CHED Newsletter
Spring 2015

DivCHED Travel Award Deadline,
September 14, 2015

ACS Fellows Nominations Due April 1, 2015

2015 ACS DivCHED Exams & Related Materials

ACS 249th Nation Meeting
Chemistry of Natural Resources
March 22-26, 2015, Denver, CO

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LETTERS FROM THE EXECUTIVE COMMITTEE
Chair’s Report .......................................................... 1
From the Secretary/Councilor ........................................ 2
The View from the Program Chair .................................. 3
From the Member-At-Large ........................................... 4

ANNOUNCEMENTS, MATERIALS & OPPORTUNITIES
The Dorothy and Moses Passer Education Fund ...................... 5
Division of Chemical Education Travel Award ...................... 5
Resources for Excellence Workshops 2015 .......................... 7
DivCHED Outstanding Service Award .............................. 8
The 2015 James Flack Norris Award ................................ 8
Receive Tuition Assistance While Pursuing Your Teaching Career . 9
Classroom Grant Opportunity for High School Chemistry Teachers . 9
ACS Fellows Nominations ............................................. 9
Cheminformatics OLCC ................................................ 9
Wikipedia and Chemistry Symposium ................................ 10
DivCHED International Travel Award ............................... 11

COMMITTEE REPORTS
Biennial Conference Committee ..................................... 12
Chemical Education Research Committee ........................ 13
Committee on Chemistry in the Two-Year College Report ........ 14
Committee on Computers in Chemical Education ................ 15
High School Committee .............................................. 15
International Activities Committee ................................. 16
Long Range Planning Committee .................................. 17
Passer Funds Award Committee .................................... 20
Regional Meetings Committee ..................................... 20
Younger Chemistry Education Scholars Committee ............. 25

249TH ACS MEETING & EXPOSITION, DENVER, CO
Program Synopsis ..................................................... 27
Schedule of CHED Committee Meetings and Social Events ....... 31
Executive Committee Meeting Open Agenda ....................... 32
High School Chemistry Day ........................................ 33
Denver Hotel & Shuttle Service Map and Schedule ............... 35

UPCOMING MEETING INFORMATION
250th ACS Meeting & Exposition, Boston, MA ...................... 36
Future ACS National Meetings ...................................... 37
2015 Regional ACS Meetings ....................................... 37
ConfChem Online Conference ...................................... 38
Biennial Conference on Chemical Education Schedule 2016 ....... 38

REPORTS & NEWS
News from the Exams Institute .................................... 39
ACS DivCHED Examinations and Related Materials for 2015 ....... 40
Strategic Plan for the Division of Chemical Education ............. 48
Dorothy and Moses Passer Education Fund Awardees .............. 5
News from the Board of Publication ................................ 41
Know Your Way Around the Division ................................ 1
DivCHED Publications .............................................. 41
Fall 2014 ExComm Meeting Minutes, Open Session ............... 42
Nomination Form for CHED Committees & Elected Positions .... 46
Division of Chemical Education Teaching Excellence Endowment .... 47
DivCHED Membership Application ................................ 49
DivCHED Connections .............................................. 50
Letters from the Executive Committee

Chair's Report, Marcy Towns, [mtowns@purdue.edu]

This year there are a number of initiatives and/or issues that are underway.

**Continuing initiatives or issues**

- The division is working to develop a process by which potential ACS Fellows that are divisional nominees are chosen. Five executive committee members who are fellows are developing this process which will be discussed at the Spring ACS meeting.

- The division has a long history of organizing and presenting the Biennial Conference on Chemical Education (BCCE). This conference has been held at colleges and universities across the US and the oversight for this conference has largely been carried out by a divisional committee. As the conference has grown in attendance and activities those on the BCCE committee have pondered changing the oversight system to a board. There have been discussions at the Executive Committee about forming a board. At this time there is a group of people led by Donald Wink, past chair who are discussing the formulation of a proposal for such a board.

- The division is looking to standardize its record retention policies and procedures across the division and its boards. We have recently heard from ACS national and are planning to develop a policy.

**New initiatives or emerging issues**

- The division will fund half of the ACS Pimentel Award for three years, 2015-2017. The division has been notified that Pearson will no longer ACS Award for Achievement in Research for the Teaching and Learning of Chemistry after 2016. The ACS Grants and Awards Committee has also inquired about the division's interest in supporting the ACS Conant award. The Executive Committee and Boards have begun discussion about the potential ways in which the division may be able to support these important awards that recognize chemical educators for their contributions.

- A proposal to form a Safety Committee has come forward from David Finster and will be discussed at the Denver ACS meeting.

- A proposal to develop the leadership skills of division members will also be considered in Denver!

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**Know Your Way Around the Division**

If you need to pay membership dues, want to make a contribution to the DivCHED Service Award fund, or want to know about money, budgets, etc., contact the Treasurer.

If you want to change your mailing address, want a Division publication, or want to know about official Division actions, etc., contact the Secretary. If you want to receive this CHED Newsletter (or not receive it), contact the Secretary.

If you want to bring an idea before the Executive Committee or want to make an opinion known, contact the Member-at-Large.

If you want to contribute something to CHED News, contact Heather Johnson.
From the Secretary/Councilor, Resa Kelly [resa.kelly@sjsu.edu]

Elections and a Special Election

During the Fall 2014 Election, we once again used the electronic voting service – Vote-Now. We had approximately a quarter of our membership (4944 total members) place votes, which was fairly consistent with previous years when we used this service. Voter comments indicated that most of you were satisfied with the voting process and found the biographies easy to access.

The election results revealed that Tom Greenbowe bested Julie Smist for chair-elect. Anna Wilson was reelected treasurer over Alex Grushow. Ellen Yezierski won the Councilor seat and Laura Slocum the Alternate Councilor position over candidates Cinzia Muzzi and Jeff Hepburn. In an unexpected twist, Tom Greenbowe was unable to accept his newly won position. As a result, a special election for chair-elect was held in mid November. In this election Cathy Middlecamp ran against Amina El-Ashmaway and Middlecamp won the election. I would like to thank all of the candidates who ran for positions and our members for voting not once, but twice.

Get Involved – Attend Open Session Meetings

I recently attended the ACS Leadership Institute meeting and took a course that focused on ways to engage and motivate members to volunteer. One idea that I found to be so logical, yet often overlooked, was to encourage members to examine committee tasks/functions and consider how their skills fit. This may help you decide, not only, whether you should get involved, but it may help you envision how you will get involved. Some of the motivations people have for joining committees are for 1) social interaction, 2) as an opportunity to express their values, 3) for job enhancement, 4) to develop knowledge and experience and 5) for fulfillment or personal growth. All of our Division’s committees should provide ample opportunities to meet these motivational needs. Perhaps some of these reasons resonate with you? If they do, then I encourage you to make a plan for the next National ACS meeting. Examine the schedule of Open Session meetings and choose one or two that interest you and simply attend. Observe how the committee works, how the members communicate and get along and consider whether it is a good match for your motivation and skills. Should you find a committee that fits, go to the Division’s website and complete the online nomination for CHED Committees [http://www.divched.org/content/nominations-ched-committees-elected-positions]. Please understand that you will not be placed on a committee immediately. There is a selection process. If you are offered a position, you will be sent an invitation to serve, typically in the fall (September/October) and then your service begins at the start of the New Year. I am including a few Open Session meetings that are on the schedule for the Denver ACS National meeting and all will be held at the Downtown Sheraton Hotel, which should make it easy for you to attend more than one! Also, don’t forget that the DivCHED Social Reception is Sunday evening (5:30-7:00PM) at the Colorado CC, room 207. I look forward to seeing you there!

Saturday, March 21, 2015
1. Exams Institute, Board of Trustees
   7:30AM – 12:00PM
   Location: Plaza Court 3
2. Board of Publication
   8:30-10:15AM; 10:45-12:00PM
   Location: Plaza Court 2
3. Program Committee
   10:30AM – 12:00PM
   Location: Plaza Court 1
4. Executive Committee (ExComm)
   Location: Governor’s Square 12
   1:30PM – 4:00PM
5. Biennial Conference Committee
   4:00PM – 6:00PM
   Location: Plaza Court 1

Sunday, March 22, 2015
1. Chemical Education Research Committee
   7:00AM – 9:00AM
   Location: Plaza Court 6
2. International Activities Committee
   8:00AM – 9:30AM
   Location: Plaza Court 1
3. Young Chemistry Education Scholars Committee
   11:30AM - 12:30 PM Open
   Location: Plaza Court 6
4. Regional Meetings Committee
   12:00PM – 2:00PM
   Location: Director’s Row F
5. Long Range Planning Committee
   2:30PM – 4:30PM
   Location: Director’s Row F
6. High School Chemistry Committee
   3:30PM – 5:30PM
   Location: Plaza Court 2

Monday, March 23, 2015
1. Business Meeting
   12:00PM – 12:30PM
   Location: Denver
2. New Member Meeting
   12:30PM – 1:00PM
   Location: Denver
The View from the Program Chair, Irv Levy [irv.levy@gordon.edu]

As I write this note, the temperature is hovering near 0°F and is headed down farther tonight, there are eight-foot icicles hanging from my roof and seven-foot snow banks in my yard. And here I am writing about the spring. How hopeful. There will, in fact, be a spring!

The 249th ACS national meeting in Denver is going to be a big one. Huge kudos are due to meeting co-chairs Wayne Jones and Andy Marsh. They have overseen the design of what has become one of our largest meetings in recent history. There will be a total of 1,835 papers including 414 oral presentations. That represents an increase of more than 20% over the number of oral presentations from our last two spring meetings. There will be many excellent speakers, award symposia, and 1,323 undergraduate research posters. All things considered, it is shaping up to be a memorable meeting.

While our meeting in Denver is not situated in the Colorado Convention Center (CCC), we are located a very short walk from the CCC at the Sheraton Downtown Denver Hotel. All of our oral presentations are in the hotel’s IM Pei Tower Building; however, the poster sessions will be in the CCC (General Posters, Sunday evening, Hall C; Undergraduate Research Posters, Monday afternoon, Hall E).

I am happy to announce that Sally Mitchell, a past recipient of the James Bryant Conant Award in High School Teaching, has volunteered to organize the high school program in Denver as her first in a three-year stretch of six meetings. Sally’s enthusiasm and network in the community of high school educators will combine with her knowledge of programming at an ACS meeting to give us three years of continuity and useful programming for our high school teachers. In Denver we are also expanding offerings for high school teachers by adding a special workshop-style symposium on Monday night organized by our friend and “Polymer Ambassador” Sherri Rukes. Please feel free to drop in for a “stretch” on Monday night to see how to put some “bounce” into your curriculum.

As always, there are a number of people behind the scenes who provide direct and indirect support for our programming at a national meeting. Many thanks to the ACS staff who are the ones who help us bring it all together: Kelsey Danner, Britney Fredrick, Brenda Philpot, Beverly Johnson, Vernar Beatty, Nikki Fisher, Evelyn Ciers, Nicole Di Fabio, Terri Taylor, and Marta Gmurczyk are a great team and I very much enjoy working with them. As always Heather Johnson attends to a host of details that make the job of organizing a meeting so much more convenient.

Many thanks are due to all the folks in the Division and ACS who work with our committee to produce a quality meeting.

There are a number of special events in Denver that might interest you:

- Award symposia will be held on Sunday to honor high school educator, Jenelle Ball, Chico High School, California (James Bryant Conant Award in High School Chemistry Teaching); on Monday to honor Vickie Williamson (ACS Award for Achievement in Research for the Teaching and Learning of Chemistry) and Cathy Middlecamp (ACS Award for Encouraging Disadvantaged Students in Chemistry); while Tuesday brings a symposium in honor of Dwaine Eubanks (George C. Pimentel Award in Chemical Education) and the ACS-CEI Award for Incorporating Sustainability into Chemistry Education.

- Of very special importance is the General Papers session to be held on Tuesday evening (6:00–10:00 PM) in the Gold meeting room in the Sheraton. We are continually in search of ways to promote our General Papers.

And, speaking of General Papers – I fought the law but the law won. At least in part. As people who have organized a program for the national meeting are aware, ACS has a series of rules referred to as the “Even Programming Rules” which describe how a division must utilize sessions throughout the week when planning their symposia. The practical rationale for this is to minimize the number of rooms needed for meetings on peak days.

For this reason, a large division such as DivCHED is required to have programming on Thursday morning. For the last several meetings our program has received approval to schedule only one or two large sessions on Thursday rather than several smaller sessions. This is to increase the number of audience members who will attend the sessions. There has been no push back for these requests.

This spring we decided to be a bit more creative about ways to increase the audience of those Thursday sessions. Specifically, we requested permission to move two of our Thursday sessions to evening sessions – one on Tuesday evening and one on Wednesday evening. After dozens of notes back and forth, we finally received approval to move one session to an earlier evening but not both. This was frustrating since moving two sessions would not change our number of rooms requested during peak days of the meeting.
As has been the practice of the division for quite a while, the Thursday sessions will be General Papers. In an attempt to assure the authors that their work is not considered less important than those in the themed symposia, we invited a number of Thursday session authors to consider also presenting a poster of their work for inclusion in Sci-Mix. I am pleased that a number of them have chosen to do so. We will continue this practice in future meetings.

Next stop – Boston. Abstracts are currently arriving for the August 2015 meeting in Boston. Please try to get your submissions in to the MAPS system well before the deadline of March 30. Beatriz Rios-McKee and Iona Black are meeting co-chairs for this meeting and they would love to see your submissions arrive before the last moment. So, please, submit early and often! We are looking forward to what you and your students will bring to Boston.

As a heads-up, I am delighted that Amy Cannon and a team of organizers are assembling a state-of-the-art symposium for Boston titled “Toxicology and Environmental Impact in the Chemistry Curriculum: Science and strategies for educators”. This is a perfect symposium for those of us who are interested to find ways to bring toxicology into our curriculum.

And, if long range thinking is your cup of tea, it’s not too early to begin pitching ideas for San Diego. Please send me your suggestions for symposia. While any ideas are fair game, we’re especially on the lookout for those that might dovetail with the society’s theme for San Diego, “Computers In Chemistry”.

Remember that my goal as the chair of your Program Committee is to make it easy for you to say “Yes, I’ll volunteer” by providing any support you might need. I look forward to working with you in the future whether it be as a symposium organizer, a meeting co-chair, or a member of the program committee. We are here to produce national meetings that serve your needs. Please do let us know what those needs are and do consider what role you might be able to play as a volunteer. Drop me a note (irv.levy@gordon.edu) with your ideas or say hello in Denver!

From the Member-At-Large, Jimmy Reeves [reeves@uncw.edu]

Significant changes in the leadership of the ACS Examinations Institute are taking place as I write this. With Tom Holme’s announcement at the San Francisco ACS meeting last Fall that he had decided to resign his post as Director to accept a distinguished professor position in Australia, a nationwide search for a successor was initiated. A five member search committee was formed by the Board, and after advertising the position in nationally circulated publications such as C&E news and the Chronicle for Higher Education, the committee conducted phone interviews and is currently in the process of conducting site visits. Because the Institute would most likely be located at the home institution of the new Director, the site visits involve meetings with various institutional officials such as the applicant’s Dean, the Provost and officials from Human Resources and finance, as well as the candidate’s fellow faculty and Department Chair. The search committee plans to submit its list of candidates to the Board of Trustees at the Spring 2015 National ACS meeting in Denver, when a new director would be chosen. While we are all sad to see Tom move on, it is our hope that his successor will continue to provide the excellent guidance and oversight that has characterized Tom’s tenure as Institute director.

Also in Denver, the Board of Trustees will consider a petition to transfer the responsibilities associated with the day to day business operations of the Institute to a business manager and move that part of the Institute to a location separate from the Director. Among his/her other duties, the manager would oversee the large scale implementation of on-line exams. The Board of Directors, the Board of Publications and the Division’s Executive Committee will also consider proposals to provide permanent funding for the Chemical Education Research Award, the Conant Award and the Pimentel Award. With the ongoing consolidation in publishing, funding for the awards has become difficult to maintain, and an alternative, reliable funding sources need to be found. Finally, ExComm will discuss proposals for leadership development and safety, as well as procedures for nominating ACS Fellows.
**Announcements, Materials & Opportunities**

**The Dorothy and Moses Passer Education Fund, Deadline April 1, 2015**

Applications Being Accepted for The Dorothy and Moses Passer Education Fund.

This Fund was established by a generous donation of Dorothy and Moses Passer. Moses (Mike) Passer was for many years the head of the ACS Education Division. The Fund grants for teachers at two- and four-year colleges or universities that do not have any advanced degree programs in the chemical sciences.

The awards support continuing education activities that must be directly related to the applicant’s teaching and must take them away from their campus.

