

THE CAPITAL CHEMIST



A Publication of the Chemical Society of Washington Section of the American Chemical Society

2017 Chemistry Olympiad Summary

Contributed by Regina Cody, Chemistry Olympiad Coordinator

The U.S. High School Chemistry Olympiad is an annual program for high school students that has been organized by the American Chemical Society (ACS) since 1984. The Chemical Society of Washington (CSW) is proud that it is one of 17 Local Sections that has participated in this Olympiad each year. The CSW conducts its Chemistry Olympiad at two levels; the first level is the Local Section examination in March and the second level is the U.S. National examination in the latter half of April. For the National exam, ACS allotted the CSW eighteen student places with the rule that a maximum of two students can be from one school.

The Local Section examination purchased from ACS was used to select these 18 students, and we worked with the high school chemistry teachers to select who will take the exam. Emails were sent to teachers asking for the nomination of up to 25 students to take the Local Section exam, which is comprised of 60 multiple-choice questions. Teachers from twenty high schools nominated a total of 213 students. Ten of the high schools were in Maryland, eight were in Virginia, and two were in Washington, D.C. The teachers administered the Local Section Exam to their students and returned the answer sheets to the CSW Coordinator, Regina Cody, for grading—using the answer key from ACS. From the results of this exam, the 18 students were selected to take the National Exam for the CSW. All the students who took the Local Section Exam received Certificates of Participation, as did their teachers. Eight students scored 50-60, and received Certificates of High Honors, and 32 students scored 40-49, and received Certificates of Honors.

The U.S. National Chemistry Olympiad (USNCO) Exam was given on April 19th in the Bioscience Education Center at the Germantown Campus of the Montgomery College. This exam consisted of three separate parts: one written multiple choice, one written essay response, and one laboratory practical. The exam was given in the same time period, April 18-24, across the U.S. to about 1000 students. The ACS had a separate grading site and team to grade the national exam. Although none of the CSW students qualified for the Study Camp in June at the Air Force Academy (from which 4 students were selected to represent the U.S. at the International Chemistry Olympiad), two students received High Honors certificates: Aaditya Singh of Thomas Jefferson High School for Science and Technology and James Vinson of Montgomery Blair High School. Ethan Liu of Thomas Jefferson High School for Science and Technology received an Honors certificate. All 18 students received ACS Certificates of Participation, and are listed on the next page.

The 49th International Chemistry Olympiad competition was held July 6-15 in Nakhon Pathom, Thailand. The U.S. Alpha Kappa Team won four gold medals: Harrison Wang of The Hinsdale Central High School, IL, won the fifth highest-ranking gold medal; Steven Liu of Monta Vista High School, CA, Joshua Park of Lexington High School, MA and Brendan Yap, from Carmel High School, IN also earned gold medals.

I thank very much the individuals below who gave generously of their time and knowledge to make the National Exam day possible.

- At the Germantown Campus of Montgomery College, Professor Scot Magnotta, Chair of the Chemical and Biological Sciences Department and Vivian Kruff, Lab Manager, who did all the preparation for the Lab Practical.
- Dr. Elinor Santor (retired), who helped proctor the written exams and assisted in the breakfast/lunch room.
- Mr. Xu Duan, chemistry teacher at Holton-Arms School, who helped proctor the lab practical, did initial lab clean-up, and assisted in the breakfast/lunch room.

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Inside this issue:

- Volunteer with the National Museum of American History
- Nominate a colleague for the Hillebrand Prize, Schubert Award, or Gordon Award
- Learn about this year's National Chemistry Week theme, "Chemistry Rocks!"

2017 CSW U.S. National Exam Participants

Student	Chemistry Teacher	High School	City, State
Abigail Svoysky	Daniela Munteanu	Charles E. Smith Jewish Day School	Rockville, MD
Bonnie Akhavan	Xu Duan	Holton-Arms School	Bethesda, MD
Jayne Slotkin	Xu Duan		Bethesda, MD
Austin Cheng	Dr. Padma Iddamalgoda	James Madison High School	Vienna, VA
Ashutosh Ukey	Dr. Padma Iddamalgoda		Vienna, VA
Harrison Smith	Beverly Sivaslian	Landon School	Bethesda, MD
Dan Ni	Leah Puhlick	Langley High School	McLean, VA
Philena Sun	Christina Hicks	McLean High School	McLean, VA
Joshua B. Fernandes	Tran Pham	Montgomery Blair High School	Silver Spring, MD
James S. Vinson	Tran Pham		
Mitchell Fream	Prasad Gerard	Poolesville High School	Poolesville, MD
Matthew R. Feng	Prasad Gerard		
Nataliya Stepanova	Brendan Mallory	Richard Montgomery High School	Rockville, MD
Robert Shekoyan	Leslie George	Saint Alban's School	Mount St. Albans, DC
Andrew Melman-Rogers	Leslie George		
Ethan Liu	Hadan Kauffman	Thomas Jefferson High School for Science and Technology	Alexandria, VA
Aaditya Singh	Hadan Kauffman		
William Yu	Brett Bentley	Thomas S. Wootton High School	Rockville, MD

