

# NOVEMBER METROPLEX SEMINAR SCHEDULE

*Seminars are occasionally postponed or cancelled. Call the department or check departmental websites before attending.*

**UT-Arlington, Dec. 1,** Huw Davies, SUNY at Buffalo, "C-H Activation: A New Strategic Reaction for Synthesis." Seminars are normally at 2:30 p.m. in Room 114, Baker Chemistry Research Building.

**University of North Texas, Dec. 1,** Kevin Ingram, Chemical Lime, "Chemistry by the Ton—Experience in Large Scale Industrial Chemistry." **Dec. 8,** Tim Warren, Georgetown University, "Metal-Ligand Multiple Bonds to Co, Ni, and Cu: Insight into Catalytic Group Transfer Reactions." Seminars are normally at 3:30 p.m. in Room 106, Chemistry Building.

**UT-Southwestern Biochemistry, Dec. 7,** John Staley, University of Chicago, TBA. **Dec. 14,** Tom Alber, UC-Berkeley, "Serine, Threonine, and Tyrosine Phospho-Signaling in Tuberculosis." Seminars are normally at noon in Room L4.176, Biochemistry.

**UT-Southwestern Biological Chemistry, Dec. 12,** Eric Meggers,

University of Pennsylvania, "Organoruthenium Compounds as Kinase Inhibitors." Seminars are normally at 6:30 p.m. on Room L4.162, Biochemistry.


\*\*\*\*Continued from Page 8\*\*\*\*

five might have gone if they had remained in Hungary, or if they had emmigrated to the Soviet Union instead of the United States. Neither of these "what ifs" are pleasant to think about.

There is an appendix, "Sampler of Quotable Martians," a collection of memorable quotations from the writings and conversations of the five. The quotation that most strongly struck me as summing up the characters of the five, however, is at the end of the last chapter. In response to Fermi's famous question, "Where is everybody?" referring to the lack of evidence for extraterrestrial beings, Szilard replied, "They are among us, but they call themselves Hungarians."

\*\*\*\*Continued from Page 12\*\*\*\*

able mention, with their chapter presidents and faculty advisors listed in that order: SMU, Michael Perez, Patty Wisian-Neilson; Tarleton State, Richard Sevcik, Peter Bell and Howard Nance; and University of Mary Hardin-Baylor, Jennifer Pietrowski, Darrell Watson.



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Southwest

RETORT

November  
2006

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PERIODICAL

# Fifty Years Ago in the Southwest Retort

**Professor W. O. Milligan** of The Rice Institute is winner of this year's Southwest Regional Award. Milligan received his B. A. degree at Illinois College and his M.A. and Ph.D. degrees from Rice. From 1934-46 he was a research chemist at Rice. He became Assistant Professor in 1946, Associate Professor in 1947, and Full Professor in 1951. He was honored for his work in x-ray, electron, and neutron diffraction studies of inorganic compounds.

**Dr. Charles Harold Fisher** will receive this year's Southern Chemist Award. He is chief of the Southern Utilization Research Branch of the U.S. Department of Agriculture located in New Orleans. Both individuals will receive their awards at the Southwide Chemical Conference in Memphis Dec. 6-8.

The November tour speaker is **Dr. Byron E. Leach** of Tulane University. His topic will be "Biochemical Studies in Mental Diseases."

An experiment in teaching chemistry with closed circuit TV was carried out at University of Texas. The topic was to orient chem lab students on the use of assigned laboratory equipment. Demonstrators were **Drs. P. D. Gardner** and **Dr. W. H. R. Shaw**. **Dr. L. O. Morgan** is pioneering this use of TV for instruction. The **E. P. Schoch** Lecture Series, initiated on Oct. 16<sup>th</sup>, was established by ex-students of Schoch, the retired chemical engineering faculty professor

who is considered the father of the Texas chemical industry. The first speaker was **Dr. Warren K. Lewis** of MIT, who spoke on "Recent Advances in Fluidization." Oct. 16<sup>th</sup> was also Professor Schoch's 85<sup>th</sup> birthday. He retired in 1954 after spending about ¾ of his life as a university faculty member.

**Dr. Gordon K. Teal** of TI was keynote speaker at the Electrochemical Society meeting held in Cleveland Oct. 1-5. **Drs. Morton E. Jones** and **John W. Ross** of TI and **Dr. Franklin** of Baylor also attended the meeting. **Dr. Price Truitt** of North Texas State College (*now UNT*) returned from a summer as Visiting Professor at University of Illinois.

**R. B. Williams** of Humble Oil in Houston was a lecturer at the Gordon Research Conference on "Petroleum Research." His topic was "Applications of Nuclear Magnetic Resonance in Petroleum Problems."

Phillips Petroleum announced a \$3000 fellowship to the Baylor Chemistry Department for research in catalysis under the direction of **Dr. Thomas C. Franklin**.

