Dear Illinois-Heartland Section Members:

2014 was the Illinois Heartland Local Section’s 75th Anniversary. It remains an active and diverse organization with many facets. The original Peoria Section consisted of 20 counties in 1939, but in 1950, 6 counties in the southwest part of the Section decided to associate with the Canton (MO) Section. In 1951, three more counties along the Mississippi River followed suit, while Jersey County associated with the St. Louis Section. McLean County was added to the section in 1976. Even with just 11 counties, we are a large Section geographically, forming a triangle defined by vertices at Galesburg and Normal on the North and connecting to Jacksonville to the south. In 2004, efforts by Vicky Finkenstadt and Marge Jones effected a name change to the Illinois Heartland Local Section.

The anniversary was celebrated with two events. We appreciate the assistance of Mark Berhow (NCAUR) who helped organize both events. On Saturday October 4th, a Poster Session and Gala Dinner were held in the Peoria Riverfront Museum.
Twenty-one posters were on display and the presenters and dinner guests were free to wander the museum from 4 to 6 pm. An excellent dinner was catered by Cracked Pepper. The after-dinner speaker, Dr. Steven W. Peterson of the National Center for Agricultural Utilization Research gave a well-documented and authoritative talk about the development of large-scale penicillin production, an effort centered in the Northern Regional Research Laboratory (aka Center) of the USDA (as it was known at that time) and made urgent due to World War II. Without a doubt, that accomplishment ranks as the most significant scientific advance to take place in the Section.

Two weeks later the Section, in partnership with NCAUR, hosted “Science Rocks!”, a family science event at the Peoria Riverfront Museum. 10 stations spanning a range of Chemical and Biochemical phenomena provided participatory activities for the young folks and young-at-heart adults who came to learn and enjoy. Several hundred individuals took advantage of the opportunity to learn about “Chemistry in the Illinois Heartland”. This activity ties in to the very prominent role of chemistry outreach that characterizes our section. Many of our members and all five of our collegiate Chemistry Clubs (Bradley Univ, Illinois College, Illinois State Univ, Illinois Wesleyan Univ and Knox College) have active outreach programs, which contribute to their local communities.

Our annual Awards Banquet was held on a snowy night in February at the Peoria Riverfront Gateway. The program recognized collegiate scholars from our two colleges and three universities that offer bachelor degrees in chemistry and biochemistry. These scholars are seniors, who typically have outstanding academic records and substantial research experience and plan to further their education in chemistry or closely related disciplines. The 2014 Chemist of the Year Awardee was Prof. Dean Campbell of Bradley University. He is an inorganic chemist interested in material Science and a passionate chemical educator. The two areas come together through his interest in nanochemistry. He is an advisor to the Bradley Demo Crew, which soon after the CoY Award, recorded its 10,000th spectator. The Crew is well-known in Peoria and throughout the Section for its exciting and often explosive presentations and has brought renown to Bradley University, The Local Section and Dr. Campbell. Two chemists in the section reached their 50 year marks as ACS members during 2014, Charles David Rowe, presently a Normal resident, and Prof. Robert Gayhart of Bradley University.

The Climate Science Outreach Team was very active in its first full year. Two teachers’ workshops in Illinois and one in Wisconsin were the major events. The ACS Climate Science Toolkit was an important feature, but each workshop also had a biologist addressing the impact of climate change on the flora and fauna of the earth, a climatologist or meteorologist participating, and several chemists. Each session has been a wonderful exchange of ideas among the participants. The demonstrations for classroom and outreach were hands-on experiences for the teachers, and they were able to take home kits of demo supplies and two DVDs. One focused entirely on Climate Science, and the second was the ACS Resources Diskette prepared for the teachers coming to the Combined Illinois Local Sections ACS Tent at the State Fair. The Cli-Sci Team members had a presence at the IL State Fair, Peoria County Heart of Illinois Fair, Grundy County Earth Expo, and a wide variety of other youth programs and sustainability fairs. Our team consists of Brent Chandler (IC), Barbara Gottemoller (Mt. Zion High School), Lena Yurs (ICC), Michael Byrns (ISU), James Webb (ISU emeritus), Shilpa Pohani (ISU) and yours truly (ISU). We welcome others to join in our efforts, and would also call your attention to our Speakers Bureau (Chandler, Byrns, Yurs & Shaw) who are available without charge for presentations to formal classes (K-12
& University), civic, religious, youth and elder organizations. See our website on the local section website.

