



## 2008 Highlights of ACS Achievements

A Yearly Report from Madeleine Jacobs  
ACS Executive Director and Chief Executive Officer

2008 was a year of great achievement for the American Chemical Society. We are very pleased to present here a summary of some of the highlights from the year, submitted by the ACS operating units and organized around the Society's six strategic goals (<http://strategy.acs.org/>). These selected accomplishments were achieved through a robust partnership of American Chemical Society members, governance, and staff, often in partnership with other organizations. Although these are only selected accomplishments, the list is long. **It does not include many of the activities carried out by ACS Technical Divisions and ACS Local Sections—or the many individual activities that our members undertake. ACS carries out so many activities that we often forget the incredible diversity of the ways in which we serve our members and the broader scientific enterprise worldwide.**

Even as you read this report, we cannot forget that last year was also a year of many challenges. The ongoing turmoil in the world economies and the sharp decline in global capital markets took its toll on every organization, including ACS. A C&EN article (December 15, 2008, page 9) summarized steps ACS has taken to bolster its financial sustainability in the face of significant declines in the value of its investments. We have since taken some additional actions, are closely monitoring the situation, and are prepared to take further steps if necessary.

At the same time, ACS members should be assured by the following facts: ACS is financially sound, even though we've suffered from the market downturn. Despite the weak economy, ACS ended 2008 with a net contribution from core operations that exceeded the 2008 ACS Approved Budget. We have a 2009 ACS Approved Budget that projects a net contribution from operations of \$10.7 million, and that Budget is supported by an extensive set of contingency plans.

Significant steps have been taken to mitigate the capital markets' impact on the ACS reserves. We remain highly liquid and have no difficulty covering operating expenses or servicing outstanding debt. ACS has very limited debt outstanding and does not rely on short-term borrowing to fund its day-to-day operations. ACS has no extrinsic financial pressures from entities such as shareholders. Unlike universities and some foundations, ACS does not rely extensively on investment income to fund core operations.

We know that the scientific community and our members are looking to us now, more than ever, for our products and services. We intend to continue to provide those high quality products and services. Out of challenges come opportunities. We have many ongoing initiatives. We continue to innovate and deliver new and valuable services and products. We have a committed and dedicated ACS Board of Directors, Council, members, and staff. We have a compelling vision, mission, and strategic plan to guide us. Together, we will work to overcome these challenges and embrace the opportunities. I am

confident that we will emerge a much stronger Society fulfilling our vision: “Improving people’s lives through the transforming power of chemistry.”

## Goal 1

**ACS will be the indispensable professional and information resource for members and other chemistry-related practitioners.**

### **Chemical Abstracts Services**

- Chemical Abstracts Services (CAS) database content grew to unprecedented levels with the addition of more than 1.2 million indexed document records to CAplus<sup>SM</sup>, an all-time high, plus more than 8 million records for organic and inorganic substances to the CAS REGISTRY<sup>SM</sup>, which reached a total of more than 41 million organic and inorganic substances by year end. In addition, 1.1 million records were added for sequences. Citations associated with document records in CAplus grew to more than 220 million during 2008.
- The 40 millionth CAS Registry Number<sup>®</sup> (CAS RN) for organic and inorganic substances was assigned in November. CAS RN 1073662-18-6 is for an azulenobenzofuran derivative. The phenomenal growth of the CAS REGISTRY<sup>SM</sup> database has been aided by CAS’s addition of records for more than 1 million substances from web sources that meet CAS’s substance registration criteria, and more than 3.75 million prophetics from patents.
- Researchers can now explore the largest collection of disclosed chemical synthesis information in CAS databases. This incorporates 29 million preparations, including more than 16 million single- and multi-step reactions from 1840 to the present.
- CAS has enhanced its reaction offering by adding 63,000 reactions from Wiley's *Encyclopedia of Reagents for Organic Synthesis* (EROS), bringing the total number of reactions to more than 16 million. Two additional Wiley reference works were added in fourth quarter 2008: *Organic Syntheses* and *Organic Reactions*.
- CAS made more than 23.8 million predicted proton NMR spectra available in SciFinder<sup>®</sup>, which now provides the largest collection of proton NMR spectra in existence. CAS has made these spectra available through an agreement with ACD/Labs, a respected vendor of predicted properties and spectra. The spectra augment CAS’s offering of 2 billion predicted and experimental properties, and data tags available in SciFinder for more than 41 million substances. Note: 2 billion properties, spectra, and data tags are also available in STN<sup>®</sup>.
- CAS scientists published a study in *The Journal of Organic Chemistry*, May 28, 2008, reporting that only 143 molecular shapes provide the frameworks for a disproportionately large percentage of reported substances. The paper published by seven CAS scientists explains why certain molecular frameworks are more likely to be used in new compounds and may also help identify new regions of chemistry space ripe for exploration.