The applicant must be a full time faculty member at his or her institution. The applications are reviewed by a committee. There is no application form but the application must include a description of the proposed activity and how it relates to his/her teaching with dates, locations, titles and contacts; a brief description of the applicant’s institution and department; a short curriculum vita; an itemized estimate of expenses, amount of aid requested and sources of all supplemental funds. No support will be given for general attendance at national, regional or local ACS meetings or for any sabbatical support.

Closing dates are three times each year: January 1, April 1, and September 1. Applications may be submitted online [http://www.divched.org/content/passer-education-grant-application-form](http://www.divched.org/content/passer-education-grant-application-form) or emailed in pdf format to the Chair of the Passer Education Grant Review Committee, Catherine MacGowan, catherine.macgowan@armstrong.edu.

**Division of Chemical Education Travel Award, Application Deadline is September 15, 2015**

DivCHED provides this service to members to grant financial support for travel to meetings. Up to 12 members will receive the award each year. The DivCHED Travel Award provides up to 80% of travel expenses for one meeting with a limit of $1,000 for the BCCE or Spring National ACS Meeting. To be considered for this award, you must be in at least your third year as a member of the Division of Chemical Education at the time of application. The award application deadline is September 15, 2015. Visit [http://divched.org/content/division-chemical-education-travel-award-application](http://divched.org/content/division-chemical-education-travel-award-application) for more information and to apply.

**Dorothy and Moses Passer Education Fund January 1, 2015 Awards**

<table>
<thead>
<tr>
<th>Michael Fultz</th>
<th>Sarah St Angelo</th>
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<tr>
<td>West Virginia State University</td>
<td>Dickinson College</td>
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<td>LC/MS: The Techniques of Electrospray, APCI and APPI sponsored by the American Society of Mass Spectroscopy in St. Louis, MO in 2015</td>
<td>Heterogeneous Catalysis: An IONiC Summer Workshop at the Frontiers of Inorganic Chemistry in the summer of 2015 at the University of Washington in Seattle, WA</td>
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<tr>
<th>Charles Abrams</th>
<th>Timothy Trygstad</th>
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<td>Truman College</td>
<td>College of St. Scholastica</td>
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<td>3-D Printing: From Trinkets to Teaching in July 2015 at the Center for Biomolecular Modeling in Milwaukee, WI</td>
<td>GC-MS Training in August 2015 as part of the Unity Lab Services Courses offered in West Palm Beach, FL</td>
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<th>Deborah Rosenthal</th>
<th>James Yoder</th>
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<td>Washington State Community College</td>
<td>Hesston College</td>
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<tr>
<td>Laboratory Safety/Chemical Hygiene Officer Course in July 2015 in Norfolk, VA</td>
<td>Nanotechnology Chautaugua Course in May 2015 in Dayton, Ohio</td>
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From the 2013 Awardees....

“I also expended my network of contacts to include college professors who are involved in interesting research as well as high school teachers with whom I can collaborate in the future.”

“From my presentations I have one faculty planning to apply my research methodology in her study and I’ve had four requests for consultation or collaboration on touch-screen textbook creation.”

“The generosity of the DivCHED executive and my fellow ACS members has enabled an experience that was transformative for my professional development and guided pedagogical advancement within my department.”

“Spending time in the exhibition gave me time to talk, face-to-face, with textbook publishers about specific needs for my department and I was able to bring back information to the department that I would have had difficulty obtaining without attending the meeting.”

“The meeting was a huge success and allowed my research group and me to engage with a variety of attendees to learn more about what other groups are doing and inform them about our work.”

“The Plenary Sessions were amazing and were also of great value to me; for example I brought back to the chemistry club at my school the theatre like approach to teach chemistry.”

Visit http://divched.org/content/division-chemical-education-travel-award-application for more information and to apply.
Resources for Excellence Workshops 2015

While numerous resources exist for supporting excellence in two-year college chemistry education, finding the right resources and strategies to address your particular needs can be challenging. The Resources for Excellence workshops are designed to help faculty meet this challenge.

Developed by the Society Committee on Education and the ACS Two-Year College Chemistry Consortium (2YC3), Resources for Excellence is a series of interactive workshops that help two-year college chemistry educators find the solutions that work for them.

Participants in Resources for Excellence workshops

• Develop customized strategies and action plans to address specific challenges at individual two-year colleges
• Create a network of supportive two-year college colleagues
• Identify and implement resources to foster excellence in two-year college chemistry education

The Resources for Excellence workshops are facilitated by specially trained two-year college chemistry faculty and are held at conferences across the country. They cost nothing but the registration fee for the meeting.

Upcoming workshops

Get a jump start using the ACS Assessment Tool for Chemistry in Two-Year College Programs: A Resources for Excellence workshop
209th Two-Year College Chemistry Conference, Front Range Community College, Westminster, CO
March 20-21, 2015

Two-year programs are under increasing pressure to perform self-assessments and document their outcomes. The ACS Assessment Tool for Chemistry in Two-Year College Programs is a resource to help your institution identify strengths and opportunities for growth in the context of the ACS Guidelines for Chemistry in Two-Year College Programs.

During this workshop, the assessment tool will be presented along with data as to how institutions use the assessment tool. Additional ideas on how to use the assessment tool will be discussed, and participants will have a chance to start working on a section of the assessment tool. Participants will leave with an action plan to complete part or all of the assessment tool. Our goal is to decrease the activation barrier for using the assessment tool.

Teaching with technology…What works and what doesn’t: A Resources for Excellence workshop
210th Two-Year College Chemistry Conference, Windward Community College, Kaneohe, HI
May 22-23, 2015

Whether it be online homework, in-class quizzing, virtual labs or learning management systems, technology has shaped how we are now able to teach chemistry. This session will be a discussion of what works and what doesn’t work and how the ACS Undergraduate Programs Office can help support your decision to use technology in your classroom. Participation by all attendees is encouraged. Bring your stories, your web links and your files to share.

Facilitator Opportunities

Interesting in becoming a Resources for Excellence facilitator? ACS is on the lookout for two-year college chemistry faculty to join the cadre of workshop facilitators. Training and workshop materials will be provided. Please contact the ACS Undergraduate Programs Office (1-800-227-5558, ext. 6108) for more information.

Contact Us

For more information, or to suggest ideas for future workshops, please contact the ACS Undergraduate Programs Office (1-800-227-5558, ext. 6108).
**Call for nominations - Division of Chemical Education 2015 Outstanding Service Award**

The Recognition Committee of the Division of Chemical Education, Inc. is charged with conducting a yearly solicitation of nominees for the CHED “Outstanding Service Award” which is presented at the fall National ACS meeting during the CHED reception. This call for nominations will allow all members of the division to submit names. The award will consist of a token of appreciation. A list of previous awardees can be found on the Division website.

The guidelines for this award are that the awardees be members of CHED and have contributed outstanding service to CHED. Individuals who currently hold office or chair a committee in CHED would not be eligible for this award until their term of office has expired.

Help the committee in this first phase of our work by submitting up to 3 names of worthy individuals for this award. Please include a list of activities including dates for which these individuals should be honored. Efforts on behalf of the division are to be the main focus and should be given in some detail. **Please send your suggestions to us by e-mail no later than April 30.** After this date the committee will confer to determine the recipient. Public announcement of the one award winner will be made by June 1 to give that person time to plan for the Fall 2015 National ACS meeting.

Names placed in nomination and not selected will be held and resubmitted for three more years. The nominator will be notified of the person’s status and allowed to up-date the information for the next year if they wish.

**Recognition Committee Co-Chairs**

Anna Wilson, annawilson40@gmail.com
2225 S. Earl Avenue
Lafayette, IN 47905

Frank Torre , ftorre@springfieldcollege.edu

**Call for Nominations: The 2015 James Flack Norris Award for Outstanding Achievement in the Teaching of Chemistry**

Nominations are invited for the 2015 James Flack Norris Award, which consists of a certificate and an honorarium of $3,000 and is given annually by the Northeastern Section (NESACS). The presentation will take place at a ceremony and dinner in November 2014, and will include a formal address by the awardee. The Award was established in 1950 by NESACS to honor the memory of James Flack Norris (1871-1940), a professor of chemistry at Simmons College and M.I.T., chair of NESACS in 1904, and ACS President in 1925-26.

Individuals or teams of individuals may be nominated. Nominee(s) should have served with special distinction as teachers of chemistry at any level: secondary school, college, and/or graduate school. With the presentation of the first Award in 1951, awardees have included many eminent teachers at all levels whose efforts have had a wide-ranging effect on chemical education. The recipient will be selected from an international list of nominees who have served with special distinction as teachers of chemistry with significant achievements.

A nomination in the form of a letter should focus on the candidate or candidates' contributions to and effectiveness in teaching chemistry. Curriculum vitae should be included and, where appropriate, a list of honors, awards, and publications related to chemical education. Seconding letters may also be included; these should show the impact of the nominee or nominees' teaching for inspiring colleagues and students toward an active life in the chemical sciences, and attest to the influence of the individual or team's other activities in chemical education, such as textbooks, journal articles, or other professional activity at the local, national, and international level.

The nomination materials should consist of the primary nomination letter, supporting letters, and curriculum vitae. Reprints or other publications should NOT be included. The material should not exceed thirty (30) pages, and should be submitted electronically in Adobe PDF format through April 15, 2015 to Ms. Anna Singer, NESACS Administrative Secretary <secretary@nesacs.org>. For more information about the Award, see <http://www.nesacs.org/awards_norris.html>.

Questions about the Award or the nomination process should be directed to the Chair of the Norris Award Committee, Dr. Patricia Ann Mabrouk, <p.mabrouk@neu.edu>. 

Announcements, Materials & Opportunities
Receive Tuition Assistance While Pursuing Your Teaching Career

The American Chemical Society can help you pursue your dream of becoming a high school chemistry teacher with the ACS-Hach teacher scholarships: ACS-Hach Post-Baccalaureate Teacher scholarships and the ACS-Hach Second Career Teacher Scholarships. Both scholarship opportunities award recipients up to $6,000 for full-time study and up to $3,000 for part-time annually. Learn more about these opportunities at www.acs.org/hachscholarships. Applications are due on April 1, 2015.

Classroom Grant Opportunity for High School Chemistry Teachers

The American Chemical Society is currently seeking applications from teachers interested in enhancing their high school chemistry class with the ACS-Hach High School Chemistry Classroom Grant. Teachers can request up to $1,500 to support ideas that improve student learning and achievement within the classroom. Grant writing assistance and application details are available at www.acs.org/hachgrants. Applications are due by April 1, 2015. Nominations for ACS Fellows Opens February 1, 2015

April 1, 2015 Deadline for ACS Fellows Nominations

Nominations for ACS fellows opened February 1, 2015 and close at 11:59PM April 1, 2015. The American Chemical Society (ACS) Fellows Program was created by the ACS Board of Directors in December 2008 to recognize members of ACS for outstanding achievements in and contributions to science, the profession, and the Society. Eligibility criteria for nominees and nominators and the selection criteria can be found here: http://www.acs.org/content/acs/en/funding-and-awards/fellows/eligibility-criteria.html

Nominations come from four sources: ACS national committees, ACS technical divisions, ACS local sections, and individual ACS members. See http://www.acs.org/content/acs/en/funding-and-awards/fellows/nomination-types.html.

The division will discuss which candidates will be DivCHED’s nominees at the Executive Committee meeting at Denver, Saturday, March 21, 2015, 1:30PM - 4:00PM, Governor’s Square 12, Sheraton Denver Downtown. If you have a candidate that meets the criteria (which can be found in the above website) that should be considered for support by the CHED division, please email the chair of the division, Marcy Towns at mtowns@purdue.edu. The email must contain the name of the nominator, the two seconders, briefly describe the nominee's documented excellence and leadership in both (1) science, their profession, education, and/or management AND (2) volunteer service to the ACS community (division and/or society resulting in significant enhancements to ACS programs, products, or services). Fellow nominees must have excelled in multiple areas.

Cheminformatics OLCC

In collaboration with ACS CINF (Division of Chemical Information) the CHED Committee on Computers in Chemical Education (CCCE) is organizing an intercollegiate OnLine Chemistry Course (OLCC) in cheminformatics and chemical information sciences. This will be the 6th OLCC the CCCE has organized since 1996 and will be offered twice, in the Fall of 2015 and the Fall of 2016. OLCCs are actually hybrid courses involving collaborative teaching between expert online guest lecturers and local faculty facilitators (instructors of record—the class being part of their teaching assignment). Prior to offering the course, the faculty facilitators will have a chance to work with cheminformaticians and experts in chemical information sciences to develop customized instructional content, and then the experts will be available to interact directly with their students when the course is offered.

We are looking for faculty facilitators who would like to offer this course at their home institutions. If you are interesting in this project we ask you to contact the chair of the CCCE, Dr. Robert E. Belford (rebelford@ualr.edu), or Dr. David J. Wild (djwild@inidana.edu), the director of the Indiana University Cheminformatics Program. Further information is available at our website, http://olcc.ccce.divched.org/.
Briefly, our objectives are to:

- Use social web technologies to develop course content, where faculty facilitators interact with cheminformaticians to develop customized and repurposeable instructional material.
- Use social and semantic web technologies to disseminate course content where multiple schools can offer content customized to the needs of their students/institution. Cheminformaticians will function as online guest lecturers and directly interact with students. This will be an intercollegiate experience.
- Archive course content in a discoverable fashion that lends to repurposing.
- Create content focused on essential cheminformatic and information science skills that are missing in the traditional chemistry curriculum, and would be an asset to graduates in today’s evolving STEM workplace.

We believe this is an appropriate topic for an OLCC because recent advances in Information and Communication Technologies are changing how our society represents, preserves and communicates information, and these advances in turn are impacting chemical education and the practice of science. Through this course educators will have a chance to interact with experts in cheminformatics and chemical information sciences, while their students will be exposed to the latest cheminformatic techniques and technologies, and learn skill sets that will be an asset when they graduate.

**Wikipedia and Chemistry: Collaborations in Science and Education symposium to be held, Boston 2015 ACS National Meeting**

Chemistry information on Wikipedia has an enormous reach and impact.

In this symposium, the connections between Wikipedia editors and the wider chemistry community will be explored. In particular, collaborations between educators, students and regular editors (Wikipedians) will be examined to understand how Wikipedia editing can be set up as a successful class project. Educators will demonstrate how Wikipedia projects can help students with understanding subject matters and improving information literacy skills. Meanwhile, we will explore how educators and the Wikipedia community can work together through the Wikipedia Education Program to ensure students’ contributions to Wikipedia are valid and effective.

Interested in submitting an abstract? Contact Martin A. Walker, Department of Chemistry, State University of New York at Potsdam, walkerma@potsdam.edu.

The American Association of Chemistry Teachers (AACT) is a professional community by and for K–12 teachers of chemistry. Take advantage of AACT’s benefits to connect with peers, discover quality classroom resources, and achieve your professional goals. Membership is open to educators and anyone with an interest in K–12 chemistry education. Visit [www.teachchemistry.org](http://www.teachchemistry.org) for more information.


ACS Division of Chemical Education International Travel Award

The Division of Chemical Education funds a Travel Award each year in support of a division member who presents and fully participates in an international chemical education conference held outside the U. S. The awardee will have the responsibility to communicate information and insights gained at the conference to the membership through available CHED publications and by postings on the DivCHED Website (http://www.divched.org).

At the New Orleans meeting, the Executive Committee adopted guidelines developed by the International Activities Committee (IAC); these are described below. Questions as well as completed applications can be sent electronically on or before November 30, 2015, to Butch Atwood, the current chair of CHED IAC. He can be reached at chatwood@chem.utah.edu

Eligibility:

The applicant must be a member of the Division of Chemical Education and be a full-time college, university, or high school faculty member. Preference will be given to junior and/or under-represented faculty members who have not had the opportunity to attend an international meeting in chemical education.

Selection Process:

1. An announcement about the availability of this Award for the following year will be submitted for publication in the Fall CHED Newsletter, appropriate issues of JCE, and to C&EN News. The announcement will also be posted on the CHED website.
2. The application package is due November 30 each year. It should be sent to the Chair of CHED-IAC. The award, presently $2000.00, is made for the following year.
3. CHED-IAC members serving on the Awards sub-committee appointed by the CHED-IAC Chair will review the applications.
4. The selected applicant will be announced by January 15 each year. An alternate will be selected in case the original awardee is not able to attend.