At the University of Arkansas Professors Kruh and Stern have had their Air Force contracts extended, and the Atomic Energy Commission has made grants to Professors Amis and Sacks. **Dr. Kurt Stern** attended the ACS meeting in September, while **Dr. T. C. Hoering** attended a July Gordon Conference.

Double Hydroxides as Divalent-Metal Cation Exchanging Materials".

**Dr. Jim Marshall** presented an ACS lecture tour in New England Oct. 2-6 on "Rediscovery of the Elements," and again at Texas Wesleyan University on Oct. 27. At the Southwest Regional Meeting in Houston Oct. 5-6 he presented "Using The History of the Periodic Table as a basis for a non-science majors introductory chemistry course."

**UT-Arlington**. Chemistry Professor and Vice President for Research **Dr. Ronald Elsenbaumer** and Materials Science and Engineering Professor **Dr. Pranesh Aswath**

received the Clarence E. Earle Memorial Award from the National Lubricating Grease Institute for their paper "Development of a High Performance, Low Molybdenum Disulfide Grease." Special seminars were held on Oct. 23 and Nov. 6. The speakers were, respectively, **Dr. John J. Lavigne** of the University of South Carolina talking about "Dynamic Polymer Assemblies: From Food Quality Sensors to Self-Repairing Materials" and **Dr. Christopher D. Spilling**, University of Missouri-St. Louis speaking on "Natural Product Synthesis with Allylic Hydroxy Phosphonates."

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### Aquatic/Environmental Chemistry Instructor at SMU

Southern Methodist University (SMU) is a private, comprehensive university located in Dallas, Texas. The Department of Environmental and Civil Engineering is currently seeking a part-time adjunct faculty member to teach an undergraduate course in environmental and aquatic chemistry during the Spring 2007 semester. The applicant must have a graduate degree in chemistry or engineering, a Ph.D. is strongly preferred. The applicant must be able to teach the 3-hr course lecture and conduct a weekly laboratory. The instructor will receive financial compensation and access to the university library. Please submit resume and cover letter by December 8, 2006 to Prof. Al Armendariz at [aja@engr.smu.edu](mailto:aja@engr.smu.edu). Information about the Department can be reviewed at <http://engr.smu.edu/encc/index.html>.

Editor of *The Southwest Retort* from Sept. 1957 until Jan. 1959. He is survived by his wife of 55 years, Dorothy, two sons, two daughters, and nine grandchildren.

**New Section Officers.** D-FW Secretary **Dr. Trish Smith** has tabulated the votes in the recent section election. Regrettably, our section is not immune to the trend of low ACS voter turnout. Trish received 193 ballots, for a pitiful 16.31% participation of the membership. Following are the newly elected officers, their terms, and their affiliations: Chair-Elect, 2007, **Mary Anderson**, Texas Woman's University; Treasurer, 2007-2008; **Kirby Drake**, Fulbright and Jaworski; Councilor, 2007-2009, **E. Thomas Strom**, UT-Arlington; Alternate Councilor, 2007-2009, **Linda Schultz**, Tarleton State University.

**UNT's Innovative November Section Mtg.** UNT hit on the innovative idea of running parallel dinners prior to the lecture by the November tour speaker. The regular dinner was \$25, while an inexpensive \$5 pizza dinner was available for the students. The idea paid off wonderfully. Registration for the regular dinner was 25, OK but nothing special. However, the registration for the student dinner was 40, outstanding. Drop-in attendance pushed the audience for the tour speaker to 80. UTD won the prize for the most students attending. Kudos go to UNT for this different, successful twist on our usual meeting format.

\*\*\*\*\*  
Doing a thing well is often a waste of time — Robert Byrne

**SMU.** In October, **Ling Hua** gave a talk titled "Smart Catalysts for Green Synthesis" at Jackson State University in Jackson, MS, and a talk titled "Biocatalysts for Asymmetric Synthesis" at Emory University in Atlanta, GA.

**TCU.** In October, **Tracy Hanna's** graduate student **Xiaodi (Cindy) Kou** presented a poster titled "Synthesis of Bismuth Aryloxide Amides," and postdoctoral associate **Lihua Liu** presented a poster titled "Synthesis, Structures, and Characterization of Bisphenolate Bismuth-(III) Complexes" at the American Chemical Society Southwest Regional Meeting in Houston, TX.

**UNT.** **Dr. Diana Mason** is the Regional Director of the Ft. Worth Regional Science Fair that will be held at UNT, March 4-6, 2007.

**Dr. Wes Borden**, Welch Chair, gave an invited lecture at an October conference at Asilomar in California on gas-phase ion chemistry, and an invited lecture in Heidelberg, Germany at a symposium honoring the 70<sup>th</sup> birthday and retirement of Professor Gleiter.