Our Young Chemists Committee, chaired by Victoria Nguyen, has run three very successful events. The Chemists Celebrate Earth Day (CCED) and The National Chemistry Week (NCW) Poetry and Picture Contests solicit entries from all levels of school children. The skills revealed in the pictures and poems are really impressive. The YCC solicits judges to help evaluate the entries, and 1st, 2nd and 3rd place prizes are awarded. The first prizes are forwarded to the National Level competition. The judging is a very enjoyable activity and I would encourage Section members to participate when the call goes out.

Members can also contribute by forwarding information to teachers in your area (your children and grandchildren’s teachers, neighborhood schools, etc.). The YCC also initiated a new event for our collegiate Chemistry Clubs, The Battle of the Chemistry Clubs, which challenges club members on practical and conceptual chemistry skills. It was a rousing success for the three participating clubs and will be repeated this Spring.

We are indebted to Catherine McDonald who was the chief organizer of the High School Chemistry Contest this year. 230 first-year students and 52 second-year students, from fourteen schools competed and were accompanied by 22 teachers. The teachers were offered a climate science mini-workshop while the students were actually taking the test, and a number of additional activities enriched the day’s experience for the students. The Section is appreciative of all the folks who assisted with the program. It has been a great pleasure for me to work with three evolving Executive Committees, as I have moved from Chairman-elect, through the Chairmanship in 2014 and now the Immediate-past-Chairmanship. The 2014 EXEC included, Brent Chandler, treasurer; Brian Brennan, secretary; Dean Campbell, chairman-elect, Derek Bemke, immediate-past-chair, Councilor Greg Ferrence and Alternate Councilor Kurt Field. Our periodic meetings in Tremont (which shortened Brent’s long commute to Section events) were pleasant, thoughtful events that lead to consensus on various issues we dealt with. I truly appreciate their congenial contributions to the governance and activities of the section last year. This year we reconnected the student poster session with the Awards Ceremony and moved it later to the spring to combine these end of the year events.

As the Section moves forward, we would like to engage our membership in our meetings, outreach activities and networking. This year (2015) we have added a several monthly talks by industrial chemists in the section. There are a number non-elected positions for which we would like to have volunteers, especially a web-master, more active members on the Young Chemists Committee (up to age 35), members to initiate a new Senior Chemists Committee (55 & over), a publicity chairperson, perhaps fund-raisers who could help to organize donations from local industry for some of our events and outreach activities, a social committee to resurrect the annual picnic tradition which has fallen by the wayside. If you have other ideas for the Section, contact a member of the EXEC Committee and let them get you started!

Sincerely,
Dr. Frank Shaw
2014 Illinois-Heartland Section Chair
The Illinois Heartland Section of the American Chemical Society recognizes our:

**2014 Chemist of the Year:**
Dr. Victoria Finkenstat
National Center for Agricultural Utilization Research

**2014 Collegiate Scholars:**
Sarah Keshwani (Bradley), Carl Meunier (Bradley)
Leah Stateman (ISU), Laura Steenberge (IWU)
Michael Supej (Knox), Christian Zwick (ISU)

**2015 Volunteer of the Year:**
Dr. Frank Shaw (ISU)

Congratulations, and thanks for all of your excellent work!
2014 National Chemistry Week Illustrated Poetry Contest
IL Heartland Local ACS Section Winners

9th-12th Grade:

1st Place: Alyssa Licudine
           Normal Community High School
           Teacher: Jeff Christopherson

2nd Place: Michael Uretzky
           Dunlap High School
           Teacher: Beth Brown

3rd Place: Lara Jensen
           Dunlap High School
           Teacher: Beth Brown

6th – 8th Grade:

1st Place: Anaghasri Arla
           Chiddix Junior High School
           Teacher: Ann Spence

3rd-5th Grade:

1st Place: Anagha Rao
           Benjamin Elementary School
           Teacher: Dawn Goldman

2nd Place: D. Vinny Reinecke
           Hollis Grade School
           Teacher: Beth Perry

