

SCIENTIFIC ROMANTICISM: A SKETCH OF ANTOINE LAVOISIER Part 2p. 5

Southwest

RETORT

January
2011

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FIFTY YEARS AGO IN THE SOUTHWEST RETORT

Two Southwest ACS Sections won ACS public relations awards recently. Baton Rouge was judged best of 47 sections in the medium small category, those having 200 to 500 members. The University of Arkansas Section earned its award in the small category, 74 sections with fewer than 200 members. The University of Arkansas Section sponsored two ACS radio programs each week and conducted 18 half hour television programs which offered supplementary science instruction to students in the 5th and 6th grades. The section provided feature news releases in addition to meeting publicity.

Assistant Professor **Allen J. Bard** from the University of Texas was the featured speaker at the meeting of the Dallas Society of Analytical Chemists. UT Department Chair **Norman Hackerman** attended a meeting of the Corrosion Research Council in New York City on Oct. 5. During November **Dr. John M. McKetta, Jr.** was one of five UT engineering professor who were guests of King Saud of Saudi Arabia for three weeks to discuss graduate engineering education with the Minister of Education and his staff. **Dr. George Watt** was appointed to the Advisory Board of the ACS *Advances in Chemistry* series and also was appointed to the ACS Committee on National Meetings and Divisional Activities.

In the Dallas-Fort Worth area, **Drs. John T. Murchison** and **Gerald E. Risinger** of UTA attended the Welch Conference in Houston Nov. 7-9. **Drs. Robert W. Higgins** and **Helen Ludeman** of Texas Woman's University attended the conference for the Advancement of Science and Mathematics Teaching in Austin Nov. 10-12. Dr. Higgins and several graduate and senior students attended the ACS SW Regional Mtg in Oklahoma City Dec. 1-3, where three of the students presented papers. **Fred Porter** of Southwestern Labs attended the Oct. 11-15 meeting of the American Council of Independent Laboratories held in Miami Beach. **Theodore P. Pritsker** has joined the staff of Dallas Laboratories as Associate Director.

Those from Baylor attending the Welch Conference in Houston Nov. 7-9 were **Professors John S. Belew, Charles E. Reeder, Virgin L. Tweedie, and A. G. Pinkus**. Rocketdyne has received a \$520,000 contract for the production of solid propellant M-34 boosters.

University of Arkansas chemists presented five papers at the ACS SW Regional Mtg. held in December in Oklahoma City. Among those presenting were **Edward S. Amis, Paul Kuroda, Samuel Siegel, and Arthur Fry**. Membership Chair **A. W. Cordes** reports a total of 21 new section members.



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SCIENTIFIC ROMANTICISM: A SKETCH OF ANTOINE LAVOISIER PART TWO

by Amanda Strickland
Completed November 14, 2010

Editor's Foreword. Please see the December 2010 issue for a biography of author Amanda Strickland.

THE TRAGIC END

The year 1789 marked the beginning of the end for many Frenchmen, including Lavoisier. The same year that he published his *Traité élémentaire de chimie* and reached the peak of his career, Parisian mobs stormed the Bastille, beginning the French Revolution. Though Lavoisier was inwardly politically conservative, he actively participated in changes. He tried to realize further social reforms like improving national education. When the Academy wanted to create a new, uniform measurement scheme in May 1790, it appointed Lavoisier as the leader. He paid with his own money the salaries of those who helped develop the *Système Internationale* (SI). In May 1791, the Revolutionary government's National Assembly abolished the *Ferme Générale*. Throughout this time, he complained to friends that the need for political correctness blocked his scientific

progress. He hoped to prove that he was essential to the cause (37), but radical writers began writing more scathing attacks on aristocrats like him. One such writer was Jean-Paul Marat. In 1780, the physician Marat had submitted his research on light and colors to the Royal Academy, hoping for admission. Lavoisier, the appointed referee, saw through Marat's flawed research and struck him down. When Marat tried to publish some of his false conclusions, Lavoisier spoke to the Academy and had a response publically released dismissing the credibility of Marat's work (38). Marat knew who was behind this, and blamed him for his failure. Marat was murdered before Lavoisier's death, but he probably contributed to his condemnation.

By fall 1793, King Louis XVI and his wife had been guillotined; the Academy itself had become defunct. When auditors came and checked the former *Ferme's* accounts, they accused

Lavoisier of selling watered-down tobacco. Yet he stayed, believing he could overcome those dark times. But as Lavoisier's world sank deeper into an abyss of instability, so did his chances of survival.