**Dr. Tom Cundary** presented "Modeling Metals in Chemistry and Biology;" Indiana University, Sept. 8<sup>th</sup>, and at the University of Texas, Oct. 6, and at Tulane University, Nov. 27, 2006.

**Dr. Bill Acree** received the inaugural UNT Upward Bound Math and Science Mentor Award.

**Mickey Richardson**, Ph.D. candidate of **Dr. Paul Braterman** (who has retired from UNT) presented a paper at SWRM, "Layered



## Southwest Retort

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and Chemistry in this area.*

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### 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

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The Dallas-Fort Worth Local ACS  
Section will NOT meet in December  
2006. Coming in January 2007 ...  
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announcement in the December *Retort*.

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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 106.36	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 (289)	114 Uuq (289)			
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

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Mary Lynn Trawick gave a seminar at Texas State University on Oct. 9.

Authors of papers at the Southwest Regional ACS Meeting in Houston were **Thiru Munisamy, Nanda Gunawardhana, Stephen L. Gipson, Selorm K. Modzabi, Dennis H. Rabbe, Marianna A. Busch, Kenneth W. Busch, Jody Harvey, Mary Lynn Trawick, Milenka Arispe, Sam Chen, Rogelio E. Siles, Ming Zhou, and Kevin G. Pinney.** Dr. Marianna Busch will have a Summer Sabbatical in 2007.

Colloquium Speakers: Oct. 20, **Julia Chan**, LSU; Nov. 3, **Mike Lewis**, University of Missouri, Columbia; Nov. 10, **Daniel D. Chapman**, Jackson Walker LLP.

## Dallas-Fort Worth

**Call for Nominations for the 2007 Schulz Award.** The Dallas-Fort Worth ACS Section solicits nominations for the 2007 Werner Schulz Award for Outstanding High School Chemistry Teachers. The award was established in 1990 to honor the memory of **Dr. Werner Schulz**, a remarkable high school chemistry teacher. In recent years the number of nominations has markedly declined. *It is necessary for high school teachers and other ACS members to nominate qualified candidates to maintain the stature of this award!*

The award is intended for high school teachers who reside in the area served by the D-FW ACS section and who, like Werner, bring something extra to the teaching of

chemistry. Nominees need not be members of the ACS. The award consists of a \$1000 honorarium, an engraved plaque, and a traveling plaque that stays at the winner's high school for the year of the award. A picture of the winner will be displayed for a month at The Science Place 1 in Dallas. Afterwards the winner's picture will be permanently displayed in the Gallery of Schulz Award Winners on the 4<sup>th</sup> floor of the Science Building at Tarleton State University in Stephenville. The winner will normally give a talk at a fall meeting of the D-FW Section.

The D-FW Section stretches from Abilene to Sherman to Commerce to Stephenville. Nomination forms may be obtained from, and should be submitted to, the D-FW Awards Committee Chair, **Dr. David Son**, Dept. of Chemistry, Southern Methodist University, P. O. Box 750314, Dallas, TX 75275-0314. The nomination form is also available on the Section's website. **Nominations are due by February 12, 2007.**

**In Memorium Former Retort Editor Dr. Archie Broodo.** **Dr. Archie Broodo** died on Sept. 11 after a long battle with heart disease. Born on Feb. 3, 1925, he served with honor in the U.S. Army during World War II. He graduated *summa cum laude* from Texas A&M University, and he then received master's and Ph.D. degrees from UT-Austin. During his scientific career he worked at TI and was founder, president, and owner of AID Consulting Engineers, Inc. He was very active in ACS, and he served as

and a Varian Cary 300 UV-VIS Spectrophotometer.

### South Plains Section



#### Texas Tech University. Dasgupta Honored With Symposium.

A symposium was held on Oct. 17 to honor Professor

**Purnendu K. "Sandy" Dasgupta.** The speakers were **Todd Anderson** and **Andrew Jackson** of Texas Tech, **Stephen Gluck**, Dow Chemical, **Noreen Poor**, University of South Florida, **Shubhra Gangopadhyay**, University of Missouri, **Jordan Berg** and **Stefan Estreicher**, Texas Tech, **Kannan Srinivasan**, Dionex Corp., **Gary Christian**, University of Washington, **Hanghui Liu**, Senomyx, Inc., and **Shaorong Liu**, Texas Tech. Chairs of the three sessions were **Bill Poirier**, **Shaorong Liu**, and **Dimitri Pappas**.