- CAS now covers exemplified prophetic substances from the example sections of patents. Exemplified prophetics described by name or structure in English-, French- and German-language patents from 2004 to the present are indexed in CAS REGISTRY. These substances are also represented in the IT field in CAplus.
- Continuing to build upon its strength in the coverage of Asian patents, CAS is currently covering utility models from China, Japan, and South Korea in CA/CAplus from 2006 to the present. CAS now guarantees within 14 days from date of publication the availability of Korean, Chinese, and Indian patent bibliographic data and abstracts in CAplus. ChemPort<sup>®</sup> now provides linking to full-text Korean patents through KIPRIS and to Chinese patents through SIPO.
- CAS continues to improve the currency of Chinese patents, for which granted patents published from April 2004 through mid-2008 are being processed and added to CA/CAplus patent families.
- CAS began to cover as basic patents both the Patent Cooperation Treaty (PCT) application and its original national equivalent(s) with oldest priority, from the U.S., Germany, Great Britain, France, Canada, and/or the European Patent Office (EPO). The new definition of basic patents resulted in the availability of approximately 7,500 additional chemistry-related patent records to CA/CAplus in 2008, for which extensive subject and substance indexing has been added.
- A new web version of SciFinder became available in November with new features such as:
  - A powerful *Refine* capability
  - Additional options to *Combine Answer Sets* offers the ability to merge multiple answer sets
  - New *Keep Me Posted* features
  - One-click linking to the users' favorite SciFinder answers
  - Related references on key scientific concepts
  - Chemical supplier information for multiple compounds can now be exported to Microsoft Excel
- SciFinder was adopted by a growing number of educational institutions and remained the leading scientific research tool for academia. For the ninth consecutive year, growth exceeded 100 additional subscribers, reaching 1,571 by year end.

## Publications Division

Washington IT collaborated on many of the projects described below.

- ACS Journals ranked #1 in Thomson Reuters ISI<sup>®</sup> Impact Factors and/or Total Citations, for 15 of the 26 ISI subject categories in which ACS Journals are indexed. As reflected in the ISI report for 2007 (released mid-2008) this ranking for ACS Journals included preeminence in:
  - 7 core chemistry categories (Analytical, Applied, Inorganic & Nuclear, Medicinal, Multidisciplinary, Organic, and Physical Chemistry); as well as
  - 8 more categories from Crystallography to Nanoscience & Nanotechnology.
- *JACS* reached new heights with the most recent Thomson Reuters ISI Impact Factors reported in mid-2008 for the period ending the prior year. In 2007 *JACS* posted a record 295,465 total citations and its highest ISI<sup>®</sup> impact factor ever (7.885). In total, ACS Journals exceeded 1.36

million total citations in 2007 – a 10.3% increase over 2006. ACS titles garnered 15.3% of the 8.9 million total citations from across the 26 ISI® categories that cover ACS Journals. (ACS journals represent just 2% of the total 1,924 chemistry titles within those same ISI subject categories.) ACS journals accounted for 36% of the 3.06 million total citations across the 7 core chemistry categories. (ACS journals represent just 6% or 27 of 446 titles indexed in those core chemistry categories).

- ACS Publications Sales and Marketing began implementation of the Value-Based Pricing plan, decoupling electronic subscriptions from historical print expenditures for our institutional customers for the first time. The new tiered pricing plan has systematized the approach to the licensing of our Web Editions based on objective criteria (Carnegie Classifications, web usage and enrollment); pricing for international customers also includes discounts for institutions in developing or economically disadvantaged countries. Most importantly, the new value-based methodology reflects the tradition of peer-review excellence and value delivered by the world's leading journals in chemistry and the related sciences.
- ACS Publications successfully developed a dynamic new online resource for the hosting and delivery of the Society's 34 peer-reviewed scholarly journals that launched in November. The introduction of the new website represented the culmination of an 18-month technology development effort and is a major milestone for the Publications Division and the Society. The project required close collaboration and oversight among all Publications Division operating units, Washington IT, and our external software development partner, Atypon Systems, and included collaboration with CAS product development and IT staff. The project threads included IT Infrastructure updates, construction of an entirely new user interface, merging existing systems with the new platform, the preparation and migration of approximately 820,000 ACS articles, and transition to a dynamic XML workflow for content processing from 2008 forward on all 30,000+ ACS articles that are published each year. The state-of-the art user interface includes easy navigation to CAS *SciFinder* and its web-based functionality, which sets the stage for robust content linking between the two publishing platforms of the Society's scientific information services.
- ACS Journals published 33,695 articles (7.3% increase over 31,253 articles published in 2007) and 262,143 pages (8.0% increase over 2007 total publishing output).
- Editorial Office Operations established a European Customer Services & Information support capability in November, working with an external provider of such services. This capability now extends ACS Publications' own Customer Service hours of operation from the current 12 to a total of 20 hours/day (12 a.m. to 8:00 p.m. EST), Monday through Friday.
- The Publications Division completed the successful launch of *ACS Nano* in the institutional market; the first year of its commercial availability following its introductory launch in mid 2007. The journal and its companion community site, *ACS Nanotation* achieved strong uptake by authors, customers, and readers. *ACS Nano* received the *Highly Commended* citation (second place award among qualified finalists) in the category of *Best New Journal* from the Association of Learned and Professional Society Publishers.