On November 24, 1793, an arrest warrant surfaced for all former shareholders in the *Ferme Générale*, including Lavoisier and his father-in-law. Within a few days he agreed to turn himself in, believing that a fair trial would ensue. Lavoisier and his father-in-law entered the Port Libre Prison in Paris on November 28, where they stayed for most of December.



A Romantic to the bitter end, Lavoisier wrote affectionate letters to his wife while in prison, expressing more concern for her well-being than his own. In early December, he wrote to her describing the acceptable living conditions. After recounting an unrestful night, he assures her that "our health otherwise is perfect and we lack nothing" (39). In one letter, dated December 19 (40), he urges her not to forget herself as she tries to save him; he has already lived a long life and she has barely started hers. He tells her that he has given himself to destiny, though her time and affection comfort him. But very true to his senses, his attitude changes from touching to logical: he asks that she help him with various chores and duties.

Marie-Anne saw that his case was handled separately, speaking to members of the prosecution. She pleaded with Antoine Dupin, who led the *Ferme* members' case, and lost her temper along the way (41). This did not help her husband's cause. Neither did the absence of their fickle friends

and colleagues: there was a time when people frequented her *salons* and participated in the Lavoisiers' cultivated scientific merriment. But now of all times she was alone.

The trial ran as smoothly as a guillotine's blade. The Revolutionary Tribunal efficiently rationalized its verdicts: death for everyone. According to a popular story, when Lavoisier asked for a delay in his execution to continue his experiments, he received the reply, "The republic has no need for scientists- let justice take its course." However, Duveen argues that this statement is largely apocryphal (42).

Lavoisier's execution took place on the same day as his verdict reading, May 8, 1794, at five in the afternoon. His father-in-law faced the guillotine on the same day, and they stood together in line to the guillotine at the Place de la Révolution. The Father of Modern Chemistry was buried in a mass grave.

Lavoisier's last surviving letter, written a day before his execution and reproduced in Grimaux's Lavoisier: 1743-1794, is addressed to a cousin. Lavoisier's own words speak volumes. He cared about his loved ones to the extent that he wished that he had shown them more of his feelings. In the second paragraph, Lavoisier states that despite the fact that all of his accomplishments for the betterment of society culminate in his execution, he will not die a bitter man. Perhaps this letter can testify for Lavoisier with all animosities set aside. Here he is not a scientist but simply a man whose last thoughts are not of scientific inquiries, vengeance or even of himself.

AFTERMATH

Marie-Anne was emotionally and

financially devastated. She herself spent 65 days in prison (43). When freed, she was penniless. She relied on the charity of a former servant to survive until she helped launch a successful campaign to recover confiscated money and property. This also helped indict Antoine Dupin. In April 1796, she officially obtained all of her husband's property and income, becoming a very rich widow. She soon helped her late husband publish his *Mémoires de Chimie*, a collection of all his works which he began compiling in 1792 and worked on while in the Port-Libre. She organized his papers, drew plates, and in a first edition added an introduction in which she attacked those who did not help her husband in his greatest time of need. She gave copies of the *Mémoires* to prominent institutions and scientists who lauded Lavoisier. Pierre Samuel Du Pont, Lavoisier's friend and Marie-Anne's paramour, proposed marriage. She rejected him and in 1805 married Benjamin Thomson, Count Rumford (1753-1814). The marriage started awkwardly when she insisted on keeping her first husband's last name, and ended disastrously four years later. By the end of her life, this woman, who was once lauded for her talent and beauty, was considered by younger generations an old relic of a semi-forgotten past. Marie-Anne Pierrette Paulze Lavoisier de Rumford died on February 10, 1836.

CONCLUSION

Lavoisier was a fortunate son who lived in unfortunate times. He was clearly a brilliant scientist. While he was dedicated to discovery and new knowledge, he was also committed to ambition and the high esteem that he felt he deserved. He was not always

tactful in delivering his message or beliefs, nor was he prompt in acknowledging earlier scientists.