Application Package (Electronic applications are preferred):

There is no formal application form. However, the application package must include:

- Description of the conference - provide the pertinent URL.
- Description of proposed participation in the conference.
- Statement of how attendance at the conference relates to professional responsibilities.
- Plan for dissemination of information from the conference to CHED members, including submission of a report to the CHED IAC Chair within three months of attendance at the conference. The report should be suitable for publication in the CHED Newsletter and for posting on the CHED website.
- Applicant’s Curriculum Vitae (no more than three pages).
- One letter of endorsement from a supervisor (for example: department chair, dean, principal, headmaster).
- An itemized estimate of expenses giving the amount of aid requested and sources of all supplemental funds.
Committee Reports

Biennial Conference Committee
Thomas J. Greenbowe [tgreenbo@iastate.edu], Chair

Purpose

The purpose of the Biennial Conference Committee (BCC) is to provide guidance, oversight, and financial accountability to the General Chairs and Program Chairs of up-coming Biennial Conferences on Chemical Education (BCCE); to review evaluations and financial reports of past BCCEs; to solicit, evaluate bids, conduct site visits, decide on the location of future BCCEs and the General Chair for future BCCEs; to closely evaluate BCCE contracts/Memorandum of Understanding (MoU); and to provide fiduciary responsibility for the Division of Chemical Education's BCCE enterprise. At any point in time, the BCC is working with four BCCEs (immediate past BCCE, immediate up-coming BCCE, and two future BCCEs) representing a total financial footprint of $2.5 million. One goal of the BCC is to have three General Chairs and three BCCE sites identified six years in advance of the current BCCE. The BCC meets at every national ACS meeting and every BCCE. BCC meetings are open to all ACS members, members of a BCCE committee and individuals invited to attend the meetings. Portions of the BCC may be closed when the committee meets in Executive session for discussing specific financial issues in contracts/MoUs or personnel actions.

The 23rd BCCE at Grand Valley State University, Grand Rapids, Michigan August 3 - August 7, 2014
http://www.bcce2014.org

23rd BCCE Conference General Chair, Sherril Soman (somans@gvsu.edu), Program Chair, Julie Henderleiter (henderlj@gvsu.edu) and members of their program committee delivered an outstanding and successful BCCE. Sherrill and Julie have been working with the BCC since August 2008. The BCC appreciated their long-term commitment to organizing a BCCE. Sherril Soman submitted a final report of the 23rd BCCE which will be reviewed by the BCC at the ACS meeting in Denver. The BCC thanks the 23rd BCCE team and recommends DivCHED send a formal letter of thank you and a certificate or plaque to Sherril Soman and Julie Henderleiter.

Plan Ahead for 24th BCCE at the University of Northern Colorado, Greeley, CO July 31- August 4, 2016
www.unco.edu/bcce2016/

Conference General Chair Richard Schwenz (richard.schwenz@unco.edu) and Program Co-Chairs, Julie Smist (jsmist@spfldcol.edu) and Matt Miller (matt.miller@sdsstate.edu), are hard at work planning for the use of the facilities at Greeley, and planning for an interesting conference. UNC’s BCCE web site is up and running. Due dates for workshops, symposia, abstracts, exhibitors, etc. are on the 24th BCCE’s web site. Of note, the Call of Workshops opens June 3, 2015, the Call for Symposia opens August 1, 2015, the call for abstract opens January 1, 2016 and closes February 28, 2016. The BCC will receive an up-date and status report from UNC at the ACS meeting in Denver during a meeting of the Biennial Conference Committee.

Letters of intent and bids for 2020, 2022, 2024 BCCEs

The BCC is encouraging any and all interested teams or individuals to submit a letter of intent to host a BCCE in 2020, 2022, or 2024. The BCC has a package of information ready to be sent explaining what facilities are needed to host a BCCE and what experience is needed to serve as a BCCE General Chair or Program Chair. Anyone interested in hosting a BCCE and serving as a General Chair should be in good physical and mental health. Any member of the BCC is available for discussion about the parameters of a BCCE. At the Denver meeting, the BCC is anticipating reviewing and evaluating letters of intent to host a future BCCE from chemical educators from an institution in the Pacific Northwest and one from institution on the Southeast to host either the 2020 or 2022 BCCEs. The BCC would like to receive a letter of intent from a chemical educator at an institution in the Atlantic Northeast to host a BCCE.

Site Visit

On February 11 and 12, 2015 two members of the BCC committee conducted a site visit at a university in the middle of the USA. The BCC will receive a report from the site visit team at the ACS meeting in Denver. The BCC has a bid from this institution and the proposed General Chair to host the 2018 BCCE. Pending a positive report
from the site visit team, the BCC will most likely vote on accepting the bid or rejecting the bid at the ACS meeting in Denver.

**Issues facing future BCCEs**

If you have suggestions for improving the BCCEs, please let the BCC know. The BCC will be discussing several issues of concern impacting future BCCEs. The BCC believes each future BCCE should be able to host 2,000 chemical educators. We need strong programming. The BCC believes more can be done to promote the BCCEs to high school chemistry teachers. Our BCCE program chairs have made strides in having appropriate programming at the BCCEs for high school chemistry teachers, but more needs to be done. With the economy stabilized, the BCC is concerned about the available travel funds for chemical educators to attend the BCCEs. The BCC is concerned with the relative lack of recognition and awareness of the BCCE among secondary school educators and higher education faculty involved in teaching chemistry. The BCC will be discussing using technology to allow for streaming of some BCCE sessions. The BCC will be discussing ways to digitally store and then share presentations and content from each of the BCCEs.

**Chemical Education Research Committee**

**Renee Cole [renee-cole@uiowa.edu], Chair**

The mission of the Chemistry Education Research (CER) Committee is to inform chemical educators, foster scholarship, and encourage improvement of the quality of chemistry education research. To achieve these goals, the committee is involved in a number of endeavors.

1. **ACS Award in Achievement in Research for the Teaching and Learning of Chemistry.** The CER Committee continues to work to ensure there are sufficient numbers of quality nominations for the award, which requires a minimum of ten nominations per year. The greatest concern is ensuring a steady state of new nominations each year to avoid boom/bust cycles on nominations. Renée Cole from CERC serves as liaison to the ACS Canvassing Committee to work on maintaining the number of nominations for this award. We ask that anyone who is nominating a colleague for this award to send a courtesy e-mail to Renee Cole so the CERC can adequately track the number of candidates nominated for this award.

2. The *Tools of Chemistry Education Research* symposium series book, edited by Diane Bunce and Renée Cole, has been published and is available at the Denver meeting.

3. The CER Committee maintains website with resources posted on the Division Website, but it needs input from the broader community. The committee information and approved minutes from past meetings are posted. There are links to journals, conferences, and other resources. The resource links to some areas may not be complete. All were asked to send feedback to committee about edits and additions that should be made. The committee would like to see this site continue to grow into a good resource for the community.

4. The CERC continues to look for ways to interface with teacher education and research at K-12. Greg Rushton is leading this effort, including a possible interface with the ACS HS Committee.

5. Programming at ACS National Meetings and the BCCEs.

**Chemistry Education Research (CER) Symposia at National Meetings**

Jennifer Lewis and Marilyne Stains were the organizers for CER Committee Symposium on Chemistry Education Research at the 248th ACS Fall Meeting in San Francisco, which had seven papers in a half-day session. The committee currently has organizers for the CER Committee Symposium on Research in Chemical Education for upcoming meetings through the 2016 Spring ACS Meeting. Members of the CER community who are interested in organizing the CER Symposium at future meetings should contact Renée Cole.

There are a number of CER related symposia at the 249th ACS Spring Meeting in Denver, including two organized by the CER Committee.

- Jack Barbera and Nathan Grove are the organizers for the CER Committee Symposium on Chemistry Education Research. The symposium has 34 papers spread over four half-day sessions.
Committee Reports

- Diane Bunce, Sam Pazicni, and Marilyne Stains are the organizers for the CER Committee Symposium on “New and Noteworthy in 2013-2014” – a symposium intended to highlight recent exemplary work in chemistry education research. This half-day session has four papers with extended presentation times to allow speakers to provide more detail on research projects.

In addition to promoting chemistry education research, the CER community is also committed to using the results of chemistry education research to improve instruction. Melanie Cooper and Teresa Larson organized a full-day symposium for the 248th ACS Fall Meeting with 12 papers focused on applying chemistry education research to practice. This joint symposium was designed to allow chemistry education researchers to share their results with practicing chemists (professors who teach these topics) and practicing chemists to share their best practices in the classroom with their chemistry and chemistry education research colleagues.

Current Membership of CCER

There are 13 voting members including the chair.

Renee Cole (chair), University of Iowa
Jack Barbera, University of Northern Colorado
Diane Bunce, Catholic University of America
David Cartrette, South Dakota State University
Melanie Cooper, Michigan State University
Tom Greenbowe, University of Oregon
Nathaniel Grove, University of North Carolina - Wilmington
Sam Pazicni, University of New Hampshire
Jeff Raker, University of South Florida
Greg Rushton, Kennesaw State University
Marilyne Stains, University of Nebraska
Melanie Teichert, US Naval Academy
Jessica Vanden Plas, Grand Valley State University


Committee on Chemistry in the Two-Year College Report

Scott Donnelly, [chair@2yc3.org], Chair

2YC3 is committed to the advancement of chemical education, the art of teaching chemistry, and the exchange of ideas and strategies regarding the first two years of chemistry and chemical technician programs. 2YC3 is a first choice option for chemical educators (open to educators at all levels- pre-service, high school, technical programs, two- and four-year colleges/universities in the US or elsewhere) to learn more about innovative and effective ideas regarding teaching chemistry. Community college chemistry faculty are oftentimes the lead innovators in the development and implementation of new pedagogical approaches to learning and teaching.

2YC3 provides professional growth opportunities for its members. As such 2YC3 has organized four regional conferences in 2015 as shown in the table below. CC = Community College

<table>
<thead>
<tr>
<th>Conference</th>
<th>Host Institution</th>
<th>Location</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>209th</td>
<td>Front Range CC</td>
<td>Westminster, CO</td>
<td>March 20-21</td>
</tr>
<tr>
<td>210th</td>
<td>Windward CC</td>
<td>Kāne‘ohe, HI</td>
<td>May 22-23</td>
</tr>
<tr>
<td>211th</td>
<td>St. Charles CC</td>
<td>Cottleville, MO</td>
<td>September 18-19</td>
</tr>
<tr>
<td>212th</td>
<td>Piedmont Virginia CC</td>
<td>Charlottesville, VA</td>
<td>November (dates TBD)</td>
</tr>
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The theme for the 209th conference is Chemistry Education Resources and for the 210th conference Chemistry for a Sustainable Future.
The 2YC3 newsletter Chemistry Outlook is published quarterly and is made available to members in both print and electronic formats.

2YC3 members are also active in the ACS Exams Committee, Committee on Minority Affairs, and SOCED. This is a growing group with a commitment to providing a high-quality chemistry education to students from the full spectrum of backgrounds and continue to facilitate transfer strategies into the workplace or for further courses.

In closing, 2YC3 is an organization that is strong, vibrant, and relevant to the larger community of chemical educators.

Electronically submitted by: Scott Donnelly, Chair 2015 2YC3

Committee on Computers in Chemical Education
Robert E. Belford [rebelford@ualr.edu], Chair

The Committee on Computers in Chemical Education is a standing committee of the Division of Chemical Education, which according to the bylaws “seeks to encourage, publicize and support the development, implementation and assessment of computing technologies in chemical education”. The CCCE runs an annual Fall online newsletter, and as a service to the general chemical education community hosts the online ConfChem conferences, both of which can be accessed through our web site, http://www.ccce.divched.org/.

The Spring 2015 ConfChem will be on Interactive Visualizations for Chemistry Teaching and Learning, held in May and June and organized by Emily Moore. Further information is available in the ConfChem section of this newsletter, and abstracts are available at the conference’s website, http://confchem.ccce.divched.org/2015SpringConfChem. Anyone interested in organizing a future ConfChem should contact Bob Belford, rebelford@ualr.edu.

In collaboration with ACS CINF the CCCE is organizing the first OLCC since 2004, and this will be on Cheminformatics. We plan to offer this intercollegiate course in the Fall of 2015 and 2016, and are looking for faculty who would be interested in offering this course at their home institutions. Additional information is available at the course website http://olcc.ccce.divched.org/.

The CCCE also hosts an annual Fall Newsletter, and the Fall 2014 Newsletter and discussions are available at http://confchem.ccce.divched.org/2014FallCCCENL. Please contact Bob Belford, rebelford@ualr.edu if you are interested in becoming involved with the CCCE, wish to contribute to the Fall 2015 Newsletter, the OLCC, or organize a future ConfChem.


High School Committee
Jeff Hepburn [jhepburn@q.com], Jo King [jlmking@hotmail.com], Co-Chairs

The most exciting resource for chemistry teachers is the new website for the AACT (American Association for Chemistry Teachers). This new website has some phenomenal activities or support for the chemistry teacher. This group is supported by the ACS so the charter membership is MUCH cheaper than any other national support group. See what they have to offer at www.teachchemistry.org.

Plan on attending ChemEd 2015. This is being held this summer at Kennesaw State University in Kennesaw, GA. Kennesaw is a suburb of Atlanta, GA so will have easier access and much for a family vacation. The dates are July 28-August 1, 2015. Check their website at www.ccpe.kennesaw.edu. ChemEd has many activities that support the chemistry teacher and well worth the time.

The High School Committee will have a meeting in Denver. The committee has not met the last two meetings due to conflicts.

The High School Committee is welcoming new committee members. We have also welcomed Jo King to the Co-Chair position. She is an AP chemistry teacher in the Houston, Texas area.
The committee has worked with the Programming committee to obtain chairs for the National High School Day at the national meetings. We will continue to assist in getting volunteers to assume this position for two national meetings. This will insure more interaction and understanding of this position.

We have also kept in touch with Adam Boyd and Terri Taylor from ACS. Adam is heading up the AACT (American Association of Chemistry Teachers). Adam will be attending the Denver meeting to allow our committee to meet Adam and have conversations concerning how the High School Committee can assist the AACT.

We still continue to maintain the submissions of the High School committee for the Newsletter. We continue to inform the members of current and important notifications for the members concerning issues such as the new Guidelines for Teaching High School Chemistry, updates on the AACT, programs available through the ACS such as Chem Club and Hach Grants, and information of the various meetings such as Chem ED, BCCE's, and national/ regional meetings from ACS.

Our next High School Committee meeting will involve looking at issues such as possible time changes for the committee so it doesn’t conflict with the National High School Day and other roles that the committee can assume.

Submitted,
Jeff Hepburn, Co-Chair

International Activities Committee
Charles (Butch) Atwood [chatwood@chem.utah.edu], Chair

After several years of dedicated service to the Division and the International Activities Committee, Carmen Valdez-Gauthier has rotated off the committee. Charles Atwood has assumed the chair of the committee. The committee appreciates the hard work Carmen has done over the last several years. We will miss her guidance.

The committee continues its efforts to promote issues on global education by organizing or co-sponsoring programs both nationally and internationally. Resa Kelley has received funding through the Division Activities Committee and the ACS-International Activities committee to develop a traveling symposium that will appear at American and Canadian Chemical Society meetings. Details on the symposium “Uniting International Chemical Societies through a Traveling Symposium” are still being hashed out. This symposium is centered on education for sustainable development and technological innovations. Dr. Sandi-Urena’s grant allowed him to attend the first meeting of chemical education research and practices of the Americas at the Latin American Chemistry Congress (CLAQ) in Lima-Peru and he is now working on establishing a Chemical Education Network of the Americas (CENA). Both activities will be discussed at our Denver committee meeting.

In conjunction with the International Activities Office of ACS, several committee members attended the Latin American Chemistry Congress (CLAQ) in Lima-Peru including Carmen Valdez-Gauthier, Santiago Sandi-Urena, and Charles Atwood. Additionally two Division members, Melanie Cooper and Maria Oliver-Hoyo, gave presentations at CLAQ. Eight undergraduate students from around the US also attended the CLAQ meeting, presented research presentations (in Spanish) at the education symposium, and volunteered at the Festival de Quimica, which occurred on October 14, 2014 in downtown Lima.

A second initiative planned with the International Activities Office of ACS is to attend and participate in the 38th Reuniao Anual da Sociedade Brasileria de Quimica to be held in Agua de Lindao, Brazil on May 25th to 28th, 2015. If the details are ironed out, a contingent of DivCHED members will attend the meeting to interact with Brazilian Educators and open some discussion about international Chem Ed activities.

Charles Atwood and Santiago Sandi-Urena have submitted a paper to the European Chemistry and Chemical Engineering Education Network (EC2E2N) newsletter explaining the purpose of the International Activities Committee and inviting collaborations. The paper will be published in the February edition of the EC2E2N newsletter.

The CHED-IAC International Travel Award was awarded to Wendy Schatzberg of Dixie State University in St. George, Utah. Wendy plans to attend the European Science Education Research Association Conference in Helsinki, Finland.
August 31, 2015 to September 4, 2015. There she will present a paper on student misconceptions transferring knowledge between chemistry lecture and laboratory. Wendy will attend the committee meeting at the Denver ACS meeting.

**CHED Travel Award**

The award is designed to support a DivCHED member who attends and fully participates in an international chemical education conference held outside the U.S. Preference is given to junior and/or under-represented faculty members who have not had the opportunity to attend an international meeting in chemical education. Information about the travel award and deadlines can be found at [http://www.divched.org/content/international-travel-award](http://www.divched.org/content/international-travel-award). If you or someone you know meet the criteria please encourage them to apply, the deadline for the submission of application for the 2014 CHED Travel Award is November 30th 2014.