Dasgupta was born in Kolkatta, India in 1949. He received his B.Sc. degree from 1968 and his M.Sc. inorganic chemistry in 1970, both from the University of Burdwan, India. He obtained his Ph.D. in analytical chemistry from LSU in 1977. He has been a Horn Professor at Texas Tech since 1992, and he has received numerous honors for his research in analytical chemistry. More recently, a paper on "A Gas-phase Chemiluminescence-based Analyzer for Waterborne Arsenic" co-authored with **Ademola Idowu**, **Genfa Zhang**, and **Kei Toda** was featured on the cover of the current issue of *Analytical*

*Chemistry*. In celebration of National Chemistry Week, ACS Publications has listed over 100 current "Hot Papers" by Thomson Essential Science Indicators. Hot papers are articles published within the past two years receiving the most citations over the most recent two-month period. Paper No. 1 for *Environmental Science and Technology* was "Perchlorate and Iodide in Dairy and Breast Milk," Andrea B. Kirk, P. Kalyani Martinelango, Kang Tian, Aniruddha Dutta, Ernest E. Smith, and Purnendu K. Dasgupta, *Environ. Sci. Technol.*, 2005, **39**(7), 2011-2017. Paper No. 6 for *Analytical Chemistry* was "Gas Phase Ion Association Provides Increased Selectivity and Sensitivity for Measuring Perchlorate by Mass Spectrometry," P. Kalyani Martinelango, Jared L. Anderson, Purnendu K. Dasgupta, Daniel W. Armstrong, Rida S. Al-Horr, and Rosanne W. Slingsby, *Anal. Chem.*, 2005, **77**(15), 4829-4835.

### Heart o' Texas

**Baylor University. Dr. Kevin Pinney** gave a talk on Oct. 17 as the recipient of the 2006 Cornelia Marschall Smith Professor of the Year Award. **Dr. Alton Hassell** was selected by the Panhellenic Council as Professor of the Month for Oct., 2006. **Dr. Pinney** and **Dr. Darren Bellert** gave seminars at Texas Lutheran University on Oct. 6. **Dr. Gouri Jas** attended the 5<sup>th</sup> International Workshop on Optical Diagnostic Imaging at NIH Sept. 25-27. **Dr.**

# Southwest Retort

FIFTY-NINTH YEAR

NOVEMBER 2006

## Review of *The Martians of Science*

Reviewed by Dr. Lyman R. Caswell,  
E-mail [ruthandyman@earthlink.net](mailto:ruthandyman@earthlink.net)

*The Martians of Science: Five Physicists Who Changed the Twentieth Century*, by István Hargittai, Oxford University Press, 2006, 313 pages, Price: \$34.50, ISBN 0-19-517845-9

From 1867 to 1914, the city of Budapest experienced a "happy peace," an era of growth and prosperity. Five extraordinary men were born in the latter part of this period. The eldest, Theodore von Kármán, was born in 1881; the other four, Leo Szilard, Eugene P. Wigner, John von Neumann, and Edward Teller, were born in the ten-year period, 1898-1908. Chemist István Hargittai, author of *The Road to Stockholm*, tells the fascinating story of the intertwining lives of these "Martians of Science" in his new book.

All five of the "Martians" belonged to professional, affluent Jewish families that were well integrated into Hungarian society. They regarded themselves as Hungarians, for whom

their Jewish background was more significant as a cultural heritage than as a religion. Two of the families, the von Kármáns and the von Neumanns, had been ennobled--- hence the Germanic *von*--- in recognition of services to the Austro-Hungarian state.

The five received excellent educations, with emphasis on mathematics and the physical sciences, in outstanding *gimnáziums* in Budapest. It was natural that they should seek their doctorates in Germany, whose universities led the world in the physical sciences in the early twentieth century. Germany also provided far more opportunities for professorial appointments, once the *habilitation* had been achieved, than

did Hungary. A number of older Hungarian scientists had already found niches in the German universities. Theodore von Kármán left Hungary for Germany in 1906.

The four younger Martians had additional motivation to leave Hungary. Jews were subjected to persecution during the "White Terror" that followed the collapse of the short-lived Hungarian Soviet Republic in 1919, and the conservative government which followed in 1920 legalized anti-Semitic restrictions. Szilard went to Germany in 1921, and Wigner in 1922; von Neumann went to Switzerland in 1923, then moved to Germany after completing his doctorate in 1926. Teller, the youngest, left for Germany in 1926, following his graduation from the *gimnázium*.

In the relative comfort of the Weimar Republic in Germany, all five published significant results in their respective fields and seemed headed for professorial chairs. But already sensitized to anti-Semitism by the experience of postwar Budapest, they foresaw the Nazi rise to power before most people. Theodore von Kármán, who had already established an international reputation, moved to the United States in 1929 to build a department in aeronautical engineering at Cal Tech. In 1930 Princeton employed Wigner, who built a research program in solid-state physics, and von Neumann in mathematics. Szilard followed them to Princeton in 1931 to do research in mathematical physics. After spending 1933-1934 at Bohr's institute in Copenhagen, in 1935 Teller accepted an appointment

at George Washington University, where he initially concentrated his research on molecular spectroscopy, but soon shifted his interest to nuclear physics. All five of the Martians soon became naturalized American citizens.