But even a genius is fallible. His belief that he knew much more than his peers (which was often true) explains his behavior and why many disliked him. Jean-Pierre Poirier summarized his disposition: "He was not a likable, agreeable, amusing, spiritual and disinterested person... People respected him, they feared him, they entrusted him with all kinds of difficult missions that he assumed with competence, seriousness, and honesty, but they did not like him." Poirier then quoted Rita Hayworth's description of her marriage to Orson Welles: "'He came into my life like a rocket throwing comets of fire,'" and that it was difficult to live with a genius. "I believe that Madame Lavoisier would have been able to say the same thing," Poirier added.

Although Lavoisier did not seem friendly, he was compassionate. According to Grimaux, he was often willing to open his purse and use his influence for those whose causes interested him, whether it was recommending someone for a teaching position, or helping a student pay the required fees for a botanical research trip in the Pyrenees (44). He did care about humanity, and he tried to apply his newfound knowledge of chemistry to social service projects. He was also generous: when crops failed in summer 1788, Lavoisier gave personal interest-free loans to Blois and Romorantin so that city leaders could buy wheat for the hungry citizens. Both cities gave him honorary citizenship, which he cherished. However, the loans were

never fully repaid (45).

Lavoisier's achievements are truly extraordinary, but it is arguable that his life was equally so. Despite his shortcomings, he had many wonderful qualities, one of them being the scientific talent that most people recognize. However, after having done so much, he truly deserves remembrance for his entire lifetime. The David portrait of Lavoisier may have illustrated to posterity an essential postulate, that science does not erase a face.

ACKNOWLEDGEMENTS

I thank the following people for their generous assistance, effort, edit, support (of all kinds), and above all interest in an undergraduate's work: Dr. Roald Hoffmann and David Corson of Cornell University; M^s. Jean-Pierre Poirier, Patrice Bret, and Henri Kagan of the Comité Lavoisier of the Académie Française des Sciences; Dr. Carl Djerassi of Stanford University; Dr. J. Michael McBride of Yale University; Dr. Anthony Stranges of Texas A&M University. Special thanks go to Dr. David E. Bergbreiter, my honors organic chemistry professor from Texas A&M University, for inspiring me to do this project. Words cannot fully express my appreciation. This work is dedicated to the memory of Scott Johnsgard, Jr.

****Continued on Page 16****

UPCOMING *RETORT* EDITOR CHANGE

Your *Retort* Editor has resigned effective with the completion of the May issue. This last Jan. 1 marked my 27th anniversary as Editor. Twenty-seven years seems long enough for this particular position. Furthermore, as of

January 1st, I started a two-year term as Chair of the ACS Division of the History of Chemistry. What with trying to do a good job as Chair and with co-editing two books, something has to give; and I think it is best that it be the *Retort* editorship. There is a lot of work needed to provide copy for nine issues a year, and a lot of stress occurs when there is not enough copy (or too much), not enough time, and not enough advertisers and sponsor members. There also is satisfaction when things do work out--- when a particular issue has very good, interesting pieces. Of course, a crucial factor in giving you readers an excellent publication is the work of our Managing Editor of the last seven plus years, Mary Teasdale. Overall, my greatest satisfaction comes from the group of talented writers who have contributed excellent feature articles through the years.

I am delighted to announce that the D-FW Execom has appointed **Dr. Connie Hendrickson** of Arkon Consultants as the new Editor. This last year Connie was selected as an ACS Fellow. She has served ACS in general and this section in particular in a number of ways. She has been Chair of our section and was General Chair for the 1998 ACS National Meeting held in Dallas. She was Program Chair for the 2004 Southwest Regional Meeting held in Fort Worth. She has served as Treasurer of the ACS Division of Chemical Marketing and Economics and in 1999 was President of the American Institute of Chemists. Connie brings dedication and competence to everything she does. She will be an outstanding Editor.

Sometime in the next few months I hope to publish some reflections about

The Southwest Retort and my time as Editor. In the meantime your staff will continue to try to publish the best magazine possible.

Chem Gems & Joules

DFW-CHEM. Dallas-Fort Worth-Chemistry High school Educators Meeting, had their January 22 meeting at the Chemistry Building at the University of North Texas. This was third of four quarterly meetings. The next one will be March 5th at UT-Arlington. The January topics were solutions, gases, and favorite websites/animations. The March topics will be nuclear, troubleshooting (labs that didn't work, etc.), and fun and games in chemistry. There is no cost or obligation. Come if you can, and pass the word along. Connect with other chemistry teachers. For more information, contact Claudia Wallace at wallacec@cfbisd.edu or at 972-968-4976.

