

JITEN CHATTERJI IS 2010 OKLAHOMA CHEMISTp. 5

Southwest

RETORT

February
2011

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FIFTY YEARS AGO IN THE SOUTHWEST RETORT

The February tour speaker is **Dr. G. F. Huff** of Callery Chemical Co. His topic is "The Chemistry of the Boron Hydrides."

Local reporter **Allen J. Bard** reports that the new officers for the Central Texas ACS Section are: Chair, **James E. Boggs**; Chair-Elect, **J. D. Malkemus**; Secretary, **Lester J. Reed**; Treasurer, **Eugene H. Wissler**; Councilor, **George W. Watt**. Members of the UT Chemical Engineering faculty attending the AIChE meeting in San Francisco last December were **Drs. John J. McKetta, W. A. Cunningham, E. H. Wissler, and David M. Himmelblau**. McKetta co-chaired a symposium, and Himmelblau presented a paper. Chemistry and chemical engineering faculty who gave lectures recently outside the area were **Drs. Norman Hackerman, Frederick A. Matsen, George W. Watt, Matthew Van Winkle, Roger J. Williams, and Murry A. Tamers**. **Dr. Royston M. Roberts** is spending a year at the University of Zurich with a PRF fellowship.

At TCU **Drs. J. E. Hodgkins and William H. Watson** have received \$20,000 Welch grants to study, respectively, divalent carbon intermediates and surface properties of semiconductors. TCU has received a \$91,400 grant from NSF to conduct a summer institute in science and mathematics for high school science teachers. **Dr. E. R. Alexander** will conduct the institute with **Dr. Sherrill D. Christian** of the

University of Oklahoma and **Dr. William Shaw** of the University of Texas as guest lecturers.

From the South Arkansas ACS section we learn that **Dr. Al Gremillion, Ronald Galli, and Clifford Pugh** of Lion Oil Research attended the regional ACS meeting in Baton Rouge.

CHEM GEMS & JOULES

REGIONAL SCIENCE FAIRS. Here are the place winners in the Fort Worth Regional Science and Engineering Fair held recently. Division 1, 1st Place, **Favyen Bastani**, Texas Academy of Mathematics and Science; 2nd Place, **Anjana Ram**, Texas Academy of Mathematics and Science; 3rd Place, **Sailee Yadav**, Martin High School; Honorable Mention, **Shree Bose**, Fort Worth Country Day School. The Division 2 winners were 1st Place, **Megan B. McDivitt**, Liberty Christian School; 2nd Place, **Cameron A. Brasher**, Liberty Christian School; 3rd Place, **Christy D. Pounder**, Christian Cottage Prep. The regional fair winners from Division 1 are invited to attend the International Science and Engineering Fair.



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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 106.42	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 (281)	111 Rg (289)	112 Cn (285)	113 Nh (284)	114 Uuq (289)	115 Fl (289)	116 Lv (293)	117 Ts (294)

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JITEN CHATTERJI, 2010 OKLAHOMA CHEMIST

Profile by E. Thomas Strom

At the 2010 Oklahoma Pentasectional ACS meeting in Norman, OK, **Dr. Jiten Chatterji**, who recently retired from Halliburton, was named winner of the 2010 Oklahoma Chemist Award. Jiten was given a \$1000 honorarium and an engraved plaque. Very often industrial chemists do not have the visibility of their academic counterparts, so it is gratifying to see this incredibly productive industrial chemist get his place in the sun. Jiten has played a seminal role in much of Halliburton's important technology in the development of drilling fluids, cement additives, hydraulic fracturing and defoamers.

He has been awarded the almost unbelievable number of 203 patents. His previous honors include 2001 Inventor of the Year chosen by the Houston Intellectual Property Law Association and 2003 Innovator of the Year selected by the Oklahoma

Bar Association.

Jiten received his early college education at the University of Patma, India. He received a BS degree in 1954 and a master's degree in organic chemistry in 1956. For several years he was an instructor at the University of Patma until he entered graduate school at the University of Wyoming. He received his Ph.D. degree in physical organic chemistry in 1967 under mentor Sarah Jane Rhodes. *Retort* readers with long memories of our profile of Richard Smalley will remember that Smalley credited his Aunt Mary Jane, whom he called "The Colossus of Rhodes," with inspiring him to go into chemical research. Jiten recalls Smalley visiting his aunt during the summers. Jiten states that Dr. Rhodes was the finest teacher he had ever seen.