Hargittai retells the story of the visit of Szilard and Wigner to Einstein in 1939, which resulted in Einstein's famous letter to President Roosevelt that ultimately set in motion the Manhattan Project and the building of the atomic bomb. All of the Martians became involved in war projects: Szilard, Wigner, von Neumann and Teller in various aspects of the Manhattan Project, and von Kármán as a consultant to the Army Air Corps. Hargittai reviews their contributions.

The chapter dealing with the post-war activities of the five, "To Deter: Cold War," is the longest chapter in the book. Theodore von Kármán continued his association with the Air Corps, was influential in its conversion to the Air Force independent of the Army, and helped lay groundwork for development of the space program. Szilard and Teller became politically active but in opposite ways. Szilard campaigned vigorously for controls on nuclear weapons, addressing urgent requests not only to Eisenhower and to Kennedy, but also to Stalin, who ignored him, and to Khrushchev, who granted him one interview. Teller's push to develop the hydrogen bomb and his later support of the Strategic Defense Initiative are well known. He joined the Lawrence

# Around-the-Area

## University of Arkansas

### In Memorium: Helen King.

Staff member **Helen King** died Sept. 23 after a lengthy illness. She joined the department in 2001 and served as the receptionist for five years. She was a country girl whose southern hospitality and sunny disposition delighted all whom she met.

**Charles Wilkins** received two awards at the 2006 FACSS meeting Sept. 24-28. He was awarded an honorary lifetime fellowship in the Society for Applied Spectroscopy, and he was also elected a Fellow of the Society for Applied Spectroscopy. Presentations were made at the fall ACS meeting by **David Vicic**, **Peter Pulay**, and **Ryan Tian**. **David Paul** presented a seminar at Oklahoma State University on Sept. 21. **Ryan Tian** presented a talk at the Annual Meeting of AANM in Washington, D.C. on Sept. 9.

**K. Z. Shein** has joined the department as a scientific research technician.

## East Texas Section

The Oct. 17 meeting at Texarkana College consisted of potpourri of demonstrations by some section members as an introduction to National Chemistry Week. The Nov. 8 meeting at Tyler Junior College featured ACS tour speaker **Dr. Robert P. Bates** speaking on "What You

Always Wanted to Know about Chemicals in Food but Were Afraid to Eat." Three student affiliate chapters from the East Texas ACS Section were honored by ACS. See p.13 for details.

**UT-Tyler.** The American Chemical Society has approved the chemistry program. Students who receive B.S. degrees in chemistry and complete the ACS-approved curriculum will graduate as ACS-certified chemists.

In August, the Department of Chemistry moved into the third and fourth floors of the new Ratliff Engineering, Science, and Technology Building. The building is equipped with state-of-the-art teaching and research laboratories; departmental office; faculty offices; teaching assistants' room, instrument rooms, cold room, and storage rooms. A computer instructional laboratory has been equipped with 12 Dell Computers loaded with the latest chemistry software.

The department is installing four new instruments totaling \$475,000: a Varian 400-MHz Nuclear Magnetic Resonance System with a high-resolution console and with variable temperature and multinuclear capabilities; an Agilent 6890N Gas Chromatograph/5975B Mass Spectrometer with an Ion Gauge Controller, a 7683 Auto Sampler, and NIST05 Library; a Varian Cary Eclipse Fluorescence Spectrophotometer;

# SMU Chemistry



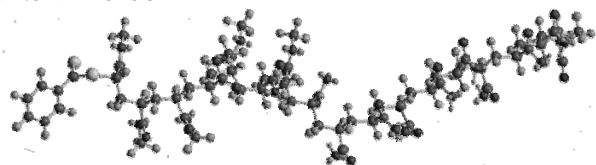
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3215 Daniel Ave, Dallas, TX 75275-0314

(214) 768-2480, [chem@smu.edu](mailto:chem@smu.edu)

Livermore Laboratory in 1952. Kennedy awarded him the Fermi Prize in 1962. Wigner was made director of research and development at the Clinton Laboratory in Oak Ridge, but he preferred the academic life and soon returned to Princeton. He made little further contribution to physics, however, and turned his energies to campaigning for civil defense. In 1963 he received a Nobel Prize for physics for his work on symmetry principles, which he had published in Germany in the 1930's. John von Neumann's work with the Manhattan Project had been largely mathematical and contributed significantly to the development of computers. He returned to Princeton's Institute for Advanced Study after the war to continue his computer work, but after 1952 he became a member of various government agencies, including the Scientific Advisory Board of the U.S. Air Force, along with von Kármán, and the General Advisory Committee to the Atomic Energy Commission. He became a full member of AEC in 1955. President

Eisenhower awarded von Neumann the Medal of Freedom in 1956.