3rd Place: Joe Zeman
           Benjamin Elementary School
           Teacher: Dawn Goldman

K-2nd Grade:

1st Place: Michael Price
           Argenta-Oreana Elementary School
           Teacher: Cheryl England

2nd Place: Megha Vijayakuman
           Argenta-Oreana Elementary School
           Teacher: Cheryl England

3rd Place: Phoenix Walters
           Argenta-Oreana Elementary School
           Teacher: Cheryl England

Judges: Greg Cote, Bruce Dien, Marjorie Jones, Susan McCormick, Victoria Nguyen and Frank Shaw
9th-12th Grade:
1st Place: Alyssa Licudine
Normal Community High School
Teacher: Jeff Christopherson

K-2nd Grade:
1st Place: Michael Price
Argenta-Oreana Elementary School
Teacher: Cheryl England
6th – 8th Grade:
1st Place: Anaghasri Arla
Chiddix Junior High School
Teacher: Ann Spence

The Truth About Candy
Sweet as candy can be
The science it takes
Hard as it can be
Might be eating glass
Sour as it can be
Citric acid you might love
Chewy as it can be
Seaweed you taste
Candy it is

3rd– 5th Grade:
1st Place: Anagha Rao
Benjamin Elementary School
Teacher: Dawn Goldman

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9th-12th Grade
2nd Place: Michael Uretzky
Dunlap High School
Teacher: Beth Brown

K-2nd Grade:
2nd Place: Megha Vijayakuman
Argenta-Oreana Elementary School
Teacher: Cheryl England
ROCKS THAT POP!
The sweet side of chemistry,
come watch and you will see.
Pop rocks are a candy gasified
with the chemical carbon dioxide.
In your mouth they shatter into pieces,
CO₂ bubbles tickling your tongue and your teethes.

3rd. 5th Grade:
2nd Place: D. Vinny Reinecke
Hollis Grade School
Teacher: Beth Perry
Sugar, Corn Syrup, Flavouring.
The atoms sway around each other.

Heat.
Atoms press together.
Pressed against my tongue,
An explosion of flavor and color.
Sweet.

Smiling.

A smile.
Childhood isn’t so far after all.

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9th-12th Grade:
3rd Place: Lara Jensen
Dunlap High School
Teacher: Beth Brown

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Candy
By: Joe Zeman

Candy, Candy rich and sweet
You make me so hyper
I jump from my feet
Loaded with sugar and spices I love
Skittles, lollipops, even chocolate doves
We boil, mold, and bake you too
Sometimes we even dye you blue.

---

3rd-5th Grade:
3rd Place: Joe Zeman
Benjamin Elementary School
Teacher: Dawn Goldman
Section Outreach Through Demonstrations:
And a fun one to try at home!
Time for Slime!

Chemistry is great for making many useful products. It’s also good for making stuff that’s just fun to play with. Let’s make some slime!

What you’ll need

- Goggles
- Elmer’s glue, white or gel
- 20 Mule Team Borax
- Measuring spoons
- 2 small plastic cups
- Popsicle stick
- Water
- Food coloring (optional)

Be Safe

Put on your goggles. Be sure to read and follow all the cautions on the borax box label. Keep your slime away from carpets, fabrics, furniture, young children, and pets. Store it in a sealed zip-closing plastic bag when you are not playing with it and wash your hands after playing with your slime.

Here’s what to do

Make the solutions

1. Place 1 tablespoon of water in a small plastic cup. Add ¼ teaspoon of borax. Mix until as much borax dissolves as possible. This is your borax solution.

If you would like your slime to be a certain color, add one or two drops of food coloring to your borax solution.
2. Place 1 tablespoon of water in another cup 
and add 1 tablespoon of Elmer’s glue. 
Stir with a popsicle stick until the glue 
and water are thoroughly mixed.

Make the slime
3. Slowly pour all of the borax solution 
into the glue solution, and 
stir with a clean popsicle stick. 
You should notice a 
sudden change in the solutions. 
Your slime is done when you can pick 
up your popsicle stick and most of the 
slime comes out on the stick.

4. When you have some nice thick slime, 
pull it off the popsicle stick and move it 
back and forth between your hands. The 
more you play, the less sticky it gets.

Experiment with the slime
5. Try pulling the slime very slowly to see if it stretches.