**Upcoming events:**

**ACS National Spring Meeting, Denver 2015**  
Chemistry Education: International and Multi-cultural Perspectives  
Santiago Sandi-Urena is the symposium organizer.

**PaciﬁChem 2015, Hawaii, December 15-20, 2015**  
Chemistry Education: International and Multicultural Perspectives.  
Santiago Sandi-Urena is the symposium organizer.

The CHED-IAC meeting will be held from **8:00–9:30 am on Sunday, March 22, 2015**, in the Sheraton Denver Downtown. The committee will discuss the 38th Reuniao Anual da Sociedade Brasileria de Quimica and IAC participation in future national and international meetings. If you are interested in international issues please join us. I look forward to hearing from you!

Sincerely,

Charles Atwood

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**Long Range Planning Committee**  
**Ingrid Montes [ingrid.montes58@gmail.com], Tom Jose [tjose72@yahoo.com], Co-Chairs**

The purpose of the Long-Range Planning Committee (LRPC) is to monitor internal and external trends and to develop plans that will allow the Division to evolve and adapt to changes in technology, science and the needs and expectations of Division members.

The LRPC met in San Francisco on **Sunday, August 10, 2014**. Our discussion was focused on the strategic plan for the Division.

During 2014, LRPC members and Immediate Past Chair, Donald Wink, asked Committee Chairs to re-visit the strategic plan. Action items specified by associated task forces were presented to the Executive Committee by Melanie M. Cooper on August 18, 2007 and can be found here: [http://www.divched.org/CHEDarchives/strategicPlanning/DivCHED2007StrategicPlan.pdf](http://www.divched.org/CHEDarchives/strategicPlanning/DivCHED2007StrategicPlan.pdf).

The Committee Chairs were asked to discuss the following questions with their committees:

1. What has our committee done in conjunction with one or more of the action items discussed in the Division Strategic Plan Task Force reports?
2. Of the items in the task force reports that have not been addressed, which might our committee best address?
3. What other actions has our committee done that we should highlight for the Division membership?
4. What other ideas for short and long-term activities can our committee address in order to serve the Division membership?

Committees were also asked to complete a spreadsheet. This spreadsheet is a digest of the task force recommendations with five tabs corresponding to the five areas of the strategic plan.

The LRPC reviewed and collated the data that is summarized on the following working document:
Strategic Plan for the Division of Chemical Education
(Draft-February 2015)

Mission: The Division of Chemical Education will expand and engage its global network of members by communicating, promoting and effectively identifying opportunities and resources responsive to the spectrum of chemistry teaching and learning environments.

Goal 1: Implement a global communication plan and social network infrastructure by 2018.

The idea behind this goal is to improve communications within the division by providing a structure exclusive to members. We envision a professional redesign of the website with the central focus being the development of a social network (a sort of Facebook for chemical educators). Members will be able to add themselves to the network, post interests, skills and needs, indicate their interest in volunteering for division activities and develop communities of like-minded individuals.

Short Range Goals:
- Use social media such as Facebook, Twitter, blogs and newsletters to increase communication between members and to announce new activities.
- Establish a division page on LinkedIn.
- Post monthly electronic reminders and alerts to highlight new events including items of particular interest to new members.
- Remind committee chairs that it is their right and responsibility to publicize their events and activities through DivCHED.

Long Range Goals:
- Increase global outreach by communicating with sister societies to identify how they address chemical education. Suggest that the New Member committee identify and work with members who have affiliations with international organizations.
- Recognize the importance of reaching undergraduates earlier in their careers through the use of direct communication focused on their interests and needs.

Goal 2: Exchange ideas, expertise, and resources for the teaching and learning of chemistry within the ACS and with national and international organizations by 2018.

We plan to identify and forge stronger ties within/between DivCHED and other professional organizations focused on the teaching and learning of chemistry including: the ACS Division of Education, 2YC3, AACT, NSTA, NARST, AAAAS, RSC. We also plan to develop international exchange programs with scholars from sister organizations.

Long Range Goals:
- Expand on the success of working with other ACS divisions as done with Sustain Mix.
- Communicate with the ACS international chapters and international student chapters.
- Work with Pacificchem and IUPAC on programming in chemical education.
- Suggest that JCE highlight international activities in one issue.

Goal 3: Establish an infrastructure to foster professional development and mentoring opportunities for DivCHED members, promote broader participation of membership in DivCHED activities, and nurture future DivCHED leaders by 2018.

Another common theme that emerged from the needs analysis was that the leadership of DivCHED was thought to be unresponsive and a “closed shop”. Many members said they did not know how to volunteer within the division. If we implement this goal it will allow us to develop future leaders and make the opportunities to get involved with division activities more apparent.
### Committee Reports

**Short Range Goals:**
- Increase active participation of DivCHED members in the role of symposia presiders and committee liaisons.
- Publish one article in In Chemistry to inform undergraduates of graduate education opportunities.
- Encourage and support undergraduates by speaking to them at poster sessions.
- Expand active recruitment by the New Member committee to include younger chemists outside of academia.

**Long Range Goals**
- Increase professional development and other activities for adjunct and non-tenured faculty.
- Establish a webinar series on relevant topics such as leadership, volunteerism, etc.
- Provide assistance to graduate students. Consider the Graduate Education Report and TA book as resources.
- Provide professional development in direct conjunction with ACS. (e.g. webinars, conferences, etc.)
- Provide assistance to post-docs (e.g. turned down by NSF) who need financial grants.

**Goal 4: Identify, classify, and deliver access to quality resources, including those developed by CHED, that enhance the teaching and learning of chemistry by 2018.**

The plan is to develop part of the division website that will point to resources on teaching and learning of chemistry, categorized by the needs of the various membership constituencies. For example, this part of the division website would feature resources on chemical education research, the scholarship of teaching and learning and curriculum development. The material would span across the spectrum of division members (e.g. K-12, 2-year, 4-year, and graduate education).

**Short Range Goals:**
- Designate a portion of the division web page for posting resources on the teaching and learning of chemistry.
- Work with the American Association of Chemistry Teachers (AACT) to promote this as a valuable resource for the K-12 chemistry teaching community.
- Build up ChemEd X [http://www.jce.divched.org/article/welcome-chemical-education-xchange-chemed-x](http://www.jce.divched.org/article/welcome-chemical-education-xchange-chemed-x) by adding additional free resources from both ACS and non-ACS sources such as NSTA.
- Follow-up on 2YC3’s effort to collect/curate materials. [http://www.acs.org/content/acs/en/education/resources/twoyear.html](http://www.acs.org/content/acs/en/education/resources/twoyear.html)

**Long Range Goals**
- Harvest, store, and design plans to disseminate the chemical education resources generated at BCCE every other year.
- Continue and strengthen DivCHED presence at BCCE, ChemEd, 2YC3 and ACS high school day conferences with appropriate JCE classroom activities, ACS Exams products and personal contact with chemistry teachers and professors. Promote these resources through AACT and Chemistry Outlook (2YC3 newsletter).
- Encourage authors from Chemistry Research symposia to build and plan dissemination of an archive of useful materials.
- Consider ways to collaborate with AACT and 2YC3.

**Goal 5: Comprehensively review and assess programs, products and services both within and outside of CHED to create greater efficiency and synergy by 2018.**

This goal is essentially to review the existing programs within the division – to focus our efforts where members might best be served. We will also identify areas of overlap with other organizations so that efforts are not duplicated.
Passer Funds Award Committee
Catherine MacGowan [Catherine.MacGowan@armstrong.edu], Chair

Six applications for funds from the Passer Endowment were received and reviewed by the committee prior to the January 1, 2015 submission deadline and all six were awarded $1000 grants to attend workshops and/or courses to enhance their teaching and professional development. Five of those applications seeking funding were submitted using the newly created online application form found on the Passer Education Grant site.

Congratulations are extended to Charles Abrams, Sarah St. Angelo, Michael Fultz, Deborah Rosenthal, Timothy Trygstad and James Yoder.

CHED members and eligible colleagues are encourage to submit a request for support for professional development from the Passer Endowment. Guidelines for submission and online applications are available at the Passer Portfolio site found on the ACS Division of Chemical Education (http://www.divched.org/awards/dorothy-and-moses-passer-education-fund-0). If request is sent via email (Catherine.MacGowan@armstrong.edu) please use PDF format.

Regional Meetings Committee
Frank Creegan [fcreegan2@washcoll.edu ], Chair


The Division of Chemical Education continues to provide financial support to each Region through an unrestricted grant of $500.00 to support development of Chemical Education programming at each Regional Meeting as well as a grant of $1,000.00 to be awarded to a high school teacher as recipient of an ACS Division of Chemical Education Region Award for Excellence in High School Teaching. Awardees from the Middle Atlantic Region and Northwest Region were profiled in the Fall 2014 CHED Newsletter; four winners from the Fall 2014 meetings are profiled in this issue.

Beginning with this issue of the CHED Newsletter, The Regional Meetings Committee will recognize the nominees for each of the Region Awards by listing them, as Finalists, along with their school affiliation.

1. 2014 ACS Division of Chemical Education Region Awardees for Excellence in High School Teaching, Volume 2

66th ACS Southeast Regional Meeting October 16-19, 2014 Nashville, TN

The winner of the 2014 Division of Chemical Education Southeast Region Award for Excellence in High School Teaching is Fred I. Okoh from Arabia Mountain High School in Lithonia, Georgia.

Fred I. Okoh began his K-12 services in the Gwinnett County Public School System in May 2004 and transferred in August 2007 to the DeKalb County School District. He engages in strong collaborative planning and teaching in order to raise students’ performance, achievement, and academic preparation for post-secondary education and the immediate workforce. He strongly believes that “proper preparation prevents poor performance.” He considers himself as a counselor, mentor, and friend to his students. He offers daily morning and afternoon tutorials to all students who need additional assistance outside the regular class sessions.

Fred received a Bachelor of Science degree in Chemistry, magna cum laude, in 1980 from Alabama A&M University, Huntsville, Alabama, a Master of Science in Industrial Chemistry and a Doctor of Arts in Chemistry in 1982 and 1985, respectively, from Atlanta University (Clark Atlanta University).

He received the Gwinnett County School System’s Region 3A 2007 Star Teacher award for exemplifying profound influence and admirable qualities of Georgia teachers and dedication to the profession that helps shape the destiny
of our state and nation. The same honor was bestowed on him in 2013 as the Star teacher at Arabia Mountain High School. Dr. Okoh is also active in the community. For several years, he has developed and successfully implemented after-school and summer enrichment programs of national repute, such as the Pre-Engineering Freshman Program (PREP) and STARLAB. He is a founding member of the Atlanta Metropolitan Chapter of the National Organization for the Professional Advancement of Black Chemists and Chemical Engineers (NOBCChE) and has remained an active member of the organization. From 1992 to 2012, he worked with NOBCChE to carry out the STARLAB summer program for middle and high school students with grants from the Centers for Disease Control and Prevention.

45th ACS Central Regional Meeting Oct. 29-Nov. 1, 2014 Pittsburgh, PA

The winner of the 2014 Division of Chemical Education Central Region Award for Excellence in High School Teaching is Erica Posthuma-Adams from University High School of Indiana in Carmel, Indiana.

Erica Posthuma-Adams has been an educator for fourteen years. She is an active member of the American Chemical Society Division of Chemical Education and is a Lead Contributor for the JCE’s ChemEd Xchange. Currently teaching at University High School of Indiana, Erica is an experienced user of the Chemistry Modeling Curriculum, saying that Modeling Instruction provides her with the tools necessary to empower her students and to become the teacher she has always wanted to be. Erica recently published an article in the Journal of Chemical Education special AP issue (J. Chem. Educ., 2014, 91 (9), pp 1284–1290) on the topic of using Modeling Instruction to engage students in the practice of science.

49th ACS Midwest Regional Meeting November 12-15, 2014 Columbia, MO

The winner of the 2014 ACS Division of Chemical Education Midwest Region Award for Excellence in High School Teaching in Honor of John E. Bauman, Jr. is Donna Malkmus from Francis Howell North High School, St. Charles, Missouri.

Donna Malkmus has been a science teacher for the Francis Howell School District for 28 years and has been teaching chemistry for 27 of those years. She was selected as the Francis Howell School District Teacher of the Year in 2012 and Francis Howell North Teacher of the year in 2010. She is currently the regional science fair director for the Missouri Tri-County Regional Science and Engineering fair and has helped the regional fair grow from 100 projects to 400 projects. She regularly sponsors students in science fair and has had over 10 students compete at the Intel International Science fair with some students earning patents.

At Francis Howell North High School, she sponsors the science club, which has the highlight of sponsoring a chemistry magic show for 5th grade students at Henderson Elementary School. She is also sponsor of National Honor Society and is the treasurer of the Francis Howell Education Association.

70th ACS Southwest Regional Meeting November 19-22, 2014 Fort Worth, TX

The winner of the 2014 Division of Chemical Education Southwest Region Award for Excellence in High School Teaching is Robert K. Lee from Rogers High School in Rogers, Arkansas.

Robert Lee is the current AP Chemistry teacher at Rogers High School. He joined the faculty of Rogers in 2010 after completing course work at Missouri State University toward a Master of Science-Chemistry. At MSU Robert worked in the research group of Dr. Adam Wanekaya and focused his own research in the area of photo-voltaics based upon multi-walled carbon nanotubes. He was also a co-author of a book chapter in Polymeric Nanomaterials (Wiley-VCH, Chapter 16, 2011) on Conducting Polymer Nanowires and Their Biomedical Applications. Robert taught several classes at MSU including general chemistry and quantitative analysis. Prior to his time at MSU, Robert taught at Dresden International School (Dresden, Germany), Surabaya International School (Surabaya, Indonesia), Brent International School (Manila, Philippines), Bartlesville High School (Bartlesville, Oklahoma),
Coachella Valley High School (Coachella, California), and Berryhill High School (Berryhill, Oklahoma). In addition to AP Chemistry Robert has taught AP Physics, AP Biology, IB Physics, IB Chemistry, and numerous other high school science courses. Robert earned a M.Ed. in Curriculum Development and Assessment from the University of Phoenix (2005) and a B.S.Ed. in Chemistry and Zoology from Northeastern State University (Tahlequah, OK 1985). He completed much of his undergraduate studies while attending Oklahoma State University where he participated in the wrestling program. Robert is active in staff development at Rogers High School and has served for two years as the District Lead Teacher in the implementation of the AAIMS grant program for the district. In this role Robert has also served in providing in-service training to other schools and at numerous structured study and review sessions across the state of Arkansas.