To me, the most interesting chapters in the book are the first chapter, which tells of the families, cultural background and early education of the Martians in Hungary, and the final chapter, entitled "Being Martian," which compares and contrasts their personalities. These two chapters round out the characters of the five men and make them come alive to the reader.

The discussions of the personalities of Szilard and Teller are especially interesting. Szilard never settled down into a permanent academic appointment; instead he bounced from place to place and from idea to idea. He published little, preferring to take out patents instead. He was remarkably prescient. He predicted the nuclear chain reaction before it was discovered--- and in 1934 filed for a British patent for it! He foresaw the Nazis' rise to power in Germany before most people took them seriously, and he anticipated World War II and the Cold War ahead of others. After the war, his scientific interests shifted to biophysics and molecular biology. When he was found to have bladder cancer, he directed his own radiation therapy and achieved a complete cure. In an essay, "Szilard and Fermi," contrasting the two persons, Hargittai sums their differences with the statement, "Fermi was a scientist from beginning to end, whereas for Szilard science was only a means to do something for mankind."

In a second essay, "Teller and Oppenheimer," Hargittai relates considerable background to both men's lives and personalities, as well as reviewing the well-known hearing at which Teller testified against Oppenheimer and lost many friends as the result. Both Teller and Oppenheimer appear to have had somewhat flawed personalities. Teller had an over-protective mother, he was friendless and unhappy at school, and he endured the post-



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World War I anti-semitism much longer than his colleagues, resulting in a set of insecurities which he carried with him the rest of his life. On the other hand, he seems to have had the happiest marriage and family life of any of the Martians. Although Teller was politically adept, he could also be rude and tactless when such behavior was not appropriate. His behavior caused Szilard to comment, "Teller should be protected from Teller!"

The discussions of von Kármán, von Neumann, and Wigner are briefer. Von Kármán and von Neumann were similar in personality; both enjoyed life and socializing, and both were brilliant mathematicians who could become deeply absorbed in their own thoughts when concentrating on a problem. Both had a fine sense of humor. Von Kármán was the only one of the Martians who never married, but he liked the company of attractive women.

Wigner was the most difficult of the Martians to know. Hargittai questions whether he had any real friends at all, even among his fellow Martians. He hid himself behind a mask of formality and politeness, even when he strongly disagreed with someone, while his body language showed his true feelings. Wigner was married three times.

The book concludes with an epilogue, "Greatness in Science." In one section of the epilogue, Hargittai speculates on how the lives of the  
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than teaching. However, Bob's heart was in teaching. His old friend Tom Hall told him of an opening at Hockaday, and in July, 1984, he became chemistry teacher and chair of the science department. In 1996 he asked to step down as chair.

Although Bob didn't overlap with Werner Schulz at Hockaday, he met Werner in 1985 when Werner taught at a special science camp. He saw Werner occasionally from then on until Werner's death. Bob is a longtime (nearly 40 years) ACS member, and for years he taught weeklong workshops in the summer on the ACS ChemCom curriculum.

Bob feels that there are not enough young, dedicated teachers of science. The love of teaching science is not shared by as many young people as should be. Schools need to keep young teachers, and they also need to keep the experienced teachers to mentor the young ones.

Bob is married to Norma Simpson, a retired chemistry teacher from the Episcopal School of Dallas. His hobbies include gardening, golf, reading, and travel. His wife has a flat in Edinburgh, Scotland inherited from her mother, so they travel to and from there summers. Bob had three children from his first marriage. Teresa is an engineer working for Ford. Robert is working on a master's degree in kinesiology at TCU. His daughter Catherine died of a vascular disease a number of years ago. Together Bob and Norma have five grandchildren.

I wish that many more local section members had heard Bob's

award address in October on changes in teaching chemistry over the last 30 years. However, I hope to share some of Bob's thoughts on this topic in a future *Retort* issue. When master teachers such as Bob Patrizi retire in the next few years, who will replace them? Until that question is answered, let us be thankful for Bob Patrizi and his fine predecessors as winners of the Werner Schulz Award.

## AREA STUDENT AFFILIATES HONORED

The area served by *The Southwest Retort* had three ACS student affiliate chapters honored as outstanding: Northeast Texas Community College with **Ashley Perryman** as chapter president and **James K. Archer** as faculty advisor; Texarkana College with **Kristin Williams**, chapter president and **Patricia Harmon**, faculty advisor; and UT-Dallas with **Stephanie Taylor**, chapter president and **John Sibert**, faculty advisor. The chapter at Northeast Texas Community College was given lots of space in an article appearing in the October 30 issue of *C&EN* on five outstanding student affiliate chapters.