6. Form the slime into a ball and see if it bounces. You 
could put it over the bottom of an upside down cup 
and watch it slowly flow down.

7. Try flattening your slime into a pancake and 
then holding it from one edge to see what it does.
**What to expect**
As you stir the borax and glue solutions together, the mixture becomes thick. It also attaches to the popsicle stick. When you pull slowly, your slime will stretch. However if you pull quickly it will break. Slime will slowly flow making it seem like a liquid, but it can also bounce which makes it seem a bit like a solid.

**Whafs happening in there?**
What makes slime so thick and stretchy? The glue has long flexible molecules in it called polymers. These polymer molecules slide past each other as a liquid.

Borax in water forms an ion called the borate ion. When the borax solution is added to the glue solution, the borate ions help link the long polymer molecules to each other so they cannot move and flow as easily.

When enough polymer molecules get hooked together in the right way, the glue solution changes from being very liquidy to a rubbery kind of stuff that we call slime!
What else could you try?
Water is an important ingredient in slime. Water helps the polymer molecules slide past each other so that your slime can flow. If you let the water evaporate, your slime will end up like a solid piece of plastic.

Try making other samples of slime with different amounts of water and compare them to your first piece of slime. In each sample, follow the instructions to make the slime that you followed before, but change the amount of water you add to make the glue solution.

- You could make the glue solution with little to no water. For example, use only 1 tablespoon of glue to make the glue solution.

- Or, add two tablespoons of water to 1 tablespoon of glue to make the glue solution.

You may choose to give each sample of slime a different color to help you tell them apart.
The American Chemical Society develops materials for elementary school age children to spark their interest in science and teach developmentally appropriate chemistry concepts. The Activities for Children collection includes hands-on activities, articles, puzzles, and games on topics related to children’s everyday experiences.

The collection can be used to supplement the science curriculum, celebrate National Chemistry Week, develop Chemists Celebrate Earth Day events, invite children to give science a try at a large event, or to explore just for fun at home.

Find more activities, articles, puzzles and games at www.acs.org/kids.

### Safety Tips

This activity is intended for elementary school children under the direct supervision of an adult. The American Chemical Society cannot be responsible for any accidents or injuries that may result from conducting the activities without proper supervision, from not specifically following directions, or from ignoring the cautions contained in the text.

**Always:**

- Work with an adult.
- Read and follow all directions for the activity.
- Read all warning labels on all materials being used.
- Wear eye protection.
- Follow safety warnings or precautions, such as wearing gloves or tying back long hair.
- Use all materials carefully, following the directions given.
- Be sure to clean up and dispose of materials properly when you are finished with an activity.
- Wash your hands well after every activity.

**Never** eat or drink while conducting an experiment, and be careful to keep all of the materials used away from your mouth, nose, and eyes!

**Never** experiment on your own!

For more detailed information on safety go to www.acs.org/education and click on “Safety Guidelines”.

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www.acs.org/kids

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Announcing the 38th Annual High School Chemistry Contest

We are pleased to announce that this year’s contest will be held on Wednesday, May 6th, 2015 in Bradley’s Renaissance Coliseum! This 4,200-seat facility is located on the former site of the Robertson Memorial Field House and serves as home court for volleyball and women's basketball teams, a state of the art basketball practice facility, and a perfect place to host events like this one.

This year’s contest is co-sponsored by the Illinois Heartland Local Section of the American Chemical Society and the Mund-Lagowski Department of Chemistry and Biochemistry at Bradley University.