- ACS also promoted a new journal, *ACS Applied Materials & Interfaces*, which was launched in 2009. As marketing campaigns spurred author submissions throughout the summer and through yearend, customer uptake of the new journal also has been brisk, particularly with academic accounts with collections in the materials sciences, as well as large institutions, and consortia. *ACS Applied Materials & Interfaces*, which was introduced online at the end of November, generated demand for 3,730 article downloads during its first week.
- Editorial Development staff launched an innovative *JACS Beta* experimental web site as a testbed for novel editorial and web publishing technology features. In addition, *JACS* has been redesigned and positioned for promotional “relaunch” in 2009.
- ACS Publications reached agreement with NIH regarding the NIH PubMed Central’s Selective Deposit program, for the deposit of published *ACS AuthorChoice* articles to PubMed Central. (Under the terms of the agreement, ACS deposits the final published version of *ACS AuthorChoice* articles directly to PubMed Central on behalf of the author, for immediate open access availability under the terms and conditions of ACS’s fee-based open access option.) ACS Publications also secured approval from the Wellcome Trust regarding compliance of *ACS AuthorChoice* terms and conditions with the open access policy of that major UK funding body.
- C&EN, in collaboration with Washington IT, launched the electronic edition of the magazine for ACS members living outside of North America with the first issue of 2008. The electronic edition is a complete, cover-to-cover facsimile of the print edition delivered over the web. Its creation alleviated members living outside of North America from having to pay the delivery surcharge mandated by the ACS Constitution & Bylaws. Approximately 38% of eligible members opted to receive the electronic edition instead of the print edition. We have made the electronic edition an environmentally friendly option for all ACS members in 2009, and as of the end of 2008, about 12% of members living in North America had opted to switch from print to electronic access.

### **Division of Membership and Scientific Advancement**

- ACS added a suite of 42 introductory online business and management skills courses for members at substantially discounted rates and reduced rates for the unemployed through a collaborative partnership with Harvard Business Publishing.
- ACS began a series of monthly teleconferences featuring luminaries from the chemical industry speaking about economic and other trends affecting employment as an additional enhancement to the careers portfolio. The speakers included Dr. Magid Abou-Garbia, Senior Vice President and Head of Chemical and Screening Sciences for Wyeth Drug Discovery and Development who discussed strategies for a successful career in the pharmaceutical industry; Dr. Carolyn Ribes of Dow Benelux BV in the Netherlands who spoke about the challenges and opportunities of working abroad, and Dr. Michael Strem of Strem Chemicals Inc. who spoke about the differences between small and large companies. Dr. Thomas Lane, ACS President and Director of Global Science and Technology Outreach at Dow Corning Corporation was the featured speaker for the January session.
- The 2008 ACS Leadership Institute was launched January 2009 in Dallas, TX, where, for the first time, delegates received leadership training. Leadership courses were also offered at six of the 2008 Regional Meetings.

- Continuing Education provided a total of 154 high quality courses including 53 Short Courses at National Meetings, 37 Short Courses in regional circuits, 14 stand alone Short Courses, 13 Custom Courses, 31 Online Courses, and 5 major ProSpectives Conferences.

### **Education Division**

- The Committee on Professional Training (CPT) published new ACS guidelines and procedures for ACS approval of baccalaureate programs in chemistry. The new guidelines are designed to increase flexibility for students who are pursuing degrees in chemistry and increase opportunities for faculty to develop innovative and interdisciplinary curricula. The new procedures will allow ACS to provide more rapid communication of the results of CPT's reviews of chemistry programs.
- The Committee on Professional Training annual report of chemistry degrees granted by ACS-approved programs was published in 2008. The number of bachelor's degrees granted by these institutions in 2006-07 reached an all-time high of 12,888 degrees, a 6.3% increase over the previous record set in 2005-06. The number of PhD graduates also set an all-time high of 2,462 degrees granted.

### **Treasurer's Division**

- The Society's planned giving program provides creative ways for philanthropically inclined members and friends to make gifts to the Society especially during trying economic times. To further enable this program, during 2008 the Development Office contracted with Comerica, a Wealth Management Company, to enable donor prospects interested in giving via a charitable gift annuity to do so in every state in the union. Before this agreement, only donors domiciled in Maryland, where ACS was registered to receive charitable gift annuities, could give this type of deferred gift.
- The Development Office's planned giving program created a recognition society, the Legacy Leaders, to recognize donors of deferred gifts (annuities, trusts, bequest intentions) to the Society. To acknowledge the founding members, each was presented with a specially designed Legacy Leaders pin at the "Silver Circle" breakfast at the Philadelphia national meeting in August. Total deferred gift commitments from Legacy Leaders increased to \$7 million during the year.

### **Office of Research Grants**

- The Petroleum Research Fund supports the careers of scientists through its programs in support of early career scientists (New Investigator Grants) at both the doctoral and primarily undergraduate levels. Research at undergraduate institutions is focused on the involvement of undergraduate students in undergraduate research programs which we expect to result in publishable work with undergraduate student co-authors. The Fund also supports career sustainability through the support of New Directions Grants which are aimed at supporting tenured faculty who would like an opportunity to take their research in a new direction in which they have neither been funded nor published in before. In 2008, the Fund supported the community through its hosting of a grant proposal writing workshop aimed at improving the proposal writing skills of various members of the community.