DISCUS in Colleyville. **Dr. Kevin Schug** along with 2010 Werner Schulz award winner **Jennifer Cruze** presented information about the Diversity in Science in the United States (DISCUS) program www.discusprogram.com at the D-FW Mini-CAST (Conference for the Advancement of Science Teaching) meeting held at Colleyville Heritage High School on Jan. 22nd. The presentation was titled "Get Lessons and Get Published! The DISCUS Program."

MARCH METROPLEX SEMINAR SCHEDULE

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

UT-Arlington. Mar. 4, Changjian Feng, University of New Mexico, "Nitric Oxide Synthesis." **Mar. 11**, Brian Dennis, UT-Arlington, "Computational and Experimental Investigations of Microfluidic Reactors." **Mar. 25**, LoneStar Diversity Colloquium Event—Graduate and Undergraduate Poster Event. Seminars are normally at 2:30 p.m. in Room 114, Baker Chemical Research Bldg.

UT-Dallas. Mar. 4, Pavel Anzenbacher, Bowling Green State University, TBA. **Mar. 24**, (Note Thursday date.) Zhiquan Lin, Iowa State, "Semiconductor Nanostructures for Solar Energy Conversion." **Mar. 31**, (Note Thursday Date) Greg M. Swain, Michigan State, "Characterizing and Tailoring the Electronic and Chemical Properties of Diamond and Diamond-Like Carbon Thin Films: New Electrode Materials for Electroanalysis." Seminars start at 2 p.m. and are held in 2.303 Science Learning Center.

UNT. Mar. 3 (Thursday) Emily Carter (Special Lecture), Princeton, "Fast Yet Accurate Algorithms for Multi-Reference Ab Initio Electron Correlation Treatment of Large Molecules." **Mar. 4**, Friday, Davidson Lecturer, Emily Carter, "How Quantum Mechanics Can Help Solve Our Energy Problems." **Mar. 25**, Richard Crooks, UT-Austin, "Bipolar Electrodes: A Simple Modality for Concentration, Separation and Detection of Analytes in Microfluidic Channels." **April 1**, Greg M. Swain, Michigan State (See Title for Mar. 31 UTD Seminar). Seminars are normally at 3:30 p.m. in Room 106 Chemistry Bldg.

SMU. Mar. 4, David Birney, Texas Tech, TBA. **Mar. 25**, Thomas Epps, University of Delaware, TBA.

April 1, Uttam Krishnan Tambar, UT-Southwestern, TBA. Seminars are at 3 p.m. in Room 152, Fondren Science Bldg.

TCU. Mar. 3, Neer Asherie, Yeshiva University, TBA. **Mar. 24**, Timothy Lodge, University of Minnesota, "Block Polymers and Ionic Liquids: A New Class of Functional Nanocomposites." **Mar. 31**, James Tour, Rice, "Nanomaterials, Nanoelectronics, Nanomedicine and Nanocards." Seminars are at 11 a.m. in Lecture Hall 4, Sid Richardson Science Bldg.

UT-Southwestern Biochemistry.

Mar. 10, Thomas U. Schwartz, MIT, "Structure of Nuclear Pore Complex." **Mar. 31**, William B. Campbell, Medical College of Wisconsin, "Cardiovascular Function and Eicosanoids." Seminars are normally at 12 noon in Biochemistry Lecture Hall L4.176.

UT-Southwestern Biological

Chemistry. Mar. 8, Hendrik Luesch, University of Florida, "Marine Natural Products Initiated Chemical Biology." **Mar. 15**, Michael Krische, UT-Austin, "Formation of C-C Bonds via Catalytic Hydrogenation and Transfer Hydrogenation." **Mar. 29**, Petra Vachal, Merck, "N-Sulfonyl-N'-Acylpiperazines: Cannabinoid 1 Receptor (CB1R) Inverse Agonists for the Treatment of Obesity." Seminars are normally at 12 noon in Room L4.162 Biochemistry.

The Chemist's Bookshelf

by Danny Dunn

The Elements: A Visual Exploration of Every Known Atom in the Universe, by Theodore Gray and Nick Mann, Black Dog & Leventhal Publishers, 2009, 240 pages, \$29.95 (ISBN 978-1-57912-814-2)

A collection of the elements at the University of North Texas created by James Marshall clearly demonstrates the beauty of the periodic table and serves as a reminder that quite a bit of chemistry exists outside our own specialized niches. Theodore Gray has amassed a similar collection of the elements which contains over 2,300 samples. In **The Elements** Gray gives us a pictorial tour of his collection. Gray founded the software company Wolfram Research that created and markets *Mathematica*. He has written several other science books and has a column in *Popular Science*.