| 8:00 - 8:50 a.m. | Check-in at the Coliseum atrium  
| | Buses can drop students off at the Coliseum entrance circle located on Main Street in the morning. For ease of drop-off, when coming from Interstate 74, turn north on University Street, left (west) onto Nebraska, left (south) onto North Park Road, and left (east) on Farmington Road. Take a left at the Farmington/Main Street intersection and travel east on Main Street to afford access to the Coliseum entrance circle. Bus parking is available at Shea Stadium, 1523 W. Nebraska Ave. Parking for cars is available in the Main Street parking deck directly across from the Coliseum at 1630 W. Main Street. |
| 9:00 - 9:20 a.m. | Opening remarks on the Coliseum main floor |
| 9:30 - 10:45 a.m. | Examination on Coliseum main floor  
| | During the exam, teachers will meet in the Zobrist Room, overlooking the Coliseum main floor, for an informal meeting with Bradley staff and members of the Illinois Heartland Local Section of the ACS. |
| 11:00 - 1:15 p.m. | Groups will be rotated through three 45 minute activities  
| | 1. A chemical demonstration show entitled “Color, Cold, and Combustion” will be presented by Dr. Dean Campbell and the Bradley University Student Chemistry Club in Olin Hall room 168.  
| | 2. Complimentary lunch will be served on the main floor of the Coliseum. Water will be provided; soda and juice will be available for purchase.  
| | 3. Guided tour of campus highlights. |
| 1:20 p.m. | Close of events and departure. |
Registration Information:
Register online for this year’s event at the High School Chemistry Contest program link found on Bradley’s Continuing Education Website (http://www.bradley.edu/continue/). This link should be available by March 30th and the registration deadline is Friday, April 24, 2015.

Each teacher should register their own students and must supply their e-mail address during online registration to facilitate the process of notifying you of your students’ performance and standings. To help us plan for the contest, please indicate the total number of people in your group who will have lunch and the number of vegetarian lunches requested when registering.

Contest Rules:
• You may bring no more than five students per chemistry class offered at your school. For example, if your school has 5 sections of first year chemistry, then up to 25 students would be eligible to participate in the Contest. The method used to select participants is at your discretion, but we ask that you invite only those students who are highly motivated to do well on the exam.
• If you are not currently teaching Chemistry, please pass this invitation on to the current Chemistry teacher(s) at your school. Also, please check with your colleagues to ensure that all chemistry teachers at your school are aware of this event.
• The First Year Contest is open to students presently enrolled in a first year chemistry course or to students who have completed the first year course but have not enrolled in a second year course.
• The Advanced (Second Year) Chemistry Contest will run concurrently with the first year examination. This contest is open to students presently enrolled in a second year chemistry course or to students who have completed a second year course.
• Each examination will consist of approximately 45 questions and will be predominantly multiple choice. A periodic table will be provided.
• Please note that a student may not take either examination more than once.
• Each student must bring at least one #2 pencil with an eraser to allow for machine grading.
• Each student should bring a non-programmable calculator to the examination. Programmable calculators will NOT be allowed and calculators will NOT be provided. All other electronic devices (e.g. cell phones) must be turned off and stored out of sight.

Awards:
• Prizes will be awarded to the top few students in each contest. These students will be honored at their schools’ awards ceremonies, if possible.
• First place winners in each contest will receive a traveling plaque to be displayed in their high school for one year.
• The top students on each examination will be invited to participate in the International Chemistry Olympiad Program (ICO). The ICO is an international competition cosponsored by the American Chemical Society.

If you have any questions, please call the Chemistry Department (309-677-3030). We look forward to seeing you and your students on the 6th of May!

Wayne Bosma, Associate Professor
Michelle R. Fry, Associate Professor
The Illinois Heartland ACS connects chemistry to the community! We are committed to building bridges with community partners to leverage scarce resources and maximize service to members and the community.

We are the ACS!

The Illinois Heartland American Chemical Society has 240 chemists, chemical engineers, and educators in a 10 county area in central Illinois, including Peoria, Bloomington-Normal, Henry, Jacksonville and Galesburg. We are the local chapter of the world's largest volunteer, professional organization, the American Chemical Society (ACS). We are a 501(c)(3) non-profit organization. We invest in our local community by providing science education opportunities through seminars, meetings, workshops, summer internships, competitions, special activities, and partnerships with other non-profit, volunteer or professional organizations. Almost all events are free and open to the public.

Our Vision

The Illinois Heartland American Chemical Society is building a sustainable, high achievement organization of networked, caring professionals following a shared vision. The Illinois Heartland ACS is recognized and respected as an effective advocate for the chemical sciences and provides outstanding service to its members. Illinois Heartland ACS members are committed, informed, and effective leaders. Illinois Heartland ACS education programs enhance knowledge by generating, sharing and making information available to the community. Illinois Heartland ACS is a sought-after source of knowledge and objective information by researchers, educators, and the public.

Illinois Heartland ACS 2014 Officers
Thank you for your service!

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