## Goal 2

**ACS will be a preeminent global scientific community that engages members and other scientific professionals to advance science education, research, knowledge, interaction, and collaboration.**

### **Division of Membership and Scientific Advancement**

- The ACS Board of Directors approved the Diversity Partner Program designed to broaden participation in the chemical sciences nationwide among diverse and traditionally underrepresented groups. Starting with the African American, Hispanic, Native American, and Asian American communities, the ACS Board of Directors selected four members to serve as Diversity Partners for the 2009-2011 pilot period: Thomas H. Epps III, Guang Cao, Javier Macossay-Torres, and Shanadeen Begay.
- ACS welcomed the following organizations as new sponsors of ACS National Awards: Cengage Publishing and the ACS Division of Chemical Education as co-sponsors of the George C. Pimentel Award in Chemical Education; Dell Inc. as a sponsor of the ACS Award in Theoretical Chemistry; and the ACS Division of Physical Chemistry as a co-sponsor of the Irving Langmuir Award in Chemical Physics. In total, the ACS Awards Program honored sixty-five individuals with fifty-four nationally administered awards.
- Nearly 30,000 people participated in two ACS national meetings and expositions, which featured more than 17,000 technical presentations, products, and services from nearly 2,700 exhibitors. The ACS and the American Institute of Chemical Engineers (AIChE), for the first time, held joint meetings in New Orleans in April. About 3,000 attendees participated in the eight ACS Regional Meetings in 2008.
- Under the leadership of the International Strategy Implementation Task Force and with the collaboration of Washington IT, the ACS Network was launched in August 2008. With more than 16,000 users worldwide and growing, the Network is a premiere forum for chemists and other scientists to find, connect, and share ideas and content with colleagues across the globe. The Task Force also led a strategy to develop global alliances to enhance ACS's leadership in the global scientific community.
- A group of five deans and department heads from leading higher education institutions in China (the Universities of Nankai, Peking, Nanjing, Tsinghua, and Xiamen) were assisted by the ACS Committee on International Activities (IAC) and the Office of International Activities (OIA) to arrange visits to the University of Toledo, MIT, Harvard, UC Berkeley, and Stanford. This program was designed primarily for U.S. and Chinese counterparts to share information and experiences on how chemistry departments in both countries are organized to support teaching, research and service.
- The ACS, the National Academy of Sciences (NAS), and the International Union of Pure and Applied Chemistry (IUPAC) were awarded \$51,000 from the National Science Foundation (NSF) to convene two roundtable meetings in conjunction with the 2009 ACS National Meeting in

Washington, DC. The meetings will promote continued, multinational dialogue on establishing effective programs for ACS and IUPAC technical divisions.

- At the Latin American Federation of Chemical Association (FLAQ) Congress in Puerto Rico, the Office of International Activities directed an NSF-funded Latin American Biofuels and Environmental Impacts symposium, an ACS workshop on Activity-based Chemistry Teaching, a Chemistry Education symposium, an ACS session on workplace skills standards, and staffed an ACS booth promoting the Society's programs, products and services relevant to Latin America, including SERMACS 2009 in Puerto Rico.

## Education Division

- Project SEED celebrated its 40th anniversary in 2008. The celebration included a symposium, technical workshop, and a reception during the ACS National Meeting in Philadelphia and a technical workshop at the New Orleans National Meeting. The Committee on Minority Affairs luncheon honored the Project SEED anniversary at the Philadelphia meeting and Past-President Katie Hunt recognized the program at the Past President's Dinner. The program sponsored 386 high school students during the 2008 summer research program.
- The U.S. Chemistry Olympiad team won one silver medal and three bronze medals at the 40th International Chemistry Olympiad (IChO) in Budapest in 2008. The U.S. team competed with 253 students from 65 countries. The International Chemistry Olympiad Steering Committee accepted the ACS proposal to host the 44th IChO in the U.S. in 2012; student activities will be held at the University of Maryland, College Park.
- The Education Division offered over 40 professional development workshops for K-12 teachers during 2008. These workshops include the "Connections" workshop, sponsored by Dow Corning and Monsanto and conducted by representatives from ACS, American Geological Institute, American Physical Society, and National Association of Biology Teachers; two Green Chemistry for High School Teachers workshops, sponsored by the Bayer Foundation; "Day of Chemistry" workshops for high school chemistry teachers held at the National Science Teachers Association (NSTA) regional conferences; and interdisciplinary "Day of Physical Science" workshops for upper elementary and middle school teachers held at the NSTA regional conferences. The first ACS Summer Institute, comprised of four concurrent professional development workshops, was also launched during 2008.
- ACS published the second edition of *Chemistry in the National Science Education Standards*, edited by Stacey Lowery Bretz, which was released in August 2008. This valuable resource addresses the science education standards specified by the National Research Council and other issues of interest relevant to the current educational landscape.
- The Committee on Professional Training and the Committee on Minority Affairs held two workshops with minority-serving institutions in 2008. One workshop focused on increasing participation of Native American undergraduate students in chemistry, and the second workshop targeted Hispanic undergraduate students. The final reports of both workshops were published with several recommendations from the participants for action by ACS.