2014 Central Region Awardee Erica Posthuma-Adams (right) with Doris Zimmerman (left), DivCHED Representative to CERM-2014

Southwest Region Awardee Bob Lee (center) with Steve Long (left), 1998 Awardee and Nominator of Bob Lee, and Cheryl Frech (right), DivCHED Representative to SWRM-2014

2. Finalists for the 2014 ACS Division of Chemical Education Region Awards for Excellence in High School Teaching

| 2014 ACS Division of Chemical Education Middle Atlantic Region Award for Excellence in High School Teaching |
| Awardee: Steven Borneman  |
| Byram Hills High School  |
| Brewster, NY 10509  |

| Finalists |
| Claudia Angle  |
| Bridgeton High School  |
| Bridgeton, NJ 08302  |

| Mary Calvert  |
| The Lawrenceville School  |
| Lawrenceville, NJ 08648  |

| Karolina Fraczkowska  |
| Stuart Country Day School of the Sacred Heart  |
| Princeton, NJ 08540  |

| Derrick C. Wood  |
| Conestoga High School  |
| Berwyn, PA 19312  |
### 2014 ACS Division of Chemical Education Glenn and Jane Crosby Northwest Region 
**Award for Excellence in High School Teaching**

**AWARDEE**
Jeff Charbonneau  
Zillah High School  
Zillah, WA, 98953

**FINALISTS**
Ann Autrey  
River's Edge High School  
Richland, WA, 99352

Barbara Nelson  
Idaho Falls High School  
Idaho Falls, ID 83401

Alison Ward  
Boise High School  
Boise, ID 83702

### 2014 ACS Division of Chemical Education Southeast Region 
**Award for Excellence in High School Teaching**

**AWARDEE**
Fred Okoh  
Arabia Mountain High School  
Lithonia, GA 30038

**FINALISTS**
Elizabeth B. Beckham  
South Aiken High School  
Aiken, SC 29803

Kathy Dunne  
Hammond School  
Columbia, SC 29209

Constance Brown  
Northwest High School  
Clarksville, TN 37042

Regis Goode  
Ridge View High School  
Columbia, SC 29229

Stephanie Chase LeGrone  
Mary G. Montgomery High School  
Semmes, AL 36575

Nancy Hasburn  
Villa Rica High School  
Villa Rica, GA 30180

Dewayne Riddle  
Benjamin Russell High School  
Alexandria City, AL 35010

Kathy Dunne  
Hammond School  
Columbia, SC 29209

Keith A. Sanders  
Girls Preparatory School  
Chattanooga, TN 37405

Dewayne Riddle  
Benjamin Russell High School  
Alexandria City, AL 35010

Stephanie Chase LeGrone  
Mary G. Montgomery High School  
Semmes, AL 36575

Juan Carlos Rodriguez  
Archbishop Coleman Carroll High School  
Miami, FL 33135

David C. Vernon  
Western Alamance High School  
Elon, NC 27244

Neera Young  
Lakeside High School  
Evans, GA 30809
<table>
<thead>
<tr>
<th>Region</th>
<th>Award for Excellence in High School Teaching</th>
</tr>
</thead>
</table>
| Central Region | **AWARDEE**
|   | Erica Posthuma-Adams
|   | University High School of Indiana
|   | Carmel, IN 46032
| FINALISTS | Margaret Convery
|   | Farmington High School
|   | Farmington, MI 38336
|   | Alice Putti
|   | Jenison High School
|   | Jenison, MI, 49428
|   | Terri Mortemore
|   | Maumee High School
|   | Maumee, OH, 43537
|   | Richard Samsa
|   | Grove City Senior High School
|   | Grove City, PA 16127
| Midwest Region | **AWARDEE**
|   | Donna Jo Malkmus
|   | Francis Howell North High School
|   | Saint Charles, MO 63303
| FINALISTS | Kevin Biga
|   | Westside High School
|   | Omaha, NE 68114
|   | Rebecca Paris-Forest
|   | Knob Noster High School
|   | Knob Noster, MO 65336
|   | Patrick Quick
|   | Central High School
|   | Springfield, MO 65802
| Southwest Region | **AWARDEE**
|   | Bob Lee
|   | Rogers High School
|   | Rogers, AR 72758
| FINALISTS | Karen Compton
|   | Plano East Senior High
|   | Plano, TX 75074
|   | Michelle Dubay
|   | Hubbard HS
|   | Hubbard, TX 76648
|   | Usha Devanthosh
|   | North Houston Early College
|   | Houston, TX 77022
|   | Sarwat Jafry
|   | St. John’s School
|   | Houston, TX 77019
|   | Beth Maris
|   | Little Rock Central High School
|   | Little Rock, AR 72202

Committee Reports
Younger Chemistry Education Scholars Committee
Stephanie Ryan [sryan@air.org], Chair

The YCES Committee had a productive conference season. At the BCCE meeting in Allendale, MI, we had a strong program to foster networking and professional growth. Jordan Harshman and Thomas Bussey created a flyer that we posted on social media and circulated through listservs for visibility. We obtained sponsorship from WebAssign to host a CV Speed Dating event on the Sunday afternoon prior to the start of BCCE where graduate students and recent graduates learned how to transform their current resume or curriculum vitae into an attractive document for potential employers. Kelly Galloway and Jessica Reed organized the event to be a round-robin “speed-dating” event with a panel of faculty member experts. Faculty were given the CVs in advance so that they could provide feedback and each graduate student met with at least three faculty members. One lucky winner won a leather padfolio for them to use throughout their interview process. We would like to thank all of the faculty and students that participated in this event.

On Tuesday, we hosted a YCES Social at a local restaurant. Attendees received a Networking Bingo card that had blank spaces along with the names of committee members. The goal of the ‘game’ was to have them meet people, discuss their research and get signatures. Throughout the event there was a slide show showcasing both professional and friendship photos of members – to highlight the relationships that were fostered through the Graduate Student conferences and the YCES committee. ACS Education donated several copies of a variety of symposium series for us to raffle off so that friends of the YCES committee could build their professional libraries. We had over 40 people in attendance.

On Wednesday night, we piggy-backed our event with the Al.D.Hyde and the Ketones concert to encourage networking outside of the YCES committee. Each person who networked with at least three people turned in a completed card for a leather business card holder donated by Element Learning. We had over 100 participants in this event! Attendees and ‘friendly faces’ were designated using buttons that were donated by the ACS Exams Institute. Justin Carmel designed ‘chemistry pun’ buttons that were a big hit. We advertised them as “Pieces of Flair” and attendees received a different button at each event they attended along with raffle tickets to enter to win a Smart Pen donated by LiveScribe. Overall, we received very positive feedback from the attendees and the larger chemistry education community. We received some feedback of how to discuss networking dos and don'ts in the future that we will incorporate into future events.

We also have a busy Denver ACS meeting planned with a lot of events to continue our outreach and recruiting. We have created a flyer and will be sending it to all active student chapters via email, posting on social media, and through the listserv. Planned events include:

- **YCES Open Meeting:** We are encouraging graduate students and post docs to attend open meetings before the conference starts to become more involved in the chemistry education community. The open meeting will be held on Sunday, March 22nd, 2015 from 11:30a-12:30p.
- **Undergrad Recruitment Fair:** We will have a booth again at the Undergraduate Recruitment fair. We will pass out the remainder of the “Pieces of Flair” along with flyers directing them to the CER program map and our blog. This event will be held on Sunday, March 22nd 2015 from 1:00p-5:00p.
- **DivCHED Social:** We are encouraging networking at the DivCHED Social. We will have members and friends of the committee wearing “Ask me about Chemistry Education” buttons to indicate a friendly face if new graduate students are shy. This event will be held on Sunday, March 22nd, 2015 from 5:30p-7:30p.
- **Poster Sessions:** This year we created a poster to highlight what our committee does, recruit students into the field of chemistry education, and to broaden our community. Our poster is being presented in two sessions – on Sunday, March 22nd, 2015 from 7:00p-9:00p and at the Sci-Mix Monday, March 23rd, 2015 from 8:00p-10:00p.
- **Undergrad posters and Successful student chapters:** Members of our committee will visit with undergraduate students at these events as part of our recruitment efforts.
- **CES Social:** WebAssign has sponsored a networking event where we will again play Networking Bingo for prizes donated by ACS Education, PASCO, and LiveScribe. All prizes are intended to help younger chemistry education scholars to build their own labs, libraries, and research groups. This event will be held on Monday, March 23rd, 2015 from 3:00p-5:00p.
Committee Reports

- Grad Student/Post Doc Social: We will have representatives at a table at this annual social to discuss chemistry education. This event will be held on Monday, March 23rd, 2015 from 7:00p-8:30p.
- Graduate Student Research Forum: This symposium is organized and hosted by graduate students for graduate students. It will be held on Tuesday, March 24th, 2015 from 8:30a-11:20a.

Our blog has recent posts by Jordan Harshman (Considerations for Choosing Stat Packages in CER) and Daniel Cruz-Ramirez de Arellano (Why I chose an instructor position after graduation) and we continue to seek out new topics for posts. Jessica Reed has done an excellent job with the blog and has handed her responsibilities to Mary Beth Anzovino. If you have an idea for a blog post that would be interesting to you, it is probably interesting to others! Submit any ideas to Mary Beth at anzovime@miamioh.edu. Justin Carmel handles our twitter account @ACS_YCES – check it out for posts at conferences and throughout the off-season for news. We also have a new facebook group – find us at https://www.facebook.com/groups/YCESCommittee/. We post updates as they come in!

We are also updating our website to introduce our committee members. Our intent is for undergrads, grad students, and recent grads to know our faces and feel comfortable approaching us at conferences or emailing us.

Thank you to Kim Linenberger, Jessica Reed, and Emily Moore for their service on the committee. We are looking forward to working with our new members: Sonia Underwood, Jennifer Duis, and David Wren.

If you are a CER graduate student and are interested in organizing and presiding over the Chemistry Education Research: Graduate Student Research Forum Symposium at a future meeting, please contact any of the committee members.

Please feel free to contact me (sryan@air.org) if you have ideas for future YCES sponsored events.
249TH ACS MEETING & EXPOSITION, DENVER, CO

Theme: Chemistry of Natural Resources
March 22-26, 2015

Meeting Co-Chairs:
Wayne Jones, Binghamton University, State University of New York, Binghamton, NY 13902; 607-777-2421, wjones@binghamton.edu
Andy Marsh, Lebanon Valley College, Annville, PA 17003-1400, 717-867-6149, marsh@lvc.edu

High School Program Chair:
Sally Mitchell, East Syracuse Minoa High School, Science Department, East Syracuse, NY 13057-9463, sbmitchell2@gmail.com

CHED Program Chair:
Irvin J. Levy, Gordon College, 255 Grapevine Road, Wenham, MA 01984. Voice: 978-867-4877, irv.levy@gordon.edu

GSSPC Organizers:
Karen Antonio (kantoni@nd.edu) and others from University of Notre Dame “Biocatalysis: Creating a Sustainable Future”

Program Synopsis  (Full abstract list can be found at http://www.divched.org/sites/default/files/CHED_Dallas_abstracts.pdf)

SUNDAY MORNING
High School Program
Cospensioned by SOCED
Financially supported by ACS Education Division
S. B. Mitchell, Organizer, Presiding; Papers 1-5

Chemistry Education Research New and Noteworthy in 2013-2014
D. M. Bunce, M. N. Stains, Organizers; S. Pazicni, Organizer, Presiding; Papers 6-9

Current Practice and Research Using ACS Exams
T. Holme, Organizer; K. L. Murphy, Organizer, Presiding; Papers 10-17

Undergraduate Research Papers Organic Chemistry
Cospensioned by SOCED
C. V. Gauthier, Organizer; J. V. Ruppel, N. L. Snyder, Organizers, Presiding; Papers 18-27

From Cornerstone to Capstone: Culminating Experiences in the Undergraduate Chemistry Curriculum that Foster Integration and Application of Foundational Knowledge
K. Kneas, J. A. MacKay, Organizers, Presiding; Papers 28-34

NMR Spectroscopy in the Undergraduate Curriculum Applications
Financially supported by Bruker; JEOL; Thermo Fisher Scientific; Anasazi Instruments
L. J. Anna, D. P. Soulsby, A. S. Wallner, Organizers, Presiding; Papers 35-42

Growing Opportunities for Research Abroad: An Undergraduate Perspective of International Research Experiences
Cospensioned by IAC, Cospensioned by CHED, PROF and YCC

Undergraduate Symposium
Cospensioned by AGFD, Cospensioned by CHED

SUNDAY AFTERNOON
High School Program
Cospensioned by SOCED
Financially supported by ACS Education Division
S. B. Mitchell, Organizer, Presiding; Papers 43-48

Chemistry Education Research K-12 and Professional Development
J. Barbera, N. P. Grove, Organizers; D. G. Herrington, Presiding; Papers 49-57

Department, University, and National Models for Faculty Development to Support Adoption of Evidence-Based Teaching
Cospensioned by INOR, ORGN and PRES
R. Waterman, Organizer, Presiding; Papers 58-68

Undergraduate Research Papers Analytical and Environmental Chemistry
Cospensioned by SOCED
C. V. Gauthier, N. L. Snyder, Organizers; J. V. Ruppel, Organizer, Presiding; Papers 69-75

From Cornerstone to Capstone: Culminating Experiences in the Undergraduate Chemistry Curriculum that Foster Integration and Application of Foundational Knowledge
K. Kneas, J. A. MacKay, Organizers, Presiding; Papers 76-83

NMR Spectroscopy in the Undergraduate Curriculum Pedagogy
Financially supported by Bruker; JEOL; Thermo Fisher Scientific; Anasazi Instruments
L. J. Anna, D. P. Soulsby, A. S. Wallner, Organizers, Presiding; Papers 84-91

Growing Opportunities for Research Abroad: An Undergraduate Perspective of International Research Experiences
Cospensioned by IAC, Cospensioned by CHED, PROF and YCC

Graduate Student Symposium
Cospensioned by AGFD, Cospensioned by CHED
SUNDAY EVENING
General Posters
I. Black, Organizer; Papers 92-188

MONDAY MORNING
ACS Award for Achievement in Research for the Teaching and Learning of Chemistry: Symposium in Honor of Vickie M. Williamson
Cosponsored by WCC
Financially supported by Pearson Publishing
M. R. Abraham, Organizer, Presiding; Papers 189-195

Experiments for Physical Chemistry Laboratory Spectroscopy & Thermodynamics
A. Grushow, S. S. Hunnicutt, R. M. Whitnell, Organizers; F. J. Creegan, Presiding; Papers 196-218

Integrating Chemistry and Polymer Science Research into the Classroom
Cosponsored by PMSE and POLY
S. E. Morgan, Organizer; K. A. Cavicchi, Organizer, Presiding; K. Wingo, Presiding; Papers 205-218

Undergraduate Research Papers Computational, Physical and Inorganic Chemistry
Cosponsored by SOCED
J. V. Ruppel, N. L. Snyder, Organizers; C. V. Gauthier, Organizer, Presiding; Papers 219-230

Research at Community Colleges: Strategies for Enhancing Student Transfer & Success
Financially supported by 2YC3
D. M. Sarno, Organizer; P. D. Svoronos, Organizer, Presiding; Papers 231-240

Chemistry Education: International and Multicultural Perspectives
S. Raje, Organizer S. Sandi-Urena, Organizer, Presiding; S. Hansen, Presiding; Papers 241-244

Diversifying STEM: Uniting through our Differences for a Brighter Scientific Future
Sponsored by CMA, Cosponsored by CHED and PROF

MONDAY AFTERNOON
ACS Award for Achievement in Research for the Teaching and Learning of Chemistry: Symposium in Honor of Vickie M. Williamson
Cosponsored by WCC
Financially supported by Pearson Publishing
M. R. Abraham, Organizer, Presiding; Papers 1450-1456

Undergraduate Research Posters Agricultural and Food Chemistry
Cosponsored by AGFD and SOCED
N. Di Fabio, Organizer; Papers 245-258

Undergraduate Research Posters Analytical Chemistry
Cosponsored by ANYL and SOCED
N. Di Fabio, Organizer; Papers 259-355

Undergraduate Research Posters Biochemistry
Cosponsored by BIOL and SOCED
N. Di Fabio, Organizer; Papers 356-538

Undergraduate Research Posters Biotechnology
Cosponsored by BIOT and SOCED
N. Di Fabio, Organizer; Papers 539-549

Undergraduate Research Posters Chemical Education
Cosponsored by SOCED
N. Di Fabio, Organizer; Papers 550-674

Undergraduate Research Posters Computational Chemistry
Cosponsored by COMP and SOCED
N. Di Fabio, Organizer; Papers 675-714

Undergraduate Research Posters Environmental Chemistry
Cosponsored by ENVR and SOCED
N. Di Fabio, Organizer; Papers 715-786

Undergraduate Research Posters Geochemistry
Cosponsored by GEOC and SOCED
N. Di Fabio, Organizer; Papers 787-794

Undergraduate Research Posters Green Chemistry & Sustainability
Cosponsored by SOCED
Financially supported by ACS Green Chemistry Institute; I&EC Green Chemistry N. Di Fabio, Organizer; Papers 795-826

Undergraduate Research Posters Inorganic Chemistry
Cosponsored by INOR and SOCED
N. Di Fabio, Organizer; Papers 827-938

Undergraduate Research Posters International Research Experience for Undergraduates
N. Di Fabio, Organizer; Papers 939-955

Undergraduate Research Posters Medicinal Chemistry
Cosponsored by MEDI and SOCED
N. Di Fabio, Organizer; Papers 956-1012

Undergraduate Research Posters Nanochemistry
Cosponsored by SOCED
N. Di Fabio, Organizer; Papers 1013-1071

Undergraduate Research Posters Organic Chemistry
Cosponsored by SOCED
N. Di Fabio, Organizer; Papers 1072-1357

Undergraduate Research Posters Physical Chemistry
Cosponsored by SOCED
N. Di Fabio, Organizer; Paper 1358-1414

Undergraduate Research Posters Polymer Chemistry
Cosponsored by PMSE, POLY and SOCED
N. Di Fabio, Organizer; Papers 1415-1449

Experiments for Physical Chemistry Laboratory Assessment, Computational Chemistry, & Kinetics
S. S. Hunnicutt, R. M. Whitnell, Organizers; A. Grushow, Organizer, Presiding; Papers 1457-1464

Online Course Development and the Effects on the On-Campus Classroom
P. Sorensen, Organizer, Presiding; Papers 1465-1472
MONDAY AFTERNOON (continued)
Undergraduate Research Papers Biochemistry and Chemical Education
Cosponsored by SOCED
C. V. Gauthier, J. V. Ruppel, Organizers; N. L. Snyder, Organizer, Presiding; Papers 1473-1481

ACS Award for Encouraging Disadvantaged Students in Chemistry: Symposium in Honor of Catherine H. Middlecamp Four-Part Harmony (or Disharmony)
Cosponsored by CMA and WCC
Z. M. Lerman, C. H. Middlecamp, Organizers, Presiding; Papers 1482-1492