There are three good reasons for reading **The Elements**: it's a good reference source; the pictures of the elements are spectacular; it's a lot of fun to read. Let's start with the reasons that it's a good reference source. In the introduction, there is an excellent summary of how electron shells fill and how this logically defines the shape of the periodic table. Throughout the book each element's physical properties are listed along with the electron configuration. I frequently found myself referring back to this data.

For each element, pictures of the pure element (where possible), some representative compounds, and some common commercial uses are presented. The pictures are often spectacular and unusual. For example, perhaps you would guess the picture for oxygen would be a bottle full of a colorless gas. But that's much too ordinary for this book. What Gray shows is oxygen cooled down to -183° C where it takes on a beautiful pale blue color. How about a diamond for carbon? Yes, there is a picture of a diamond along with a warning that diamonds are not really

forever because if heated they will burn up and form carbon dioxide. The interesting picture for carbon is a block of graphite that was actually used in Enrico Fermi's CP-1 reactor which created the first sustained nuclear reaction under the stadium at the University of Chicago. For silver, there is a picture of a silver coin minted in 261 BC with a picture of Alexander the Great. The noble gases are enclosed in glass tubes shaped like their chemical symbol and subjected to a high-voltage discharge illustrating each uniquely colored emission spectra.

Finally, this book is definitely fun to read. Gray relates interesting stories and facts about the elements with a good deal of humor. For example, in the introduction he says, "The periodic table is the universal catalog of everything you can drop on your foot. Your foot is made mostly of oxygen with quite a bit of carbon joining it, giving structure to the organic molecules that define you as an example of carbon based life. (And if you are not a carbon-based life-form: Welcome to our planet! If you have a foot, please don't drop this book on it.)".

Gray seems quite fascinated with the reaction of alkali metals with water and describes many of his experiments in this area. He notes that cesium instantly and violently explodes when dropped into water, but that sodium produces a larger explosion. Because sodium reacts more slowly with water, there is more time for a plume of hydrogen gas to build up before ignition occurs resulting in the bigger explosion. He wistfully notes that francium should be the most reactive of all the alkali metals and thus have the capability to produce a "truly monumental

explosion" when added to water. Unfortunately, francium is the least-stable naturally occurring element and is radioactive with a half-life of 22 minutes.

Gray has collected enough mercury to fill a salad bowl and can float a small cannonball on top of it. After putting on rubber gloves, he can feel an incredible pressure on his fingers when he plunges his hand into the bowl. You may think that mercury is the only metal listed in the periodic table that is liquid at room temperature. Gray notes this is a climatological bias as in more tropical parts of the world gallium (melting point 85.6°F; 29.8°C) and cesium (melting point 83.2°F; 28.4°C) would also be a liquid.

The lanthanide rare earths, it turns out, are not really very rare. The name comes from the fact that they all have very similar chemistry, owing to two 6s electrons in their outer shell, and were initially very difficult to separate. However, today a solvent extraction method has been worked out that readily separates the rare earths based on their slightly different solubilities. The rare earths are now available in large quantities at reasonable prices. As for actually being rare, lanthanum is more than three times as abundant in the earth's crust as lead, and cerium is nearly twice as abundant as lanthanum.

The Elements would make a nice "coffee table" book for anyone's home or office. Turning the pages is much like eating salted peanuts. You eat one, then another, and suddenly the whole jar is empty. For more information about Gray and his element collection see: www.theodoregray.com or www.periodictable.com.

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Around-the-Area

University of Arkansas

Bob Gawley was awarded the Bene Merenti Medal of the University of Regensburg. The award recognizes people for their contributions to the University and is the highest award that can be given to an outsider. Gawley was honored for his role in the development of the US-EU Atlantis transatlantic dual degree exchange program in chemistry.

Frank Millet is serving a two-year term as chair of the NIH Macromolecular Structure and Function A study section. Millet has the longest record of continuous research funding from NIH at UA, spanning the last 38 years. He is also the founding and current director of the Center for Protein Structure and Function and is responsible for the COBRE grant, the largest research grant ever received by UA at the time.

Professor Donna G. Blackmond of Scripps Research Institute gave the 2010-2011 Arthur Fry Lecture on Jan. 24. Her topic was "Models for the Origin of Biological Homochirality."