After Jiten received his Ph.D., he joined Halliburton in Duncan in



June, 1967, and he retired in Dec., 2009, at the top of the Halliburton technical ladder with a career spanning 42 and ½ years. He first worked in fracturing, and after five years he began efforts in cementing. He eventually became supervisor of production enhancement, which meant efforts also in acidizing research. After ten years in management, he made the unusual step back to the technical ladder for the rest of his career.

Jiten and his wife Iris, an educator, have two sons. Son Robbie Paul is a physician. Son Mark Andrew with a degree in foreign service spent six years in Australia and has since moved to Dallas with his family to work in finance. For Jiten, his work was pretty much his hobby, and he is not so sure that it was a good idea to retire.

Whether or not Jiten was right to retire, *The Southwest Retort* stands in awe of this internationally recognized chemist who developed a variety of technologies to enhance the economic production of oil and gas. Not every chemist has made a difference, but Jiten Chatterji has. We at *The Southwest Retort* salute him.

CELEBRATORY BANQUET APRIL 16

Jim and Jenny Marshall are sponsoring a Celebratory Banquet on Saturday, April 16, to commemorate the completion of their “Rediscovery of the Elements,” a twelve year old project where they visited all of the

sites throughout the world associated with the discovery of the chemical elements. The program will include a presentation by Jim and Jenny on their twelve year effort, including interesting stories and anecdotes of their experiences traveling through 30 countries in Europe and the Americas on their quest. The banquet will be held at the well-known Fremaux’s Metropolitan Catering on University Ave. in Denton and will be held jointly with the annual Alpha Chi Sigma spring gathering.

Interested people of all ages are welcome including students, faculty, other scholars of science and history, laypersons, families, and friends. The cost is a reduced \$25 per person. Included in this cost is a free DVD of “Rediscovery of the Elements,” just published by Jim and Jenny and registered with the U.S. Library of Congress, to be given to all attendees (\$40 value). Prior registration is requested (deadline: April 8) and payment (either by PayPal or check) may be made using www.jennymarshall.com/axe.htm. Questions may be directed to J. L. Marshall at jimm@unt.edu. Personal directions will be sent to each interested party, and a map will be posted on the Departmental website as well.

The schedule is similar to that of a local ACS meeting, even though this is partly an Alpha Chi Sigma function. There is a social hour at 6 p.m., a 7 p.m. dinner, which is a full chicken dinner buffet, a brief business meeting at 7:45 p.m., and the 8 p.m. talk, “Twelve Years of Wandering in Europe and America While

Researching Rediscovery of the Elements---Background, Stories, and Anecdotes.”

Sharp-eyed readers will have noticed that this banquet is the same day as the section’s Meeting-in-Miniature. However, the Meeting-in-Miniature is a day function, while the banquet is an evening function. There is no reason why our members can’t attend both.

QUANTUM CHEMISTRY SYMPOSIUM AT ANAHEIM

Two local chemists have organized a symposium on “Pioneers of Quantum Chemistry” to be held on Monday, Mar. 28, at the ACS meeting in Anaheim, CA. The organizers are **E. Thomas Strom** of UT-Arlington and **Angela Wilson** of UNT. Also participating are local UNT chemists **Weston Borden** and **Paul Bagus**. The symposium was organized through the ACS Division of the History of Chemistry and is cosponsored by the Divisions of Computers in Chemistry and Physical Chemistry. The location of the symposium is in the Redondo Room in Disney’s Paradise Pier Hotel.