Chemistry Education: International and Multi-cultural Perspectives
S. Raje, Organizer S. Sandi-Urena, Organizer, Presiding; S. Hansen, Presiding; Papers 1493-1496

MONDAY EVENING
STRETCH Your Students’ Polymer Knowledge by Putting Some BOUNCE into Your Curriculum Polymer Science Education and the NGSS
Cosponsored by PMSE, POLY, RUBB and SCC
Financially supported by InterSociety Polymer Education Council
S. C. Rukes, Organizer, Presiding; Papers 1497-1500

Sci-Mix

Successful Student Chapters
N. Di Fabio, Organizer; Papers 1501-1619

TUESDAY MORNING
GSSPC: Designed by Nature, Developed by Science: Interdisciplinary Perspectives on Biocatalysis
Cosponsored by ANYL, BIOL, CATL, ENVR, I&EC, MEDI, ORGN and PRES
K. J. Clear, Organizer; K. Antonio, C. Ayres, Organizers, Presiding; Papers 1620-1622

Chemistry Education Research: Graduate Student Research Forum
E. Humphreys, S. E. Nielsen, Organizers, Presiding; Papers 1623-1629

ACS-CEI Award for Incorporating Sustainability into Chemistry Education Cosponsored by CEI
K. E. Peterman, Organizer, Presiding; Papers 1630-1634

NSF Programs That Support Undergraduate Education
R. K. Boggess, Organizer; C. A. Burkhardt, Organizer, Presiding; Papers 1635-1639

George C. Pimentel Award in Chemical Education: Symposium in Honor of I. Dwaine Eubanks Sputnik to Smartphones: A Half-Century of Chemistry Education
Cosponsored by HIST‡
Financially supported by ChemSource, Inc.
M. Orna, Organizer, Presiding; Papers 1688-1695

Overcoming Obstacles in Student Learning in Physical Chemistry
A. L. Marsh, A. Noble, Organizers, Presiding; Papers 1696-1701

TUESDAY AFTERNOON
GSSPC: Designed by Nature, Developed by Science: Interdisciplinary Perspectives on Biocatalysis
Cosponsored by ANYL, BIOL, CATL, ENVR, I&EC, MEDI, ORGN and PRES
L. Woods, Organizer; A. Gans, M. Pillers, Organizers, Presiding; Papers 1660-1663

Chemistry Education Research General Chemistry
J. Barbera, N. P. Grove, Organizers; J. P. Suits, Presiding; Papers 1664-1673

Perspectives on Climate Change Literacy and Education: Local to International
G. P. Foy, Organizer; K. E. Peterman, Organizer, Presiding; Papers 1683-1687

NSF Programs That Support Undergraduate Education
C. A. Burkhardt, Organizer; R. K. Boggess, Organizer, Presiding; Papers 1688-1695

Overcoming Obstacles in Student Learning in Physical Chemistry
A. L. Marsh, A. Noble, Organizers, Presiding; Papers 1696-1701

TUESDAY EVENING
General Papers
S. A. Fleming, Organizer; C. Hamann, Presiding Papers 1702-1712
**Wednesday Morning**

**Green Chemistry: Theory and Practice**
Cosponsored by CEI‡
Financially supported by NSF-CCI Center for Sustainable Polymers at the University of Minnesota; ACS Green Chemistry Institute; I&EC Green Chemistry Subdivision
J. E. Wissinger, Organizer; E. J. Brush, Organizer, Presiding; Papers 1713-1720

**Chemistry Education Research Concept Inventories**
J. Barbera, N. P. Grove, Organizers; J. R. Raker, Presiding; Papers 1721-1724

**Chemistry Education Research Online Homework**
J. Barbera, N. P. Grove, Organizers; J. R. Raker, Presiding; Papers 1725-1728

**Process-Oriented Guided Inquiry Learning (POGIL)**
R. S. Moog, Organizer, Presiding; Papers 1729-1735

**Instructors and Researchers: Advancing Graduate Education in Chemistry**
S. Hansen, S. Sandi-Urena, Organizers, Presiding; Papers 1736-1742

**Using Technology in the Undergraduate Laboratory**
A. Oxley, C. E. Stilts, Organizers, Presiding; Papers 1743-1751

**Computational Chemistry in the Undergraduate Curriculum: What is Working and How Do We Assess It?**
Cosponsored by PHYS
J. L. Sonnenberg, Organizer; J. B. Foresman, Organizer, Presiding; Papers 1752-1761

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**Wednesday Evening**

**Green Chemistry: Theory and Practice**
Cosponsored by CEI‡
Financially supported by NSF-CCI Center for Sustainable Polymers at the University of Minnesota; ACS Green Chemistry Institute; I&EC Green Chemistry Subdivision
E. J. Brush, Organizer; J. E. Wissinger, Organizer, Presiding; Papers 1762-1769

**Chemistry Education Research Organic and Biochemistry**
J. Barbera, N. P. Grove, Organizers; T. Bussey, Presiding; Papers 1770-1773

**Chemistry Education Research Chemistry Majors**
J. Barbera, N. P. Grove, Organizers; T. Bussey, Presiding; Papers 1774-1776

**Research on Learning in the Laboratory**
M. J. Chrzanowski, S. Sandi-Urena, A. Villalta-Cerdas, Organizers, Presiding; Papers 1777-1782

**Undergraduate Research in Chemistry: Expanding Opportunities and Broadening Participation Models Supporting and Expanding Undergraduate Research**
B. L. Gourley, R. M. Jones, Organizers, Presiding; Papers 1783-1786

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**Thursday Morning**

**General Papers**
S. A. Fleming, Organizer; C. R. Pharr, Presiding; Papers 1807-1816

**General Papers**
S. A. Fleming, Organizer; M. T. Mongelli, H. Stokes-Huby, Presiding; Papers 1817-1823

**General Papers**
S. A. Fleming, Organizer; J. D. Mendez, Presiding; Papers 1826-1835

**Environmental Chemistry: Pedagogical Models and Practices**
Sponsored by ENVR, Cosponsored by CHED, MPPG‡ and YCC

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**Wednesday Evening**

**Environmental Chemistry: Pedagogical Models and Practices**
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**Thursday Morning**

**General Papers**
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**Environmental Chemistry: Pedagogical Models and Practices**
Sponsored by ENVR, Cosponsored by CHED, MPPG‡ and YCC
### Schedule of CHED Committee Meetings and Social Events

**Sheraton Denver Downtown**  
Address: 1550 Court Place, Denver, CO 80202  
Phone: (303) 893-3333

**Colorado Convention Center (CHED Social Reception Only)**  
700 14th Street, Denver, CO 80202  
Phone: (303) 228-8000

<table>
<thead>
<tr>
<th>Date</th>
<th>Meeting/Committee</th>
<th>Time</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Saturday, March 21, 2015</strong></td>
<td>Exams Institute, Board of Trustees (open)</td>
<td>7:30AM – 12:00PM</td>
<td>Plaza Court 3</td>
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<tr>
<td></td>
<td>Board of Publications (open)</td>
<td>8:00 – 8:30AM; 10:15 – 10:45AM (closed)</td>
<td>Plaza Court 2</td>
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<td></td>
<td></td>
<td>8:30 – 10:15AM; 10:45-12:00PM (open)</td>
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<tr>
<td></td>
<td>Program Committee (open)</td>
<td>10:30AM – 12:00PM</td>
<td>Plaza Court 1</td>
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<td></td>
<td>Executive Committee</td>
<td>Location: Governor’s Square 12</td>
<td>Plaza Court 1</td>
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<tr>
<td></td>
<td>1:00PM – 1:30PM (closed)</td>
<td>1:30PM – 4:00PM (open)</td>
<td>Plaza Court 1</td>
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<tr>
<td></td>
<td>4:00PM – 5:30PM (closed)</td>
<td>Biennial Conference Committee (open)</td>
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<td>4:00PM – 6:00PM</td>
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<tr>
<td><strong>Sunday, March 22, 2015</strong></td>
<td>Chemical Education Research Committee (open)</td>
<td>7:00AM – 9:00AM</td>
<td>Plaza Court 6</td>
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<tr>
<td></td>
<td>International Activities Committee (open)</td>
<td>8:00AM – 9:30AM</td>
<td>Plaza Court 1</td>
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<td></td>
<td>Finance Committee (closed)</td>
<td>9:30A – 11:30AM</td>
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<td>Regional Meetings (open)</td>
<td>12:00PM – 2:00PM</td>
<td>Director’s Row F</td>
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<td></td>
<td>Long Range Planning Committee (open)</td>
<td>2:30PM – 4:30PM</td>
<td>Director’s Row F</td>
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<td>High School Chemistry Committee (open)</td>
<td>3:30PM – 5:30PM</td>
<td>Plaza Court 2</td>
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<td>Young Chemistry Education Scholars Committee</td>
<td>9:30AM - 11:30 AM Closed Session</td>
<td>Plaza Court 6</td>
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<td></td>
<td>11:30AM - 12:30 PM Open Session</td>
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<tr>
<td></td>
<td>DivCHED Social Reception (open)</td>
<td>5:30PM – 7:00PM</td>
<td>Room 207 (Colorado CC)</td>
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<tr>
<td><strong>Monday, March 23, 2015</strong></td>
<td>Business Meeting (open)</td>
<td>12:00PM – 12:30PM</td>
<td>Denver</td>
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<td></td>
<td>New Member Meeting (open)</td>
<td>12:30PM – 1:00PM</td>
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<td></td>
<td>Younger Chemistry Education Scholars Social (open)</td>
<td>3:00PM – 5:00PM</td>
<td>Windows</td>
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AGENDA – Executive Committee (Open)
Division of Chemical Education
Saturday, March 21, 2015
Sheraton Denver Downtown Hotel, Governor’s Square 12, Denver, CO

Notes:
1. The agenda packet is available on the Division web site: http://www.divched.org/
2. The Executive Committee (ExComm) consists of 16 members, 13 elected members, plus the Editor, J. Chem. Educ., the Director, Examinations Institute and the Chair, Division Program Committee. Only ExComm members are present in Executive Session. Input is welcomed from all in attendance at the Open Session, but ExComm members are the only persons who may vote on actions before the Executive Committee.
3. Reimbursement forms for ExComm members will be provided via interactive form on the Division’s website and a manual form is available on p. 54

Open Session -1:30PM to 4:30PM

<table>
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<th>Action</th>
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<tr>
<td>1:30</td>
<td>Call to order</td>
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<tr>
<td>X</td>
<td>Approve meeting agenda and consent agenda reports</td>
<td>1-2, 20-45</td>
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<td>X</td>
<td>Approval of the Fall 2014 ExComm Meeting Minutes, Open Session</td>
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<td>Introductions</td>
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<td>Chair’s Announcements – M. Towns</td>
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<td>Past Chair – Recognition of Service</td>
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<td>Past Chair’s Announcements – D. Wink</td>
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<td>Chair Elect’s Announcements – C. Middlecamp</td>
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<td>Secretary’s Announcements – R. Kelly</td>
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<td>X</td>
<td>CHED Safety Committee Proposal - M. Towns &amp; D. Finster</td>
<td>48-49</td>
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<td>ACS Fellows Task Force – Report on procedures (Wink)</td>
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<td>Record retention policies and procedures report – (Towns)</td>
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<td>DivCHED sponsorship of ACS awards – (Towns)</td>
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<td>Pimentel, Conant, and ACS CER Award</td>
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<td></td>
<td>Program Committee Report - I. Levy</td>
<td>9-16</td>
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<td>Treasurer’s General Report - A. Wilson</td>
<td>17-19</td>
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<td>Board of Publication Report – C. Bauer</td>
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<td>BoP Candidate Profile – Nomination criteria (Bauer)</td>
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<td>BoP support for the Conant Award for HS Teaching (Bauer)</td>
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<td>Board of Trustees of the ACS Exams Institute - A. Grushow</td>
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<td>BCCE Committee Report – T. Greenbowe</td>
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<td>Recognition Committee Report (Wilson)</td>
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<td>Long Range Planning Committee Report – I. Montes &amp; T. Jose</td>
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<td>Regional Committee Report - F. Creegan</td>
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<td>Nominations for Region Awards for H.S. Teaching shortages/remedies</td>
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<td>YCES Report – S. Ryan</td>
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<td>Special travel award request</td>
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<td>3:30</td>
<td>CHED Liaisons</td>
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<td></td>
<td>ACS Education Division Highlights</td>
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<td></td>
<td>Open Discussion/Input to the Executive Committee</td>
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<tr>
<td>X</td>
<td>Discussion of Leadership Development Fellows – (Towns)</td>
<td>51</td>
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<tr>
<td>4:00</td>
<td>Adjourn Open Session</td>
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HIGH SCHOOL CHEMISTRY DAY
HIGH SCHOOL TEACHERS PROGRAM
DENVER, COLORADO

SHERATON DENVER DOWNTOWN HOTEL
1550 COURT PLACE, DENVER, CO
SUNDAY, MARCH 22, 2015 | 8:30 AM – 4:30 PM
FOLLOWED BY A RECEPTION AT 5:00 PM

5 REASONS TO ATTEND THE HIGH SCHOOL CHEMISTRY DAY AT THE ACS NATIONAL MEETING:

1. See what fun experiments Steve Spangler will do
2. Hear from the ACS Chemistry Teacher of the Year—2015 James Bryant Conant Award winner
3. Learn about resources that you can use when you return to your classroom
4. Network with other chemistry teachers from your area and around the US
5. Receive Continuing Education Credits for attending any part of the ACS National Meeting

The American Chemical Society is the world’s largest scientific society dedicated to a single discipline. The meeting and exposition will be held at the Denver Convention Center and hotels around the city.

PROFESSIONAL DEVELOPMENT
Attendees can track professional development (based on clock hours) for sessions attended at the ACS national meeting. Upon completion and submission of ACS forms, participants will be mailed a certificate documenting their participation in the conference.

FOR MORE INFORMATION
CONTACT THE OFFICE OF HIGH SCHOOL CHEMISTRY
1 800 227 5558, EXT. 2105
education@acs.org
www.acs.org/hsday
MORNING PROGRAM

Welcome
Symposium organizers:
Sally B. Mitchell
East Syracuse Minoa High School,
East Syracuse, NY
Greta Glugoski-Sharp
St. Mary’s Academy,
Englewood, CO

Demonstrations Guaranteed to Get Oohs and Aahs! – How to Turn Ordinary Activities into Unforgettable Learning Experiences
Keynote Speaker: Steve Spangler
Steve Spangler Science,
Littleton, CO
Explore a collection of highly visual demonstrations and presentations ideas that help students to build connections between scientific concepts and real-world applications.

Writing Across the Curriculum: Concept Journals as Means to Teach the Metric System
Sally B. Mitchell
East Syracuse Minoa High School,
East Syracuse, NY
Find out how to teach the metric system as the simple manipulation of sound mathematical principles and how to use a concept journal to guide students toward their own definition of the metric prefixes.

A Few Insights into Classroom & Lab Safety
Harvey W. Gendreau and Bette Bridges
Laboratory Safety Institute,
Colorado Springs, CO
Hear from two “experienced” teachers about their classroom stories and tips on topics ranging from the general health and safety to chemical storage. Engage in a discussion about personal and student safety issue.

Spectroscopy of Natural Resources
Dick McGraw
Thermo Fisher Scientific, Molecular Spectroscopy,
Highland Ranch, CO
Learn about molecular spectroscopy as an analytical technique to determine the chemical structure of a wide range of natural materials.

Spark student’s interest in chemistry with resources from the American Chemical Society
Karen M. Kalevati and Marta U. Gmurczyk
American Chemical Society,
Washington, DC
Explore a number of the ACS Education Division programs like ChemMatters, ChemClubs, and the ACS-Hach grants as well as learn about the free lesson plans, videos and other activities to use in your classroom.

LUNCH
A feature of each national meeting, the High School/College Interface Luncheon brings together educators from different levels with the goal of facilitating an exchange of ideas and networking between teachers. This activity is organized and sponsored by the ACS Division of Chemical Education (CHED) and ACS Education Division.

NOTE: Pre-college registrants should not purchase a ticket to the High School/College Interface Luncheon tickets for pre-college registrants to this event are generously provided by the ACS Division of Chemical Education.

AFTERNOON PROGRAM:

Through generations X,Y and Z – learning never ends
Jenelle L. Ball
Chico High School,
Chico, CA
Jenelle L. Ball is a recipient of the 2015 James Bryant Conant Award. She will share her very rewarding journey of passion and knowledge of chemistry and ways she has been growing with her students of twenty plus years.

ChemSource, the NGSS and the particle nature of matter. How to develop classroom-ready templates
Patricia Smith
The College of New Rochelle,
New Rochelle, NY
Mary Virginia Orna
Air Academy High School,
Colorado Springs, CO
Explore how to identify, adapt, and develop classroom-ready templates and lesson plans with the NGSS. The basic material will be selected from the ChemSource modules, Basic Chemical Reactions and the NGSS performance expectations for the high school levels.