- Funded by the Alfred P. Sloan Foundation, Clemson University hosted an ACS workshop for prospective chemistry faculty. Thirty postdoctoral scholars interested in academic careers participated in a three-day workshop presented by eight facilitators. The workshop focused on the academic job search, interview process, faculty expectations, interactive pedagogies, and strategies for work-life balance. A Facebook group was established prior to the event and is being used to help maintain this network of early-career faculty.

## **Office of Research Grants**

- The Petroleum Research Fund supports programs which integrate the research and educational processes. Our grants for research at primarily undergraduate institutions, our Supplements for Underrepresented Minority Research (SUMR), and the Scientific Education grants in support of the ACS scholars program, the American Geological Institute Minority Participation Program and Project SEED at ACS all focus on minority or disadvantaged students. For career sustainability and interaction between undergraduate institution faculty and research institution faculty, we fund the Undergraduate Faculty Sabbaticals program which allows a researcher to take time in a laboratory outside of his or her home institution. In all of these programs the dual mission of research and education are well served.
- Interaction and collaboration has been served this year through our ongoing support of the Scientific Education grants which support travel for foreign speakers in symposia in the U.S.
- The PRF Fund has recently been authorized to proceed with the implementation of a new grant program which will emphasize collaboration since the design of the program is for multidisciplinary, multi-investigator grants.

## **Information Technology**

- The ACS Network, the first online directory of ACS members was launched in August 2008. Over 11,000 members had signed up in advance to be part of this new service. By the end of the year we had over 16,000 ACS Network participants. Initially, members had the ability to establish a personal profile of information and link to other members. In October we transformed the ACS Network by allowing international customers of ACS Publications products to join the network as Global Partners. Finally, in mid December, additional collaboration features were added to the ACS Network. Members can now post content, engage in discussions and participate in communities. This is evolving into an important tool to help ACS engage chemists and interested constituents across the globe.
- With the advent of the ACS ID, members now only have one ID and password to pay their dues online, access acs.org member-only content, manage their preferences (i.e., receiving RSS feeds, Table of Contents alerts, etc.), access ACS Journals, and view C&EN articles online. In the past, members and other users of ACS systems needed to remember different user names and passwords to access these systems. While this does not represent all of the systems that provide benefits to ACS members, this is a great start. In coming years we will expand the use of the ACS ID to as many places as we can.

## Goal 3

**ACS will be a global leader in enlisting the world's scientific professionals to address, through chemistry, the challenges facing our world.**

### **Division of Membership and Scientific Advancement**

- ACS and the Society for Chemical Industry (SCI) held several joint programs in various parts of the world on sustainability of water. The events are part of a larger joint objective – Global Innovation Imperatives – whose goal is to create community and transfer knowledge to stimulate global scientific innovation that meets societal imperatives.
- Continuing in the area of sustainability, the ACS Green Chemistry Institute®, which is a focal point for the implementation of green chemistry and engineering, successfully cosponsored, with the Environmental Protection Agency, the 12<sup>th</sup> Annual Green Chemistry and Engineering Conference in Washington, D.C. on June 24-26, 2008. More than 300 people attended, representing many areas of the U.S. and the rest of the world. The meeting was preceded by the Presidential Green Chemistry Challenge Awards. ACS assisted EPA with the judging of these awards. In other “green” activities, the Colorado School of Mines hosted 85 graduate students and post-doctoral fellows for the ACS Summer School on Sustainability and Green Chemistry, July 9-17, 2008. The sixth annual Summer School is a joint project of the ACS GCI and the Education Division and is sponsored by the Argosy Foundation, the ACS GCI Petroleum Research Fund, the Rohm and Haas Company, the Colorado School of Mines, and the Sigma-Aldrich Chemical Company. Two green chemistry workshops for high school teachers were held in July at Duquesne University and North Carolina State University. The Bayer Foundation is supporting the participation of 25 high school teachers at each workshop.
- ACS GCI continued to work closely with the ACS GCI Pharmaceutical Roundtable, which at yearend had 9 major global pharmaceutical companies as members, and continues to grow. This successful and productive Roundtable has issued more than \$500,000 in research grants since 2005 and also publishes articles, collaborates globally, educates students and defines and develops tools for innovation.
- Building on the successful model of the ACS GCI Pharmaceutical Roundtable, ACS GCI has been working with sixteen companies over the past year to develop the ACS GCI Formulator's Roundtable, which will formally launch in January 2009. Prospective members have worked together to create the organizational structure and define the strategic priorities. Any company operating within Standard Industrial Classification Industry Group 284 including formulation of soap, detergents, cleaning preparations, perfumes, cosmetics, and similar preparations, is encouraged to consider joining the roundtable to further expand the industrial impact of sustainability.

### **Treasurer's Division**

- In New Business Development, TechCatalyst™ was launched in February 2008 as an innovative service to primarily aid small business, research institutions and ACS member inventors in the commercialization of chemical and allied-science (C&AS) based technologies.