Following are the speakers and the titles of their presentations: **William Jensen**, “The Free Electron Model: From Otto Schmidt to John Platt;” **E. Thomas Strom**, “George Wheland: Forgotten Pioneer of

Resonance Theory;” **Istvan Hargittai**, “Pioneering Quantum Chemistry in Concert with Experiment;” **M. Katharine Holloway**, “Michael J. S. Dewar: Quantum Theory for Organic Chemists;” **Andrew Streitwieser**, “Molecular Orbital Theory for Organic Chemists;” **Weston T. Borden**, “H. C. Longuet-Higgins: Contributions to Theoretical Chemistry;” **Klaus Ruedenberg**, “Atoms, Molecules and Bonds;” **Janet Del Bene**, “John Pople, the Man and His Science;” **Vera Mainz**, “History of the Quantum Chemistry Program Exchange (QCPE);” **Roald Hoffmann**, “Development of the Ideas of Orbital Symmetry Control;” **Paul Bagus**, “The Golden Years at Chicago (LMS) and San Jose (IBM): Lessons that are Relevant Today;” and **Henry F. Schaefer, III**, “Quantum Chemistry: 1950-1960.”

Doherty, Schulz Deadlines Delayed

The deadline for receiving Doherty and Schulz Award nominations has been delayed until Friday, April 15. Nominations should be sent to the Awards Committee Chair, Dr. Paul Sood, Access Pharmaceuticals, 2600 N. Stemmons Fwy, Ste 176, Dallas, TX 75207-2107, Tel. 214-905-5100 x214, Email, paul.sood@accesspharma.com.

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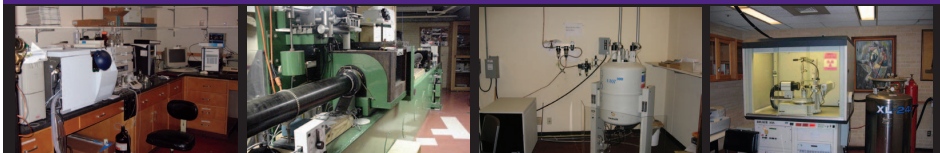
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Around-the-Area

University of Arkansas

Xiaogang Peng is ranked number eight among the top 100 materials chemists of the past decade as compiled by Thomson Reuters. **Derek Sears** is serving on an NSF REU panel in astronomy. He recently received a grant from NASA to write a series of articles on the history of cosmochemistry. Alumna **Bridgette (Blackman) Shannon** was honored as a Modern Day Technology Leader (MDTL) during the 25th meeting of the Black Engineer of the Year Awards and STEM Global Competitiveness Conference held in Washington D.C. Feb. 17-19.

Wichita Falls-Duncan

The most recent local section meeting was held on Feb. 21 at Cameron University. The speaker was **Dr. Al Hazari** whose topic was "The Chemistry in Comics."

South Plains

The group of Welch Professor **Bill Hase** is hosting the visiting European husband and wife team of **Hans Lischka** and **Adélia Aquino**. Dr. Lischka is a theoretical chemist who is recently retired from the University of Vienna. He received his Ph.D. at the University of Vienna. He spent some time at the University of Karlsruhe, Germany with a Humboldt fellowship. He has been a visiting scientist at Ohio State, Argonne National Laboratory, Chiba University in Japan, Pacific

Northwest National Laboratory, and the Academy of Sciences of the Czech Republic. He received the Sandoz Prize for Chemistry and the Award Prize from the Theodor Körner Foundation. In 2008 he was honored with a special issue of the journal *Chemical Physics* on the occasion of his 65th birthday. Among his research interests are computer simulations on the properties of light-active DNA components and new quantum chemical approaches to photo-physical studies.

Theoretical chemist **Adélia Aquino** received her Ph.D. from the University of São Paulo, Brazil. She then worked as Coordinator of Human Resources for Strategic Areas and Technical Secretary of Subprogram Chemistry and Chemical Engineering in PADCT, a program sponsored by the Brazilian government and the World Bank. Following that, she did a post-doc in the physics department at UC-San Diego. Next she became Coordinator of the Division of Biological and Environmental Sciences at CNPq. There followed an international collaboration project between Brazil and Austria. She then became a Senior Scientist at the Institute of Theoretical Chemistry at the University of Vienna in the Advanced Light Sources research program. Among her research interests are molecular modeling of adsorption processes in soils and studies of hydrogen bonds and cation bridges.

The Eleventh Henry Shine Lecture took place on Feb. 22. The speaker was **Peter Stang** of the University of Utah. His topic was "Chemical Publishing in the 21st Century: Perspectives of a JACS Editor."

Dallas-Fort Worth

Texas Wesleyan University.