The East Texas Section also had a Commendable Chapter, UT-Tyler with **Luke Potts**, chapter president and **Neil Gray** and **Tanya Shtoyko** as faculty advisors. This chapter has been recognized by the ACS for nine consecutive years. Following are chapters in the area ranked as honor-  
\*\*\*\*Continued on Page 20\*\*\*\*



# HOCKADAY'S PATRIZI WINS SCHULZ AWARD



This year's Werner Schulz Award was given to Robert Patrizi of The Hockaday School in Dallas. Bob received his \$1000 honorarium and plaque at the D-FW Section's October meeting held at Hockaday. His picture will now hang in the Gallery of Schulz Award Winners at Tarleton State University. Bob's outstanding teaching career was triggered by his acquaintance with another outstanding high school teacher, as we will soon see.

Bob Patrizi was born in Aliquippa, PA, a thriving steel town and the home of such future celebrities as Mike Ditka, Tony Dorsett, and Henry Mancini. Indeed, Bob went to school with Mancini, and they shared the same clarinet teacher. Bob had an uncle who loved to tinker with things, which got Bob interested in investigating things. Ultimately, it was his high school chemistry teacher, Mr. Fazio, who had the greatest influence. Fazio was such a great teacher that Bob not only wanted to go into science, but he wanted to be a chemistry teacher like Fazio. He went on to receive his B.A. degree in chemistry from Washington and Jefferson University in Washington, PA. When he was applying to graduate schools, one of his chemistry teachers, Dr. Bill Lake,

knew Ed Biehl and suggested that he apply to SMU. That was how he wound up in Dallas.

As a new teaching assistant, Bob was assigned to assist the lab instructor Gene O'Brien. After one year, however, O'Brien left to join the faculty at El Centro. SMU then gave Bob the opportunity to be the lab instructor at a higher salary, but with the understanding he would be unable to take a full load of courses. Thus it took Bob 5+ years to finish his graduate studies, but at the end he had master's degrees in both secondary education and in chemistry, an unusual combination for a high school chemistry teacher.

Bob then joined the faculty at Cistercian Prep School in Irving, where he taught both chemistry and chemistry 2 (equivalent to AP chemistry). After seven years at Cistercian, a friend of Bob's at Richland Community College hired Bob for the summer with the understanding that he would be full-time in the fall. As a requirement, Bob had to resign from Cistercian. However, higher-ups in the administration vetoed the arrangement, leaving Bob to scramble for a job. He wound up teaching physical science in the DISD at the Business Magnet.

After a year in the DISD, Bob got an offer to work at RSR Corp. as Occupational Health Coordinator/Lab Manager at a lot higher salary

# CHEM GEMS AND JOULES

by Mary Teasdale

## Penny for Your Thoughts?

How often have you had thoughts or opinions on matters, but no one interested enough to listen? Well, we on the editorial staff of the *Southwest Retort* are ready and willing to listen. The catch? Well there are two: first, you have to let us know what you are thinking by writing or e-mailing us (see page two for specifics), and second, once your thoughts are shared with your colleagues, you may learn that to one or more of them, your penny-thoughts are actually priceless!!

Some of us are prolific thinkers and writers. We encourage you to WRITE ON! For the rest of us, here are a couple of ideas that may help get us started. Does your school utilize the state provided "canned" curriculum? Do you have definite ideas on its effectiveness or implementation? Then share your thoughts and opinions with our editorial staff.

Do you have a favorite website that you use for classroom instruction or homework assignment? Share your site and tips for its use with other teachers by sending us your URL and comments concerning it.

## Meatier Matters

About two months ago now I attended a meeting where the women sidetracked onto a discussion of microwave ovens. Someone asserted that food, especially meat, cooked in a microwave just did not taste the same as meat cooked in a convent-

ional oven. Nods and murmurs followed. I was about to say there was some evidence for this based on how the two ovens operate, when one of the very young ladies remarked that there really was no difference in taste. Ooops! The casual observer might be convinced that this young woman must surely be the owner of a seriously impaired palate as the elder ladies responded to her comment with grave intensity. My thoughts, however, had wandered back to a *Scientific American* article that I had worked into a content reading assignment for HRW several years ago. Seeing no safe opening in the barrage of comments, I wisely chose to keep my mouth closed until a more opportune moment.

Appearing in the same issue of *Scientific American* is an experiment set using thermocouples to test the internal temperatures of soufflés. The assertions to test are two: it is not essential to put a soufflé directly into the oven after adding egg whites, and individual soufflé mixtures can be frozen and later thawed for cooking.

It also provides demonstrations to illustrate how microwave ovens work. First the reader is treated to a discussion of how microwave ovens operate. Microwaves penetrate the item to be heated and give part of their energy to the individual molecules, causing them to vibrate. Frictional energy between the molecules and their surroundings produces the

heat to cook the food. The substance to be cooked must contain polar molecules such as water, and cannot be completely solid. Molecules in solids are present in a fixed array and cannot move in response to the microwaves.