Alumnus **Dr. Bill Deese** of Louisiana Tech won the ACS Helen Free Outreach Award. Recent alumnus **Dr. Chris Mazzanti** has joined the department as an instructor. **Paul Adams** was the featured professor in the Research Spotlight on the American Society for Biochemistry and Molecular Biology's web site. Ingrid **Fritsch** organized a two day symposium and present a talk at Pacificchem. Graduate student **Zheng Li** presented a poster there.

East Texas

Following are the 2011 officers for the section: Chair, **Phil Verhalen**; Chair-Elect, **Amy Calhoun**; Treasurer, **Patti Harmon**; Secretary, **Mike Sheets**; Councilor, **Philip Verhalen**; Alternate Councilor, **Mike Sheets**. The February meeting was scheduled for Feb. 10 at Panola College in Carthage, TX. The speaker is former ACS President **Bill Carroll** on "Where Everything Comes From: Industrial Chemistry 101." The next meeting is scheduled for Mar. 23 at Kilgore College featuring Earnest Simpson on "Chemistry of Wine."

The International Year of Chemistry is 2011. There will be a different focus each quarter. Those are in quarterly order: water in the environment; alternative energy; materials; and health.

South Plains

Texas Tech University. **Welch Professor Bill Hase** has received a \$125,000 two-year grant from AFOSR/Spectral Sciences, Inc. to study "STTR PHASE II: Predicting Kinetic Rate Constants for Condensed Phases." He gave an invited talk at Pacificchem 2010 and seminars on Jan. 27-28 at TCU and UT-Arlington.

Dr. Dimitri Pappas had a paper published in a special issue of *The Analyst* highlighting work from emerging investigators from around the world. His team included coworkers from chemistry and the Department of Animal and Food Sciences. **Dr. Satomi Niwayama** gave a course in December at Yokohama National

University on “Advanced Technologies in Chemistry.”

Dr. Richard Bartsch presented a plenary lecture at Pacifichem 2010 with coauthors **H. Zhou, M. Surowiec, K. Surowiec, and J. Wang.** Dr. Bartsch was honored with a commemorative issue of *ARKIVOC*, the online journal for organic chemistry on the occasion of his 70th birthday. **Dr. Robert E. Hanes, Jr.** of Beacon Sciences, LLC in Austin served as Facilitator. The issue contains 18 papers in 248 pages written by collaborators and former research coworkers of Professor Bartsch.

Alumnus **Dr. Kyongtae Kim** has retired from the School of Chemistry, Seoul National University. However, he is working on a revised 7th edition of McMurry's *Fundamentals of Organic Chemistry* for nonchem majors.

Dallas-Fort Worth

Local Reporter Tracy Hanna, TCU (t.hanna@tcu.edu)

Meeting-in-Miniature. The 44th ACS D-FW Meeting-in-Miniature is scheduled for Saturday, April 16, at the Science Building at Tarleton State University. The abstract deadline is Friday, April 1. The format will be 10-15 minute talks and posters by undergraduate and graduate students. **Judges and Session Chairs are needed! Please Volunteer!** Contact Linda Schultz at schultz@tarleton.edu.

SMU. Brent Sumerlin delivered an invited lecture at Pacifichem 2010 and also gave a seminar at Texas A&M University.

TCU. Student affiliate sponsor **Dr. Kayla Green** reports the TCU Chemistry Club is hosting a Career Seminar Series. Scheduled speakers are on Feb.

23 Jeff Keyser of ZS Pharma speaking on “Innovations and Entrepreneurship in New Drug Development,” on Mar. **23 Jeff Lowinger** of Bell Helicopter, and on April 20 **Paul Zinke** of Alcon Labs. Seminars will be given on the 3rd floor of the Brown Lupton University Union at 5 p.m. Food and drinks will be provided. Funding is provided by an ACS Science Café Grant, the TCU Student Activities Board, and the TCU Chemistry Club. For more information contact Kayla Green at kayla.green@tcu.edu.

UT-Arlington. Assistant Professor **Subhrangsu Mandal** has received a three year \$440,000 grant from NIH to study estrogen disrupting chemicals. He also received another NIH grant for \$213,807 to explore how the biochemical mechanism of estrogen signaling is linked with control of blood cholesterol. However, NIH rules prevented him from accepting the second grant.