Dr. Newton Hilliard served as an NSF review panelist for the Feb., 2011 panel. **Dr. Phil Pelphrey** coauthored an article in *Angew. Chem. Int. Ed.* which was featured in the Feb. 21, 2011 issue of *C&EN*.

UT-Arlington. The speaker at a special seminar held on Mar. 3 was **Dr. Claudia Longo** of the University of Campinas, Brazil. Her topic was "Semiconductor Electrodes for Solar Energy Conversion: Application in Dye-Sensitized Solar Cells, Hydrogen Production and Water Disinfection."

APRIL METROPLEX SEMINAR SCHEDULE

Seminars are occasionally postponed or cancelled. Check departmental websites or call the department before attending.

UT-Arlington. April 8, Newton Hilliard, Texas Wesleyan University, "pH Dependent Metabolism in the Obligate Chemolithoautotroph *Halotheobacillus Neapolitanus*." **April 15,** Shaorong Liu, University of Oklahoma, "Developing Enabling Technologies for Proteomic Research." **April 22,** Sascha Usenko, Baylor University, TBA. **April 29,** Isiah Warner, LSU, "NanoGUMBOS:

A New Generation of Designer Nano-materials." Seminars are normally at 2:30 pm. in Room 114, Baker Chemical Research Bldg.

UT-Dallas. April 8, Jin Zhang, UC-Santa Cruz, "Shed Light on Nanomaterials for Solar Energy Conversion and Cancer Therapy." **April 22,** Frank Bloom, Oklahoma State, TBA. Seminars are at 2 p.m. and are held in Room 2.303 Science Learning Center.

UNT. April 1, Greg Swain, Michigan State, "Characterizing and Tailoring the Electronic and Chemical Properties of Diamond and Diamond-Like Carbon Thin Films: New Electrode Materials for Electroanalysis." **April 8,** Omar Yaghi, UCLA, "The Chemistry and Applications of Metal-Organic Frameworks." **April 15,** H. F. Schaefer III, University of Georgia, TBA. **April 29,** Sharon Hammes-Schiffer, Penn State, "Proton-Coupled Electron Transfer in Catalysis and Energy Conversion." Seminars are normally at 3:30 p.m. in Room 106 Chemistry Bldg.

SMU. April 1, Uttam Krishnan Tambar, UT-Southwestern. TBA. **April 29,** Michael Kilbey, University of Tennessee, TBA. Seminars are at 3 p.m. in Room 152, Fondren Science Bldg.

TCU. April 19, Matthew Merritt, UT-Southwestern, "Measuring Metabolic Flux using Dynamic Nuclear Polarization and C13 Magnetic Resonance." Seminars are at 11 a.m. in Lecture Hall 4, Sid Richardson Science Bldg.

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

April D-FW American Chemical Society Meeting

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Saturday, April 16, 2011

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Categories: Undergraduate Students and Graduate Students

Format: 10-15 min. talks

Abstract Deadline: Friday, April 1. Send abstracts (200 words or less) to Dr. Linda Schultz - schultz@tarleton.edu For further details, please check http://acsdfw.org/meetings/201104_meeting.php

Lunch: Free to speakers and sponsors; \$5 to others. Menu is salad, spaghetti, bread, tea, and cookies

Special Events: We have arranged a tour of the new \$11.1 million Southwest Regional Dairy Center and a Planetarium Show free for meeting participants.

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****Continued from Page 10****

UT-Southwestern Biochemistry. **April 7**, Fred Winston, Harvard Medical School, “Yeast Genetics and Transcriptional Regulation.” **April 21**, Yifen Cheng, UC-San Francisco, “Structure and Function of Proteasome by Single-Particle Electron Cryomicroscopy.” **April 28**, Robert E. Kingston, Harvard Medical School, “Chromatin Remodeling Factors and Polycomb Repressor Complexes.” Seminars are at 12 noon in Biochemistry Lecture Hall L4.176.

UT-Southwestern Biological Chemistry. **April 19**, Dionicio Siegel, UT-Austin, “Synthesis and Study of Regenerative Natural Products.” **April 26**, John A Porco, Jr., Boston University, TBA. Seminars are normally at 12 noon in Room L4.162 Biochemistry.