TechCatalyst™ designed the Finder & Advisor Service (“FAS”) and CATALYST Program offerings to meet the entrepreneurs’ needs for:

- Technical and management assistance as well as capital for product development, finding technologies, management talent, partners or licensees to advance products or merely solving problems
  - Management assistance through sourcing executive or senior management level scientific expertise.
- The Development Office played a key role in building the relationship between the Hach Scientific Foundation and the Society which has led to the Foundation’s decision to gift its full and complete assets (est. \$33 million) in exchange for the Society agreeing to carry out the Foundation’s primary mission of supporting future teachers of science at land-grant educational institutions. The scholarships are helping to educate the next generation of teachers of chemistry and the other sciences, which is in service of the chemical industry in this country and abroad.

### **Office of Secretary and General Counsel**

- The ACS Board of Directors at its meeting in June, selected “Sustainability (e.g., Energy, Water, Food)” as the Level 1 global challenge based on data gathered from an online member survey. During the Council meeting in Philadelphia, a special discussion on “Achieving Sustainability” took place, where Councilors suggested a wide range of creative ideas to address the topic. ACS staff and applicable committees are working to implement these ideas.
- The ACS Board of Directors considered ways to be a leader in enlisting the world’s scientific professionals to address sustainability through chemistry. Responding to a proposal led by the Committee on Environmental Improvement, the Board approved, in principle, elements of the proposed agenda, and has established a working group to determine ongoing oversight of these activities.
- ACS was cited as exemplary at the April –May 2008 American Society of Association Executives (ASAE) and the Center for Association Leadership’s “Global Summit on Social Responsibility” on improving people’s lives. ACS was singularly recognized as an organization to be emulated, based upon activities connected to our Vision “Improving people’s lives through the transforming power of chemistry” and strategic goal #3 “ACS will be a global leader in enlisting the world’s scientific professionals to address, through chemistry, the challenges facing our world”. Tangible accomplishments of the Green Chemistry Institute, Committee on Environmental Improvement, Global Innovation Imperatives, Building & Administrative Services, and our internal Staff Council were highlighted.

### **Office of Research Grants**

- The Office of Research Grants addresses the challenges facing our world by directly funding research aimed at solving problems in the major challenge areas such as energy, food and health.
  - The programs of the Petroleum Research Fund focus on “Advanced Scientific Education” and/or “Fundamental Research in the petroleum field”. The vision of the Fund is to “...aid in significantly increasing the world’s energy options.” The \$23 million that we allocated for these programs in 2008 are all aimed in one way or another at removing barriers to solving energy problems. In 2008 to help us move toward this vision, the Fund began categorization of the proposals and the grants into energy areas in order to understand the

impact that the Fund might have on the energy field. A Program Committee was appointed to guide the Fund toward the vision. Initial steps toward the implementation of full scale evaluation and assessment of the program portfolio related to the vision were taken.

- The Herman Frasch Foundation for Chemical Research funds research in agricultural chemistry with the goal of developing research results which have practical application to agriculture in the United States. Research grants are funded in five year cycles. Current grants are focused on topics such as:
  - the development of disease and fungus resistant plant varieties,
  - fertilizer synthesis from atmospheric nitrogen (understanding nitrogen fixation mechanisms),
  - the environmentally sustainable destruction of agrochemicals,
  - development of value added products from agricultural feedstocks,
  - sustainable agricultural development is a fundamental principle around which these grants are centered.
- The Irving Sigal postdoctoral fellowship awarded its 6<sup>th</sup> award in 2008. These fellowships are in support of research at the interface of chemistry and biology, a rare combination of fields at the inception of the program. It is clear that these grants were prescient in that so much work is now occurring at the interface of these two important fields. The 2008 award recipient is John Hoerter who will be working with Nicholas Gascoigne at the Scripps Research Institute. Dr. Hoerter's research focuses on protein and RNA interactions at the immunological synapse.
- The Office of Research Grants concluded negotiations at the end of 2008 for a new grants program focused on pharmaceutical and medicinal chemistry sponsored by Teva USA Pharmaceuticals, Inc. The first grants will be awarded in 2009.

## Goal 4

**ACS will be a leader in communicating to the general public the nature and value of chemistry and related sciences.**

### **Chemical Abstracts Service**

- CAS released a beta version of Common Chemistry, a web-based free access resource providing accurate and authoritative CAS Registry Numbers and associated substance data for some 7,800 substances of widespread, general public interest in December 2008. Common Chemistry can be searched free of charge and includes reciprocal links to related chemical information on Wikipedia.
- A new series of podcasts was launched with a focus on SciFinder's value relative to scientific investigation in a variety of areas. Topics in this growing series include ethanol, Hurricane Katrina, nanotechnology, and more.
- CAS introduced the *CAS - Science Connections* series of articles showcasing the value of CAS databases in light of important general-interest science and technology news. Topics range from Vitamin E to Nobel Prize winners, for which the Science Connections series points to the CAS databases for a more complete understanding of the latest news.

## **Division of Membership and Scientific Advancement**

- ACS continued to communicate the nature and value of chemistry and related sciences through two of its hallmark programs: *Chemists Celebrate Earth Day*--133 local sections participated in events across the U.S. The level of participation among local sections increased 10% over 2007 participation levels. *National Chemistry Week (NCW)—2008 Theme: Having A Ball With Chemistry*, which involved 175 local sections and 207 coordinators led efforts within their communities. NCW was also celebrated in Second Life®, a 3-D virtual world which is inhabited by millions of virtual residents (avatars) from around the globe. NCW was also featured in the ACS Bytesize Podcast series.