Engaging Chemistry Resources from the Journal of Chemical Education and ChemEdX
Deanna Cullen
Whitehill High School,
Montague, MI
Find out about “ready to use” resources from the Journal of Chemical Education (JCE) and Chemical Education Exchange, www.ChemEdX.org. Modeling, Socratic Questioning techniques and Student Discourse will be highlighted in this presentation.

Think Safety = Work Safety
Elizabeth M. Hawson
Chatham High School (retired),
Morristown, NJ
There have been numerous accidents in the chemical community that could have had more positive outcomes if safety had played a greater role in demonstrations or experiments. Learn techniques that will make safety a way of life for you as a teacher/demonstrator.

How effective is lecturing in a high school chemistry class?
Diane M. Bunce
The Catholic University of America,
Washington, DC
Learn from the chemical education research how lecturing dovetails with the way human operators. Find out whether students pay attention throughout the entire lecture and how much they internalize it. Explore what alternatives are available for teaching.

Developing Inquiry Lesson Plans Using Content Reading Materials Aligned with Standards
Marta Gmurczyk
American Chemical Society,
Washington, DC
Sally B. Mitchell
East Syracuse Minoa High School,
East Syracuse, NY
Find out how you can advance science literacy through reading and writing about science in the classroom using magazine articles based on science behind every day life.
Updated as of February 24, 2015. Please refer to www.acs.org/denver2015 for an up-to-date shuttle map.

**HOURS OF OPERATION**

**SUNDAY, March 22**
- 7:00 AM - 10:00 AM .......... 15 minute service
- 10:00 AM - 4:00 PM .......... 30 minute service
- 4:00 PM - 7:00 PM .......... 15 minute service
- 7:00 PM - 11:00 PM .......... 30 minute service

**MONDAY, March 23**
- 7:00 AM - 10:00 AM .......... 15 minute service
- 10:00 AM - 4:00 PM .......... 30 minute service
- 4:00 PM - 11:00 PM .......... 15 minute service

**TUESDAY, March 24**
- 7:00 AM - 10:00 AM .......... 15 minute service
- 10:00 AM - 4:00 PM .......... 30 minute service
- 4:00 PM - 11:00 PM .......... 15 minute service

**WEDNESDAY, March 25**
- 7:00 AM - 11:00 PM .......... 30 minute service

**THURSDAY, March 26**
- 7:00 AM - 6:00 PM .......... 60 minute service

**MAP & HOTELS**

1. Courtyard by Marriott Denver Downtown
2. Crowne Plaza Denver Downtown
3. Embassy Suites Denver – Downtown Convention Center
4. Grand Hyatt Denver
5. Hampton Inn & Suites Denver Downtown – Convention Center
6. Hilton Garden Inn Denver Downtown
7. Homewood Suites Denver Downtown – Convention Center
8. Hotel Monaco Denver
9. Hyatt Regency Denver at Colorado Convention Center
10. Magnolia
11. Marriott City Center Denver
12. Renaissance Downtown Denver City Center
13. Residence Inn City Center
14. Sheraton Denver Downtown Hotel
15. The Curtis – a DoubleTree by Hilton
16. The Ritz Carlton
17. Westin Denver Downtown

**ROUTE**

1. Walk to Renaissance Downtown Denver
2. Walk to Colorado Convention Center

**BOARDING LOCATION**

Scan here to download a copy of the shuttle schedule.
250th ACS Meeting & Exposition, Boston, MA

Theme: Innovation from Discovery to Application
August 16-20, 2015

Meeting Co-Chairs:
Iona Black, James Madison University, Department of Chemistry, Harrisonburg, VA 22807; 540-568-6246; blackin@jmu.edu
Beatriz Rios-McKee, Southern Methodist University, Dallas, TX 75206; 214-768-2445; beatrizmckee@me.com

High School Program Chair:
Sally Mitchell, St. John’s School, Houston, TX; 713-850-0222 (202); rallen@sjs.org

CHED Program Chair:
Irvin J. Levy, Gordon College, 255 Grapevine Road, Wenham, MA 01984. Voice: 978-867-4877, irv.levy@gordon.edu

GSSPC Organizers:
Lindsay Johnson (joh10479@umn.edu) and others from University of Minnesota
“Academic Innovations for Tomorrow’s Industries”

Symposia List

Academic Innovations for Tomorrows Industries:
GSSPC Symposium-Oral-Invited, Oral, Lindsay Johnson

Active Learning in the Chemistry Classroom-Oral, Oral, David Katz

Careers for Young Professionals in Green Chemistry:
Breaking Bad Chemistry Habits-Oral-Invited, Oral, Raymond Borg, Anna Ivanova, Wasiu Lawal

Chemistry Education Research-Oral, Oral, Gautam Bhattacharyya, Tom Greenbowe

Citizens First! Using Real-World Contexts for Engaging Students in Learning Chemistry-Oral, Oral, Patrick Daubenmire, Catherine Middlecamp

Education for Sustainable Development and Innovative Technologies Across Culture-Oral, Oral, Resa Kelly

From Discovery to Application: Implementing the Last 50 Years of Innovation into the UndergraduateChemistry Classroom-Oral, Oral, Anil Banerjee

General Papers-Oral, Oral, Steven Fleming

General Posters-Poster, Poster, Irvin Levy

High School Program-Oral-Invited, Oral, Sally Mitchell

Incorporating Green Chemistry Innovations and Applications into the Classroom and Outreach-Oral, Oral, Edward Brush, Jane Wissinger

Polymer Concepts in Inorganic Chemistry Courses-Oral, Oral, Warren Ford

Process-Oriented Guided Inquiry Learning (POGIL)-Oral, Oral, Richard Moog

Promoting Engaged Student Learning Through the ACS CPT Guidelines-Oral, Oral, Cynthia Larive, Thomas Wenzel

Successful Student Chapters, Poster, Nicole Di Fabio

Teaching Organic Chemistry for Biology Majors-Oral, Oral, Ron Swisher

Toxicology and Environmental Impact in the Chemistry Curriculum: Science and Strategies for Educators, Oral, Amy Cannon, John Warner

Undergraduate Research Papers-Oral, Oral, Carmen Gauthier, Nicole Snyder

Undergraduate Research Posters: Agricultural and Food Chemistry-Poster, Poster, Nicole Di Fabio

Undergraduate Research Posters: Analytical Chemistry-Poster, Poster, Nicole Di Fabio

Undergraduate Research Posters: Biochemistry-Poster, Poster, Nicole Di Fabio

Undergraduate Research Posters: Biotechnology-Poster, Poster, Nicole Di Fabio

Undergraduate Research Posters: Chemical Education-Poster, Poster, Nicole Di Fabio

Undergraduate Research Posters: Computational Chemistry-Poster, Poster, Nicole Di Fabio

IMPORTANT DATES
Attendee Registration and Housing will open May 2015


Abstract deadline: March 30, 2015
Undergraduate Research Posters: Environmental Chemistry-Poster, Poster, Nicole Di Fabio

Undergraduate Research Posters: Geochemistry-Poster, Poster, Nicole Di Fabio

Undergraduate Research Posters: Green Chemistry & Sustainability-Poster, Poster, Nicole Di Fabio

Undergraduate Research Posters: Inorganic Chemistry-Poster, Poster, Nicole Di Fabio

Undergraduate Research Posters: Medicinal Chemistry-Poster, Poster, Nicole Di Fabio

Undergraduate Research Posters: Nanochemistry-Poster, Poster, Nicole Di Fabio

Undergraduate Research Posters: Organic Chemistry-Poster, Poster, Nicole Di Fabio

Undergraduate Research Posters: Physical Chemistry-Poster, Poster, Nicole Di Fabio

Undergraduate Research Posters: Polymer Chemistry, Poster, Nicole Di Fabio

Undergraduate Research: Applicable Science to Encourage STEM Education-Oral, Oral, Deborah Rosenthal

Future ACS National Meetings

<table>
<thead>
<tr>
<th>Meeting</th>
<th>Location</th>
<th>Dates</th>
<th>Theme</th>
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<tr>
<td>250th ACS National Meeting &amp; Exposition</td>
<td>Boston, Massachusetts</td>
<td>August 16-20, 2015</td>
<td>Program Theme: A History of Innovation: From Discovery to Application</td>
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<tr>
<td>251st ACS National Meeting &amp; Exposition</td>
<td>San Diego, California</td>
<td>March 13-17, 2016</td>
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<tr>
<td>253rd ACS National Meeting &amp; Exposition</td>
<td>San Francisco, California</td>
<td>April 2-6, 2017</td>
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2015 Regional ACS Meetings

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<tr>
<th>Meeting</th>
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<tr>
<td>CERM/GLRM</td>
<td>Grand Rapids, MI</td>
<td>May 27-30, 2015</td>
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<tr>
<td>NERM</td>
<td>Ithaca, NY</td>
<td>June 10-13, 2015</td>
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<td>NORM</td>
<td>Pocatello, ID</td>
<td>June 21-24, 2015</td>
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<tr>
<td>MWRM</td>
<td>St. Joseph, MO</td>
<td>October 21-24, 2015</td>
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<tr>
<td>SERMACS/SWRM</td>
<td>Memphis, TN</td>
<td>November 4-7, 2015</td>
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<tr>
<td>WRM</td>
<td>San Marcos, CA</td>
<td>November 6-8, 2015</td>
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ConfChem Online Conference: Interactive Visualizations for Chemistry Teaching and Learning

http://confchem.ccce.divched.org/2015SpringConfChem

May & June, 2015

Visualizations in chemistry education – animations and simulations – provide powerful resources to support students’ conceptual understanding, as well as the representational fluency needed to envision the particulate level world, communicate through chemical symbols, and make connections to the observable world. Advances in technology and access to technology in classrooms have allowed for increasingly interactive visualizations to emerge. With the rise of the tablet, putting interactive visualizations in the hands of students creates tremendous opportunities for engagement with pedagogically rich interactions and interfaces as well as challenges for visualization design and understanding of student learning.

For this virtual conference, we seek submissions focused on the following components of research into educational interactive visualizations for chemistry:

- Design. What challenges have been faced when designing interactive visualizations, and what has been learned so far? What are emerging design principles that meet the needs of teachers and students of chemistry?
- Visualizations? What research methodologies and assessment techniques provide insight into student learning with visualizations?

Tentative List of Papers

1. Learning by Being: Playing Particles in the MeParticle-WeMatter Simulation, Elon Langbeheim, and Sharona T. Levy
3. Insights into How Students Learn About a Weak Acid and a Strong Acid from Cartoon Tutorials Featuring Molecular Animations, Resa M. Kelly
5. The Cutting Edge: Educational Innovation, Disability Law, and Civil Rights, Paul Grossman, and adapted by Emily B. Moore*
6. Technological Challenges to Equal Access of the Virtual Laboratory Experience for the Blind, Cary A. Supalo
7. Designing Accessible Interactive Chemistry Simulations, Emily B. Moore*

Anyone interested in submitting a paper should contact Emily Moore at the University of Colorado, emily.moore@colorado.edu.

Relevant Dates:
March 15, 2015 Full papers due
May 8, 2015 Conference starts

Biennial Conference on Chemical Education 2016

July 31 - August 4, 2016 | University of Northern Colorado | www.bcce2016.org

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<td>Call for Abstracts deadline</td>
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<td>Call for Abstracts begins</td>
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News from the Exams Institute,
Thomas Holme [taholme@iastate.edu]

This entry for the DivCHED Newsletter marks my final contribution as Director of the Exams Institute. I have enjoyed nearly 13 years of serving in this role and it has provided more great colleagues and interesting challenges than I could begin to enumerate. What’s best is that The Institute keeps chugging along and there’s every reason to expect that my successor will have many new and exciting things to talk about in this space over the next several years.

At present, we have several of our traditional new products appearing and available to users. The 2015 General Chemistry exam, created by a committee chaired by Laura Eisen of George Washington University has completed its work and the new test is at the printer – ready to be used for the “finals season” this year. The Physical Chemistry Exam Suite has also been finished up. While the Thermodynamics and Quantum exams were released in 2013, the Comprehensive exam (which includes Thermo, Quantum and Kinetics) has been released in addition to the “Modular” exam, which allows users to mix and match sections of items based on how they divide up the content in their course. The Modular exam includes item-blocks for Thermodynamics (40 items); Quantum (40 items); Classical Kinetics (20 items); Dynamics (10 items) and Statistical Mechanics (10 items). That’s a lot of work put into the new suite of exams, and the leadership provided by Alex Grushow of Rider University made for smooth sailing despite the demands of a large and complex set of exams. Another new exam not yet out, but due by this summer is the new General Chemistry Conceptual Exam, co-chaired by Tom Greenbowe of the University of Oregon and Jamie Schneider of the University of Wisconsin – River Falls. As was true for the 2008 version of this exam, it is being designed to be useful as either a pair of one-semester exams or a full year exam.

This spring, we’ll be trial testing two new exams for High School chemistry. The first one is the revision of the traditional, first year course chemistry. Lauri McDonald of Highland Park High School is the chair of this committee. The other exam is a new one, a High School Conceptual Exam, that is designed to mirror the General Chemistry Conceptual exam. Laura Slocum of Heathwood Hall Episcopal School is the chair of this new committee. If you are a high school chemistry teacher and are interested in participating in the trial testing of either of these exams, please contact us at chmexams@iastate.edu. Another new exam is also in trial testing this spring. While The Institute has long prepared an exam for the senior-level, pchem prerequisite Inorganic Course, this year marks our first attempt to prepare an exam for the sophomore-level Inorganic Exam that has become increasingly common at US colleges and universities. This exam is also hoping to find more trial testing locations, so please drop us a line if you can help with this stage of the development.

Our on-line exam capacity, built on the Meteor platform developed by the Center for Educational Software Development at UMass-Amherst is ready to go. Julie Adams is the Assistant Director for On-line Resources and she’s ready to help anybody who is interested in learning more about this new testing means. There are extra steps required because of the security needs of ACS Exams, so we cannot make on-line tests available immediately when they are ordered. We must work with IT personnel from your school to make sure there are no unusual browser dependencies that emerge and to establish security protocols for the machines that will be used in the testing. If you are interested in obtaining more information about the logistics of on-line testing, feel free to contact Julie at examsinstitute@gmail.com

Finally, in addition to these incrementally oriented advancements for Exams Institute products, we are also continuing our research and development efforts for completely new tools. One fascinating example is a system that uses machine-learning matching capacity to take a user entered test question and present likely matches of the content of that question with the Anchoring Concept Content Map we have been developing. Once the user confirms one of the proposed matches (or finds a better match themselves) we can provide basic statistical information about the range of student performances on ACS Exam items in the same topic over the past 20 years. We will be offering workshops at the Sheraton on Sunday, March 22, at the ACS National Meeting in Denver. If you would like to learn more about the capacities of this new system and provide us with further feedback on the user interface, we’d be delighted to hear from you and encourage your participation. Again, you can reach us at chmexams@iastate.edu to sign up!

So, to close this entry, please allow me to express my thanks to the Chemistry Education community for all of the many things you do that help the Exams Institute accomplish the things we do. When I describe the level of participation we enjoy to colleagues in other STEM fields they are astounded by the efforts. I am grateful I have been afforded the opportunity to work with so many great colleagues. Thank you for helping make the Exams Institute an institution that is both unique and invaluable to chemistry educators. I am moving on to take on new challenges outside of the US. I am looking forward to the adventure, but I know I will never again have the enviable position of being able to count on so many who give so freely of their time and effort. It’s been a great time, and I look forward to crossing paths with friends and colleagues, often, in the future.
# ACS DivCHED Examinations and Related Materials for 2015

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<th>STOCK CODE</th>
<th>DESCRIPTION</th>
<th>ITEMS</th>
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<td>General Chemistry–2015</td>
<td>70</td>
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<tr>
<td>GC15C</td>
<td>General Chemistry (Conceptual)–2015</td>
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<tr>
<td>GC14B</td>
<td>General Chemistry–2014 (brief)</td>
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<td>GC10B</td>
<td>General Chemistry–2010 (brief)</td>
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<td>General Chemistry (First–Term)–2012</td>
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<td>General Chemistry (First–Term)–2009</td>
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<td>General Chemistry (Second–Term)–2014</td>
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<td>General Chemistry (2nd–Term) Paired Question</td>
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<td>General–Organic–Biochemistry–2007</td>
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<td>Analytical Chemistry–2007</td>
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<td>IA09</td>
<td>Instrumental Methods–2009</td>
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<td>TP98</td>
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<td>Polymer Chemistry–1990</td>
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<td>ACS ChemCom Curriculum–1998</td>
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<td>ACS ChemCom Curriculum–1991</td>
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* Var means variable times are allowed depending on how many groups of items are used in a test.

Use Test Stock Code followed by /S to order scoring stencils; e.g. GC15/S specifies scoring stencils to accompany the GC09 exam.