To illustrate the need for polar molecules, the demonstrator heats a bit of paraffin, which barely warms, and a bit of glycerol, which quickly boils. To illustrate the second point, water is poured into the gap between two beakers one small enough to fit inside the other with a 4-cm separation between their sides. The water is frozen in stages so the glass does not crack. Separate the beakers from each other by running them under warm tap water. This should leave a hollow ice block in the bottom of the larger beaker. Fill a small beaker three-fourths full of water and set it in the hollow of the ice. Place the beakers in the microwave oven and heat for thirty seconds. The water should boil leaving the ice intact!

## REFERENCES

1. Kurti, Nicholas and This-Benekhard, Herve. (Apr. 1994) Chemistry and Physics in the Kitchen. *Scientific American*. 66-71.
2. *Ibid.* (Apr. 1994) The Amateur Scientist: The Kitchen as a Lab. *Scientific American*. 120-122.

## Science and Society in Film

The television in my parents' house tends to run whether anyone is around to listen or not. As a result one often catches bits and pieces of things here and there when passing through the house. During one such

passing this week my ears piqued as a news commentator mentioned that two babies in England were the first to be screened for genetic defect before the embryos, having been injected with mitochondrial DNA from a fertile donor, were implanted into the mother. I tried in vain to hear a repeat of the segment, but was still reminded of the popular press's expression of people's fears when something like this is reported. You may recall Steptoe's test tube baby and the subsequent publishing of *The Stepford Wives*, later brought to the big screen with alternate endings. This news report, however, brought to mind *GATTACA*, the 1997 science fiction thriller starring Ethan Hawke and Jude Law. In this movie, persons conceived naturally were considered inferior while those who had been genetically engineered were given recognition and places of prominence. Vincent (Ethan Hawke) is a nonengineered child with a heart defect making him *invalid* and unable to rise above the lower echelons of this dystopian society. So his parents go to the doctor to have their next child, also male, genetically predetermined to be disease and defect free, hence, *valid* and able to rise to places of societal prominence. A careful observer will notice the organic molecule Vincent plays with while his parents are speaking with the doctor. The movie then centers on the struggle to achieve one's goals in this society that values perfection. This movie does not present pro or con arguments for genetic predetermination but instead explores "what if."

Portions of *GATTACA*, can be used to discuss the interrelationship between science and society; *e.g.*, during a traffic check, police attempt to swab Vincent's mouth for DNA from saliva. Insurance companies now use a similar method of testing before granting life insurance policies. Explain why you feel this practice does, or does not, lend validity to the premise of *GATTACA*. Sir Alec Jeffries, a British biochemist, developed the DNA fingerprinting method first used in court in 1987 to convict a rapist. Since then it has been used to both convict and to exonerate persons charged with violent crimes. The FBI wants a nationwide database comprised of DNA samples from anyone ever arrested for anything – regardless of conviction. How do you feel this relates to the dystopian society presented in the film?

*GATTACA* could be used to consider scientific ramifications. For example, suppose implantation is accomplished with the cytoplasmic transfer process developed by embryologist Jacques Cohen. How, if at all, would having three parents (mother, father, and mtDNA donor) affect the way DNA analysis is done? It can also reinforce basics: what sequence of amino acids is represented by the movie title? or The ball-n-stick molecular model shown while Vincent's parents are in the scientist's office has two springs connecting round balls. These springs identify which type of bond: single, double, or triple? *GATTACA* produced by Columbia TriStar Pictures is rated PG-13 with a running time of 106 minutes.

## FURTHER READING

1. Lawton, Graham. (2006:May 13) The Incredibles. *New Scientist*. **190**, 2551, 32-38.
2. Iredale, R., *et.al.* (2006: Sept.) What choices should we be able to make about designer babies? *Heath Expectations*. **9**, 3, 207-217.
3. *n.a.* (2004: Nov./Dec.) U.K. Allows Embryonic Screening, Cloning. *Science*. p. 22.
4. Dimond, B. (2005: Jul.) Designer Babies: sense and suitability. *British Journal of Midwifery*. **13**, 7, 419.
5. Brownlee, Shannon. (2002: Mar) Designer Babies: human cloning is a long way off, but bioengineered kids are already here. *Washington Monthly*. [accessed online] <http://www.washingtonmonthly.com/features/2001/0203.brownlee.html>

Send Material for this column to Dr. S. Starnes, Dept. of Chemistry, Texas A&M -Commerce, P. O. Box 3011, Commerce, TX 75429. Email [stephen\\_starnes@tamu-commerce.edu](mailto:stephen_starnes@tamu-commerce.edu). Tel.: 903-886-5389

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