## **Education Division**

- Student Affiliates Chapters were invited to produce short videos with the theme “Putting a Human Face on Chemistry.” The goal was to reach out to elementary and middle school students and help them develop an awareness of who chemists are and understand how important chemistry is to their lives. Four Student Affiliates chapters were \$1000 winners. Award-winning videos are highlighted on the ACS Web site.

## **Treasurer’s Division**

- The Development Office produced *The Future of Science*, a multi-media appeal in support of Project SEED that won a 2008 AVA Gold Award (recognizing excellence in audio visual production) from the Association of Marketing and Communications Professionals. The multi-media production has been used by ACS Development staff and Project SEED volunteers to help tell the story of the program and raise funds in support of the program.

## **Office of Secretary and General Counsel**

- ACS issued over 200 press release items, resulting from the review of more than 33,000 ACS journal articles and almost 17,000 National Meeting abstracts for newsworthy discoveries, which have been covered in hundreds of media outlets worldwide. The Society also produced over 100 podcasts — including the 12-part Global Challenges/Chemistry Solutions series — that have been collectively downloaded 120,000 times. This work has received wide recognition and awards such as those honoring our Bytesize Science® blog from PR News and the MarCom and Silver “Davey” awards for our annual report. (This also supports goals 1,2 & 3).
- ACS Public Affairs continued as a leader in use of digital technology to communicate science to the public, policymakers, and our members. This included the introduction of new digital press conferences so that journalists worldwide can access live audio and video and the expanded use of blogs, podcasts (audio and video), web-based seminars, and web services like Twitter™, Delicious™, and Facebook™. ACS also experimented new ways to recruit ACS members into the LAN such as text messaging. (This also supports goal 2.)
- With the tagline ACS: Chemistry for Life™, a new look to unify ACS products, and a comprehensive communications strategic plan, the Society has rebranded itself in order to increase ACS recognition among members, other scientists, the public and policymakers. The new look and feel now appears on the ACS web site, in PowerPoint presentations, on letterhead, on business cards,

on banners, and in advertising. Templates, guidelines, thirty workshops, and a presence at the fall national meeting have begun the process of integrating the brand into the entire ACS image.

### **Office of Research Grants**

- The PRF annual report, usually produced as a CD-ROM has, for 2008, been produced as a web-site, allowing access to a significantly broader audience. We were able to take advantage of several advantages that the web provides which allowed us to highlight researcher stories and to discuss our funded research in a clear and lucid manner, demonstrating clearly the capability of scientific research to address world problems.

### **Goal 5**

**ACS will be a premier advocacy organization for members and the profession, creating and communicating policy statements in accordance with our Congressional charter.**

### **Division of Membership and Scientific Advancement**

- ACS endorsed the Green Chemistry Research and Development Act of 2008 (S. 2669) and identified two more Senate supporters.

### **Office of Secretary and General Council**

- To reverse the fallout of the failed 2007 appropriations process that slashed science funding and threatened lay-offs at national labs, ACS engaged in six months of concentrated advocacy with Legislative Action Network (LAN) members sending nearly 5,000 letters and making over 800 phone calls; the ACS Board of Directors visiting more than 25 congressional offices; and ACS writing five letters to congressional leaders and the President. ACS efforts paid off with \$400 million of emergency funding for NSF, DOE, NIH, and other science agencies, as well as quadrupled funding for an important NSF recruitment program for science teachers. ACS priorities were also included in other legislation ranging from higher education to global climate change and green chemistry.
- The number of Local Section Government Affairs Committees (GAC) grew by 25 percent to 80. The Office of Public Affairs trained and motivated more than 30 GAC leaders through a two-day Washington, D.C., hands-on course and seven webinars. Sixty ACS members representing 40 Local Sections visited their legislators either in Washington, D.C., or in their Districts. The Legislative Action Network continues to grow with a 2,400-member increase to 16,000. Over 100,000 visitors came to the newly launched act4chemistry.org site, which offers social networking and routine communications to LAN members, including calls to action, blogs, and bookmarked news.
- ACS opened member opportunities in the states. The pilot state government affairs initiative provided increased opportunities for ACS members in five states to interact with policy makers at the state and local level. Members have formed state-level government affairs committees and developed partnerships with other stakeholders from the science, education, and business communities to advance policies to improve science education. Notably, ACS members have met

with the governor of Tennessee, and are working to organize a science education caucus in the California legislature, and are leading a Pennsylvania elementary science education coalition.