## Study Guides
- **GC0G**: Preparing for Your ACS Examination in General Chemistry–The Official Guide (1995) — 110 pages
- **PH0G**: Preparing for Your ACS Examination in Physical Chemistry–The Official Guide (2010) — 120 pages

## Laboratory Assessment Materials
Lab assessment exam for General Chemistry is available using user specified modules as an on-line test only.
News from the Board of Publication, Chris Bauer, Chair [chris.bauer@unh.edu]

Chris Bauer was re-elected chair of the Board and David Licata was re-appointed as Treasurer.

The Board and Journal have been engaging in planning for the future. After the summer 2014 Strategic Planning meeting, a number of near and long term issues were identified along with action items. The Board and Journal have begun working on some of those. In particular, a Board subcommittee is working on developing an RFP and process for finding the next Editor. This seems sudden given that we just renewed the contract of our current fine Editor until August 2019, but he has assured us that he doesn't have a third term in him. When the timeline is laid out, it becomes clear that the RFP will have to be issued sooner rather than later. This will thus increasingly begin to occupy the Board’s attention.

The Board made a commitment to push forward with ChemEdXchange, asking Jon Holmes, the JCE Managing Editor to put together a business model proposal to consider at the Denver Board meeting. This action also is a harbinger that Jon will not continue an infinite commitment to the Journal, and we must be thinking of a transition for his position as well. So, what ChemEdExchange becomes – a branch of the Journal or an independent entity of its own – is going to be part of the discussion.

Our Editor Norb Pienta and Board member Pratibha Varma-Nelson, along with some other colleagues visited India recently. This trip initiates the Board’s interest in exploring how to engage the Journal with a broader international community for both authorship and subscription. We are looking forward to their insights about opportunities for the Journal and the Division.

Respectfully submitted, Chris Bauer, BoP Chair, January 2015.

DivCHED Publications

Division Members are involved in a wide variety of activities that lead to publications in the area of chemical education.

The Journal of Chemical Education is the main publication outlet for the division.

DivCHED is also responsible for the publication of the ACS Exams via the Examinations Institute.

Other journals in which Members publish scholarly articles include:
- The Chemical Educator
- Education in Chemistry
- Science Education
- Journal of Research in Science Teaching
- International Journal of Science Education
- Journal of College Science Teaching
- The Science Teacher
- ChemMatters
- Chemistry Education Research and Practice
EXECUTIVE COMMITTEE MEETING MINUTES, FALL 2014 (Open Session)
DIVISION OF CHEMICAL EDUCATION, INC.
Saturday, August 9, 2014
Moscone Convention Center, North Building, San Francisco, CA

Chair Wink called the open session to order at 1:41PM.


Key: M = Motion made, S= Seconded, P= Passed or D=Defeated

{14E-19} M/S/P  Kelly/Reeves/Unanimous
To approve the meeting agenda and consent agenda reports and accept them as a record for the Division.

{14E-20} M/S/P  Cole/Cooper/ Unanimous (1 Abstention – Kelly)
To approve the minutes of the Spring 2014 ExComm Open Session minutes.

Chair Wink reminded members that there would be no Fall Business Meeting.

Chair’s Announcements (D. Wink) – Wink reported on Division progress, he specifically acknowledged efforts to bring forth new members to committees. He reported on the work of the Long Range Planning Committee (LRPC) under the leadership of Ingrid Montes that constructed a survey based on work done formerly by the Strategic Planning Committee. The surveys were completed by DivCHED Committee chairs. The goal was to determine ways to serve the members better.

Wink announced the Division reception and shared that they would commemorate the 25th anniversary of the death of George Pimental. Pimental’s legacy in Chemistry and Chemistry Education was to be recognized and his wife Jean would be in attendance.

Introductions were made.

Past Chair’s announcements (F. Torre) – Torre announced that this was his last ExComm meeting as Past Chair and he thanked the members, and especially, Arlene Russell, George Bodner, Don Wink, Marcy Towns, Resa Kelly, Heather Johnson and Tom Holme.

(applause)

Chair Elect’s announcements (M. Towns) – Towns shared her enthusiasm to serve as Chair of the Division.

Secretary’s Announcements (R. Kelly) – Kelly reminded members of the upcoming 2014 Fall election and the candidates running for office.
Chair-Elect: Julie Smist and Tom Greenbowe
Treasurer: Anna Wilson and Alex Grushow
Councilor and Alternate Councilor: Jeff Hepburn, Cinzia Muzzi, Ellen Yezierski, and Laura Slocum

The election would be run electronically using provider Vote-Now.

ACS Fellows Announced - Kelly announced the 12 DivCHED members that were named 2014 ACS Fellows: Paul Anastas, Mitchell Bruce, Arlene Garrison, Karen Grant, Larry Krannich, Nancy Levinger, Loretta Jones, Ron Perkins, Arlene Russell, Laura Slocum, Linette Watkins, Donald Wink.

(Applause)

Australia ACS International Chapter – Towns introduced Dr. Elizabeth Yuriev who was present to build relationships with the ACS. Dr. Yuriev reported that a group of Australian ACS members were forming a Chapter. They hoped to build relationships between Divisions, Society to Society and to ACS Members’ Chapter. Their national congress meeting in December has the potential to allow formalization of these relationships. Wink introduced IAC Chair Carmen Gauthier to Dr. Yuriev.
IUPAC – Definition of the Mole (M. Towns)
Towns reported on the history of SI base units. She relayed that there was a current proposal to separate the mole from how we defined mass. The mole would be redefined as a specific number of entities. She shared that the Committee on Chemical Education inside IUPAC wanted input from the chemistry education community. Specifically they wanted to know if we redefined the mole, what impact would that have? The project was designed to produce a technical report for release in March of 2015. Members were encouraged to contact Marcy Towns if they were interested in discussing the impact of redefining the mole.

Nomination of Division Members to become ACS Fellows – Guidelines and Procedures (D. Wink)
Wink reviewed that there were three routes that could be taken to nominate a member to become an ACS fellow. 1) Individual nomination, nomination by an ACS Standing Committee (only 1 nomination per committee per year) and nomination by a Local Section or by a Division (group can nominate as many individuals as there are councilors, thus DivCHED could nominate 4 members). Wink conveyed the logistics of nominating Division members sharing that it required extensive documentation of a person's background, a nominating letter and two supporting letters. The goal was to cite the policy that would be used in order for the Division to support the nomination of an individual for ACS fellow so that preparation be done far in advance of the spring deadline.

Discussion:
• Russell recommended that the procedures not be limited to nominations for only Fellows but for many other awards. She recommended a task force be charged to examine all of the awards for consideration.
• Towns reminded members that they could make individual nominations. She encouraged everyone to be cognizant of the nomination criteria.
• Wink discussed the Award for Achievement in Research for the Teaching and Learning of Chemistry and Practice and stressed the importance of making nominations
• P. Varma-Nelson asked whether ACS differentiated among nominations made by individuals and nominations made by Divisions? Cooper responded that the process by which ACS chooses the nominees was unclear.
• Russell recommended nominating teachers that had earned Division accolades.
• C. Frech reported her understanding of ACS Fellow appointment criteria. It involved service to ACS and to the profession.
• C. Middlecamp shared her experience being on the selection committee for ACS fellows. She agreed with Frech’s report of criteria for selection. She discussed the grading process.
• E. Yezierski shared that the source of the nomination had nothing to do with who was appointed as Fellows.

Fiduciary matters of the Boards (C. Bauer)
Bauer reported that BoP decided to hire bookkeeping services from an accounting firm to handle routine business and financial tasks. Historically, many of these things were done by the Journal’s managing editor with the assistance of the treasurer. Essentially, it was decided that this was not in the long-term interest of the Journal. The Board made a commitment to pursue professional financial services at least for one year to handle routine business tasks of the Board.

Discussion:
• In the audit report conducted by the Board, it was specifically recommended to segregate our duties in a more financially appropriate fashion. (D. Licata)
• Wilson expressed that she did not know how much that would affect the Division. She noted that the Division received income from dues, and operating funds, and she estimated that the cost for both the executive assistant and a bookkeeper would likely be $100K per year.
• BoP will invest about $6,000 to hire their bookkeeper. (J. Holmes)

Consideration of a Central location for Divisional Operations  –(C. Bauer)
Bauer shared that a concern of the Board was - What is the future of the physical operations of the Journal? Might it be possible to have a central storefront location for the physical aspects of the Division that could include The Examinations Institute, the Journal or other things? (No discussion followed)
Program Committee Report (I. Levy)

Levy reported an error in his consent agenda report (this was corrected).

- Cathy Middlecamp – thanked Irv Levy for his work and the placement of the DivCHED symposia at the Moscone Conference Center.
- Middlecamp highlighted an International Student Summit on Global Climate Change (K. Peterman) linking students Internationally using the GoTo meeting platform and announced Sustain-Mix (I. Levy)
- This meeting was large – there were 320 oral presentations.
- The end of PACS (applause) as it was being replaced with Meeting Abstracts Programming System (MAPS) – Abstracts for the Denver meeting due between Aug. 25th and Nov. 3rd.
- Shared success of undergraduate oral symposia, and updated on limitations for Denver.
  - J. Reeves asked about the significant cost at having symposia filmed – do we know how much these are actually viewed? Levy shared how the cost was assigned for this particular meeting, but he did not provide information on viewing statistics.

A 10-minute break was taken at 2:54 PM.

Committee on Personnel and Nominations (C. Muzzi)

Muzzi announced who the newly appointed Board members were for 2015.
BoT – Alex Grushow and Tom José; BoP – Chris Bauer and Ellen Yezierski

She shared changes to the nomination process that were made (such as how people were contacted, the timing of thank you notes) and changes to the information required for nominations (such as websites and documentation of candidates’ service to the Division and the Society, as well as their academic institution).

- Muzzi reported on Board recruitment. The Board of Trustees has a leadership development program and the Board of Publication has associate members. Muzzi shared how she gathered candidate nominations from the Boards. She questioned whether CPN should continue to bring in outside people when the Boards have these recruitment programs. Muzzi requested that the Boards work with ExComm and CPN to develop a plan for bringing forth nominees.
- Muzzi requested that the Board Chairs provide an overview of their current members to CPN.
- Muzzi reported that the online nomination form was getting more activity. More members were using the form to express their desire to get involved in service to the Division. The form needed to be modified to gain more useful background information (such as the candidate’s experience). Muzzi wanted to know if she had permission to modify the form or did ExComm need to be involved in the process?

Discussion:

Wink stated that the next step for CPN would be the slating of candidates for Division offices and for the councilor positions in the spring. Wink recommended CPN to revise the online self-nomination form and present it at the Denver meeting.

- BoT Chair Lowery-Bretz shared that they had only carried out the leadership development program (LDP) once. They invited two people to come to one Board meeting. The criteria for those people to be invited were that they had successfully served as an Exam committee chair or they had been on a committee for two years. BoT did not provide any training to them. They were issued an invitation and their travel costs were paid. The program allowed candidates to make an informed decision about their involvement. Lowery-Bretz shared that they sent the candidate an agenda complete with documents that would be discussed at the meeting and they answered any questions raised. They had the candidate leave during closed sessions. There was no training or follow-up. Lowery-Bretz then shared the reason behind why they developed the LDP – to better inform potential members.
- Muzzi stated that it was important for the Boards to know that in the CPN vetting process candidates recommended by the Boards may not be selected. Lowery-Bretz acknowledged that this was understood.

BoP Chair Bauer shared that they had created their associates program to mentor people and inform them of BoP work, but they were still trying to create a structure that might benefit the Division as a whole.

P. Varma-Nelson asked if the Boards informed ExComm of their decision to create these kinds of leadership training. Lowery-Bretz stated that multiple announcements were made.
Wink recognized the work of C. Muzzi and M. Towns for their work on CPN. (applause)

Muzzi sought clarification on term limits for committee members. She asked if a break of one year was taken after a person completed three consecutive terms could they go back onto a committee. Wink confirmed that after a break the member could return for a new set of terms.

**Treasurer’s Report – (A. Wilson)**

Wilson asked the Committee to vote on the proposed budget for 2015. Wilson reviewed the spreadsheet with the committee, and announced that she had a detailed financial report in Dropbox that she would be willing to share with anyone on the Executive Committee. She reported that investments were doing okay. Questions related to line items about royalties, IUPAC funding, and BCCE finances were raised and addressed.

**Board of Trustees (S. Lowery-Bretz)**

Tom Holme announced that he had been presented with a professional opportunity and he would be stepping down from his position as Director of the Examinations Institute in July 2015. Lowery Bretz shared that as a result of this news, they were working to develop an RFP and appoint a search committee. The search committee would develop the text for constructing an advertisement very quickly. Next, Lowery Bretz reported that BoT’s investment portfolio continued to do well. The total assets of the Examinations Institute were approximately 2.2 million. She reported on legality issues with study guides. They pledged to continue supporting receptions of the Division and assisting with the funding of travel awards. An exam for each college chemistry course was now available for online testing. She reported on professional copies and online exams that were available. They were formalizing a Ted Ashford fellowship, which would be made available for sabbatical services. Lowery Bretz also shared that this was her last meeting as chair of the Board of Trustees.

**Biennial Conference on Chemical Education** – no one was present to provide a report on the BCCE. Wink stated there was work being done on the governance structure.

**ACS Education Division Highlights – (K. McCune)**

McCune thanked the Division and SOCED for bringing the American Association of Chemistry Teachers (AACT) from vision to reality. On August 4th, the AACT website was launched. There were 115 teacher members, 34 affiliate members and 2 international members that had joined the AACT. The dues for joining were reported as $50 for teachers, $25 for pre-service teachers (students). The benefits of joining were shared. McCune reported that there was a new elementary school website at www.acs.org/kids.

Levy asked if there were plans to market AACT to undergraduates interested in teaching careers, and McCune confirmed that there were plans to reach these students.

N. Bakowski reported that their graduate student and postdoctoral office conducted a survey of graduate students and a report was generated. The report was available online. For undergraduates, a college to career website was launched. It was a compilation of work from all of the Divisions providing information on different kinds of careers students could do with a chemistry degree. She also reported on international student chapters. Yezierski asked that they consider adding Chemical Education as one of the career spots on the website. Bakowski said that they would look into this.

**Recognition Committee – (A. Wilson)**

Recognition of Service to the Division was awarded to Bill Robinson. An apple would be presented to him. (applause)

In closing, Chair Wink stated, “Be it resolved that the Division of Chemical Education recognizes with gratitude the service of Frank Torres as a member of the Chair Succession. It added to his many years of Service to the Division including his work as Program Chair. We wish him well in his future work and hope that we can rely on him for further service.” (applause)

The open session was adjourned at 4:11PM
Nomination Form for CHED Committees & Elected Positions

Below are listed the various committees or elected positions of the CHED Division. If you are interested in serving, or if you know of division members who are willing to become involved please fill out this form. For more information, please visit the Division of Chemical Education website at <www.acs.org> or contact the individuals listed below.

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Chemistry Education Research Committee (CER)
Chemistry in the Two Year College (COCTYC)
Computers in Chemical Education (CCCE)
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High School Chemistry (HSCC)
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New Member (NMC)
Passer Portfolio (PPC)
Personnel & Nominations (CPN)
Program (PC)
Recognition (RC)
Regional Meetings (RMC)
Younger Chemistry Education Scholars (YCES)

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Treasurer
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Division of Chemical Education Teaching Excellence Endowment

Why are you a chemist? Many of us would agree with Eli Pearce, Past President of the American Chemical Society (ACS), when he said “my excellent high school teacher was definitely responsible for my choosing chemistry as a career.” And now you can join the effort to ensure that the great teachers who launch so many scientific careers are recognized and rewarded by their professional society!

The ACS Division of Chemical Education has stepped forward to establish an endowment that will support awards for high school science teachers in every Region of the ACS. By establishing an effort to solicit funds for the Division of Chemical Education Teaching Excellence Endowment, the Division is making a firm financial commitment to high school science teaching, ACS Regions, and the profession of chemistry. But the project will not be successful without your help.

Our goal is not just a financial one; we are anxious to assemble a lengthy list of donors containing names, of both individuals and collective entities, that will demonstrate to the secondary education community that there is a large number of science professionals who appreciate the value of good science teaching in the Nation's high schools and who are willing to reward it.

Join other individuals and organizations that have already contributed to the. Most of all join what will be thousands of people who know, without that special teacher, their future would look very different.
I want to help ensure that our great teachers are recognized and rewarded!

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Thank you for your contribution. All gifts of $250 or more will be acknowledged in writing. Acknowledgment will be sent to others upon request.
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_____ as an Affiliate, $20/year (for non-ACS members).

Affiliates have all membership privileges except voting for
CHED Councilors and holding elective office.

New members will receive information about CHED in general and about its major activities such as the
Exams Institute, the Journal of Chemical Education/JCE Software/JCE Online, and 2YC3.

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