has joined the department as undergraduate lab supervisor and instructor.

Heart o' Texas

Baylor University. Two papers were given at the ACS SW Regional Meeting in El Paso from the group of Welch Professor **F. Gordon Stone**. Coauthors were **Robin McCown**, **Thomas D. McGrath**, **Akella Sivaramakrishna**, and **Bruce E. Hodson**. The colloquium speaker on Nov. 20 was **Dr. Gouri Jas** of Baylor

South Plains

Texas Tech University. **Purnendu K. Dasgupta Lecture Series Inaugurated.** The first Dasgupta lectures took place Nov. 17 and Nov. 18. This lecture series was started by former Dasgupta students and colleagues in honor of their former faculty member, who is now Jenkins Garret Professor and Chair at the Chemistry Department at UT-Arlington. The first lecturer was **Professor Royce W. Murray** of the University of North Carolina. The topic of the public lecture was "Publishing Chemistry: Process, Ethics, and the Internet." The technical lecture was on "The Composition, Structure, and Behavior of Very Small Nanoparticles."

Welch Professor **Bill Hase** presented the invited lecture "Simulations of Structures, Energetics, and Heat Transfer Dynamics at Interfaces. A Tribute to Peter Schmidt" at the International Joint Tribology Conference held in Memphis Oct. 19-21. **Jon Thompson** and grad students **Haley Richmond** and **Kathy Dial** have published a paper in *Aeolian Research*.

Dallas-Fort Worth

Call for Nominations for Doherty and Schulz Awards. Nominations are invited for the 2010 Wilfred T. Doherty and Werner Schulz Awards. Nomination forms may be

obtained from and submitted to the D-FW Awards Committee Chair, Welch Professor **Laszlo Prokai**, Department of Molecular Biology & Immunology, University of North Texas Health Science Center, 3500 Camp Bowie Blvd., Fort Worth, TX 76107-2699, Tel. 817-735-2206, E-mail lprokai@hsc.unt.edu.

Nominations are due by Mar. 31, 2010. Seconding letters may accompany nominations. Each nomination should contain a cover letter that carefully highlights the nominee's accomplishments in more detail than is possible on the nomination form. Nominations remain active for five years, but annual updates to past nominations should be considered.

The honorarium for the Doherty Award is \$1500 and an engraved plaque; that for the Schulz Award \$1000 and a plaque. A large photo of the Doherty Award winner will be mounted permanently in the Gallery of Doherty Award winners in Berkner Hall at UT-Dallas. A similar photo of the Schulz Award winner will be permanently mounted in the Gallery of Schulz Award winners in the Science Building at Tarleton State University. The photo of the Schulz winner will be displayed for a month at the Science Place 1 in Dallas. There is a traveling plaque that stays at the winner's high school for the year of the award. The Doherty and Schulz Award winners will normally receive their award and give a lecture at a fall section meeting.

The Doherty Award is given for excellence in chemical research or chemistry teaching, meritorious

service to the ACS, establishment of a new chemical industry, solution of pollution problems, and advances in curative or preventive chemotherapy. The impact of these accomplishments may be of either local or national significance. Nominees may come from industry, academia, government, small business, etc. The nominee should be a member resident in the area assigned to the D-FW ACS Section. The work on which the award is based should usually have been done in this area.

The Schulz Award is given to high school chemistry teachers like **Dr. Werner Schulz** who bring something extra to the teaching of chemistry. It is not necessary for the nominee to be an ACS member. Nominees should also show excellence in chemistry teaching as demonstrated by testimonials from students and fellow teachers, results in student competitions, and diligence in updating and expanding scientific credentials. The D-FW section stretches from Abilene on the west to Sherman on the north to Commerce on the east to Stephenville on the southwest.

All ACS members and high school chemistry teachers in the D-FW area are urged to nominate strong candidates for both awards. To maintain the stature of these awards, a continual flow of high quality nominees is needed. Please do your part.

New D-FW Officers. Here are the results of the recent election: Chair-Elect **Patty Wisian-Neilson**,

****Continued on Page 2****

JANUARY D-FW ACS MEETING

TERRELL SCHOOL OF MEDICAL TECHNOLOGY TARLETON STATE UNIVERSITY, FORT WORTH

TUESDAY, JANUARY 26, 2010

“CHEMISTS AND MEDICAL LABORATORY SCIENCE”

About the Program: Medical Laboratory Science is a profession with strong ties to Chemistry. The purpose of this program is to introduce chemists – especially recent graduates – to career opportunities in Medical Laboratory Science/Medical Technology and to inform Medical Laboratory Scientists/Medical Technologists about the ACS and career advancement opportunities in Chemistry.

About the Talk: A panel discussion will focus on 1) Medical Technologist training and job opportunities, 2) Links between Chemistry and Medical Technology, and 3) Opportunities available for medical technologists and chemists outside of the hospital environment.

Social Hour: 6:00-7:00 p.m., Schaffer Building, 1501 E. Enderly Place, Fort Worth. The Social Hour will feature tours of laboratories and training facilities with drawings to win a Merck Index (4 total).

Dinner: 7:00-8:00 p.m., Schaffer Building, first floor.

Lecture: 8:00-9:00 p.m., Schaffer Building, Auditorium, second floor

About the Dinner: The dinner is free for undergraduates (sponsored by ACS) and \$10 for others. Menu is baked lasagna, salad, bread, desert, and drink.

Reservations: Please make reservations to Linda Schultz at 254-968-9143 or at schultz@tarleton.edu by 4 p.m. on Thursday, January 21.

How to Get There: The Terrell School of Medical Technology is located at 1501 E. Enderly Place in the Central Hospital (aka Fort Worth South) District of Fort Worth. From points east of Fort Worth, take I-35, exit at Allen Ave., and proceed west on Allen until it hits a dead end at E. Enderly (one block past 8th Ave). Turn right, proceed one block, and the Schaffer building will be on your right. Parking is available at several area lots.

From the west take I-30 East to Summit exit. Turn right (south) on Summit. Follow S. Summit, which becomes 8th Ave. Proceed to Allen, turn right, proceed one block to E. Enderly, turn right and proceed to Schaffer Bldg. (or take Rosedale exit and make a right onto 8th Avenue).

PERIODICAL

****Continued from Page 7****

cupcakes were decorated with symbols of the elements and arranged as a periodic table. Metals had white frosting; nonmetals were chocolate. At a cost of \$1 per cupcake, about \$100 were raised for Student Affiliate scholarships. Concluding activities were a hamburger and hot dog social at **Dr. Reuben Walter's** house to celebrate NCW and welcome visiting alumni. On Saturday the student affiliates had a float (cosponsored with the Biology Society and Pre-Medical Society) in the Homecoming Parade.

We are interested in publishing additional NCW activities carried out by area high schools and universities. Send your information to Mary Teasdale at owlcritic75@yahoo.com or to Tom Strom at tomstrom@juno.com.

****Continued from Page 2****

Jenny Marshall gave seminars in November at Midwestern University, McMurry University, and DARSPA in Denton. They have finished their 12-year project, "Rediscovery of the Elements"; DVDs will be available March, 2010.