- The ACS *Strategic Plan for 2008 and Beyond* was launched on the Web in January. Throughout the year, efforts continued to actively promote the plan to all ACS stakeholders. In March, the ACS Board Chair employed the online conferencing tool WebEx to host discussions with ACS volunteer leaders and staff on each of the strategic goals. Members of the Planning Committee contributed comments to *C&EN* on each of the plan's six goals and appeared in videos, which were presented as part of ACS-TV at the National Meetings. Multiple articles also appeared throughout the year in ACS publications and newsletters.
- President Bruce Bursten appointed a Presidential Task Force in May to consider the establishment of an honored community of ACS members who will be recognized for excellence in Science, the Profession, and Society, in a way parallel to Fellows in other societies. It will honor members from all areas of the chemistry profession and related areas for their scientific endeavors as well as activities within the Society. The American Chemical Society will increase its visibility as a professional resource by instituting a Fellows Program. The Board voted in December 2008 to include funding for an ACS Fellows Program in the Society's 2009 proposed budget and 2010-2011 forecast budgets. The mission of the ACS Fellows Program is: "The ACS Fellows Program honors members of the American Chemical Society who have demonstrated excellence in contributions to Science, the Profession, and the Society."
- The Office of the Secretary and Legal Counsel provides behind the scenes support to the ACS governance volunteers such as Councilors, elected by the membership to represent Local Sections and Divisions, the ACS Board of Directors, also elected by the membership or their representatives, and the many ACS committees. This Office is also the legal representative of the Society and coordinates the Society's legal operations, including those in Washington, DC, and at Chemical Abstracts Service in Columbus, Ohio. The Office of the Secretary and General Counsel is responsible for (1) supporting these governance units and their activities, (2) working with them and senior management to develop and implement a comprehensive and coherent strategy for the Society, as well as developing supporting strategies and implementation, contingency, and evaluative plans, and (3) communicating a clear, consistent message about the Society—and about chemistry—to the public, news media, public and elected officials, the chemical enterprise, and ACS members. Additional highlights are noted below:
  - Provided support for the national and committee elections; supported all phases of the petition process; produced high quality issues of the *Councilor Bulletin* and *Committee News* to keep our volunteer members well informed; supported Council Policy Committee's efforts to review committee reimbursement and long range planning; provided direct support to the ACS Board of Directors in various venues such as New Member Orientation, developing Board goals, identifying efficient communications technology, and developing and executing four ACS Board of Director's meetings. This Office also provided training to Staff Liaisons to ACS committees to enable them to provide effective support to their committee chairs.
  - In the area of General Counsel the Office worked with the Office of Government Affairs and the Committee on Patents and Related Matters to complete a new Patent Policy Statement addressing proposed patent reform legislation. In addition, the Office worked with the

Committee on Constitution and Bylaws to oversee the membership petition. The Office assisted the Committee in its successful effort to become current on its review of local section and division bylaws.

## **Goal 6**

### **ACS will be a financially sustainable organization that serves members, chemistry, and related sciences.**

#### **Division of Membership and Scientific Advancement**

- As of December 31, ACS membership was more than 154,000. During the 2008 Member-Get-A-Member campaign, ACS members nominated a total of 1,333 colleagues for membership.

#### **Treasurer's Division**

- Under Administrative & Customer Services, Facilities signed a two year contract with Pepco Energy Services to provide 50% Non-specific Renewable Energy Certificates (RECs) to ACS. Through Pepco, Sterling Planet, an environmental energy company, will provide the Society with 2.5 million kilowatt-hours of Green-e Energy certified renewable energy certificates (RECs) for the period 2008 through 2010. These RECs offset approximately 3.4 million pounds of carbon dioxide, a key greenhouse gas. (Note: The environmental benefit is equivalent to not driving 335 passenger cars for one year, 199 households' annual electricity use, 1,290 acres of pine or fir forests storing carbon for one year, or 554 tons of waste recycled instead of landfill). Beyond these environmental benefits, RECs help build a market for renewable electricity ("green power"), increase energy diversity and security, reduce dependence on foreign energy sources, support domestic economies and create U.S. jobs.
- The ACS Headquarters and Othmer buildings both earned the U.S. Environmental Protection Agency's (EPA's) prestigious ENERGY STAR, the national symbol for protecting the environment through superior energy performance. ACS joins approximately 3,200 buildings nationwide that have earned the ENERGY STAR. By earning the ENERGY STAR, ACS is using about 35 percent less energy than average buildings, while still providing quality service and comfort to its occupants. The ACS lowered their energy costs by making cost-effective improvements to both of their buildings and reduced greenhouse emissions.
- Member Insurance portfolio of plans includes life and health insurance, auto and homeowners/renters insurance, and professional liability insurance. In these uncertain and challenging economic times, members may turn to the Member Insurance Program for the peace of mind that comes from having a secure foundation for their family's financial future. The Disability Income Insurance Plan, designed to help protect income if a disabling accident or illness prevents one from working, was revised to acknowledge that many members now work past the traditional retirement age of 65. This coverage is now available to age 70.
- The Development Office surpassed its overall fund-raising goal of \$2.6 million for the year; a significant accomplishment. The Development Office reached the Project SEED fund-raising goal

of \$1 million. A stellar group of volunteers, led by Mary Good and Barbara Ullyot, helped the Development team reach this goal.

### **Information Technology**

- ACS launched a new membership system, the Individual Constituent System in 2008. This new system will replace an aging system that had become increasingly expensive and difficult each year to support. In addition, this system will improve the capability of ACS members to manage their own demographic information should they choose. Benefits to members include the ability for the online renewal and acquisition processes to directly change the central membership database – accelerating information updates and access to the benefits of membership.