Welch Professor Daniel Armstrong recently received a \$55,000 grant from Alcon to study the “Occurrence and Stability of Natural Antioxidants” and a \$26,000 grant plus supplies from Supelco for studying “Evaluation of New Stationary Phases and SPME Adsorbents.” Dr. Armstrong gave three invited talks at Pacifichem 2010 plus co-organizing a symposium on “Ionic Liquids for Chemical Analysis.” He gave an invited talk on Jan. 11 at Amgem. Earlier he gave an invited talk at FACSS in Raleigh, NC, and a plenary lecture at the 17th International Symposium on Capillary Electroseparation Techniques held in Baltimore, MD. Armstrong's research at Pacifichem 2010 was highlighted in the Jan. 3, 2011 issue of *C&EN* on

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MARCH DFW ACS MEETING
Honoring the
DFW National ACS Award Recipients
Monday, March 7, 2011

John G. Mahler Building's Great Hall, Dallas Baptist University
3000 Mountain Creek Parkway, Dallas, Texas 75211

Weston T. Borden

recipient of the
James Flack Norris Award in
Physical Organic Chemistry
Welch Chair of Chemistry
Department of Chemistry
University of North Texas
"Spectroscopy of Transition
States"

Purnendu K. Dasgupta

recipient of the
ACS Award in Chromatography
Jenkins Garrett Professor
Department of Chemistry and
Biochemistry
University of Texas at Arlington
"Ion Chromatography:
From Small to Small"

Although Wes Borden and Sandy Dasgupta will formally receive their awards during the national ACS meeting in Anaheim, CA in late March, this is a rare opportunity for local section members to hear short overviews of their work. Titles for their presentations are listed above.

Time: Social Hour: 6:00-7:00 p.m. (hosted by DBU)
Dinner: 7:00-8:00 p.m. Lectures: 8:00-9:00 p.m.

Reservations: aaronf@dbu.edu or 214-333-5519 by 11:59 PM on Wednesday, March 2, 2011. Dinner is \$15. Specify Chicken Cordon Blue (with cream sauce) or Stuffed Pork Loin (with brown sauce) when making your reservation. Dinner will include spinach salad, twice baked potato, steamed broccoli, bread, dessert and tea/water/coffee. Payment by cash or check will be accepted at the meeting. Please note that you are financially responsible for reservations made but not used. It is not necessary to attend the dinner in order to attend the lecture.

Directions: **From Dallas**, take I-30 west to Loop 12 south to Spur 408 Patriot Parkway. Turn right on Kiest Boulevard, and you will see the school atop the second hill on your right. **From Fort Worth**, take I-20 east to Mountain Creek Parkway exit. Turn left heading north on Mountain Creek Parkway. Cross Kiest Boulevard and enter the campus from the west. **John G. Mahler Student Center is located at the top of the hill and has a large fountain in front of it. You may park anywhere on top and the Great Hall will be seen as you enter the building.**

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page 26. The article mentioned Armstrong's startup company AZYP, which sells cyclofructan chiral stationary phases.

Work of **Dr. Sandy Dasgupta** and coworkers showing that soap films doped with α -cyclodextrin could be used for enantiomeric enhancement was featured in *Nature Chemistry* and *C&EN*.

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37. J. Jackson, *World on Fire: a Heretic, an Aristocrat, and the Race to Discover Oxygen*, Viking Penguin, New York, NY, 2005, 236, 263-264.

38. Ref. 1, p 110-112.

39. Antoine-Laurent Lavoisier to Citoyenne Lavoisier (Marie-Anne Paulze Lavoisier), An 2^e frimaire 2^d decad (December 1793), Rare and Manuscript Collections, Carl A. Kroch Lib.,

Box 2, Folder 9, Manuscript 128.

40. Antoine-Laurent Lavoisier to Citoyenne Lavoisier (Marie-Anne Paulze Lavoisier, 29 frimaire (December 19) 1793, Rare and Manuscript Collections, Carl A. Kroch Lib., Box 2, Folder 11.

41. M. S. Bell, *Lavoisier in the Year One: The Birth of a New Science in an Age of Revolution*, W. W. Norton & Company, Inc., New York, NY, 2005, 180-182.

42. Ref. 32.

43. R. Hoffmann, "Mme. Lavoisier," *Am Sci*, **2002**, 90.1, 22-24.

44. Ref. 11, p 53-54.

45. Ref. 15, p 142.