Volunteer Opportunity: Smithsonian's National Museum of American History

The Lemelson Center for the Study of Invention and Innovation at the Smithsonian's National Museum of American History is recruiting volunteers (called Ambassadors) to work with museum visitors in Spark!Lab, its hands-on invention space for children and families. Unlike traditional classroom-style learning, Spark!Lab is very "curiosity-driven" and there is no right or wrong way to complete the activities, just challenges and prompts to get them thinking like an inventor. We focus on skills-based and inquiry based learning techniques and applying the experience to real life examples and problems.

Spark!Lab Ambassadors will play an active role in:

- Facilitating Meaningful Visitor Experiences: welcoming a diverse group of visitors and engaging in inquiry-based discovery at a variety of hands-on activity stations; using creative methods to inspire and encourage children's and family's interest in the invention process.
- Assisting daily facility operations in Spark!Lab: getting the space and hands on activities ready for visitor use; helping with some routine maintenance necessary to keep the innovation and imagination flowing!

If You are Good at and Enjoy...

- tinkering, experimenting, asking questions, constructing and deconstructing things to figure out how they work...
- interacting with diverse audiences, age groups and learning styles...
- working in an often busy and changing environment...

If You Have...

- some experience working in a hands-on, informal education space...
- strong interpersonal and communication skills...
- an interest in invention, history and science...

If You are Able to...

- commit to at least two 4-hour shifts a month, (weekends and holidays available)...
- handle frequent walking, standing, bending and lifting...

...Then please request an application from Laurel Miller, Interpretive Exhibit Manager MillerL@si.edu or 202.633.7304.

- Applicants must be 17 years or older.
- One full-day orientation training
- 8 hours (two 4-hour shifts) of shadowing a staff member or experienced volunteer on the floor
- Completing a background check and obtaining a Smithsonian ID badge
- A commitment of 8 hours per month (two 4-hour shifts, or one full day) of volunteering, based on your schedule and availability.

The next training session begins Saturday, September 16, 2017. For more information please visit www.invention.si.edu or contact Laurel.

The Smithsonian is an Affirmative Action/Equal Opportunity Employer. Women, minorities, people with disabilities, and candidates of all backgrounds are encouraged to apply.

Hillebrand Prize Call for Nominations

Nominations are invited for the 2017 Hillebrand Prize, awarded annually for original contributions to the science of chemistry by a member or members of the Chemical Society of Washington (CSW), the local section of the American Chemical Society. The Hillebrand Prize is the most prestigious honor given each year by CSW and is recognized nationally as a mark of significant accomplishment in chemistry. The Hillebrand Prize originated in 1924 and is named for Dr. William F. Hillebrand (1853- 1925), an internationally-recognized pioneer in analytical chemistry and one of Washington's most distinguished early chemists. The prize carries an honorarium of \$2000. Many previous Hillebrand Prize recipients have won numerous other national and international awards, including three who have received the Nobel Prize. See the list of award winners at http://csw.sites.acs.org/CC_pdf/Hillebrand_CSW_Award_winners.pdf.

The nominating package should contain the following:

Nominating Letter – limited to 1000 words

The letter should focus on the chemical accomplishments of the nominee, rather than the bio of the nominee, from a broad standpoint, leaving the finer points to those submitting seconding letters. Biographic details (degrees, positions held, major activities etc) will be given in the nominee's CV. The letter should begin with the major theme(s) in the nominee's research career with perhaps a summary of how these evolved over the years to create breakthroughs or push the field in a new or very productive direction.

Describing the nominee's major contribution(s) is extremely important and should be the bulk of the letter. There is no preference or restriction for the specific area of contribution so long as it represents a significant accomplishment in chemistry. Anything is fair game; synthetic or analytical, experimental or theoretical, bio- or inorganic, etc. This section might detail such things as: the major techniques used in their research and how these were applied to a specific area to bring about significant results not previously achievable; if their research resulted in the development of a new experimental/instrumental technique or use of an existing technique in an innovative new way; how techniques the nominee developed became standard in that area; the impact the nominee's work had on influencing other areas of research; development of new reagents, catalysts or reaction conditions; development of a new computational method or theoretical approach; etc. The nominator should provide evidence in support of these statements. This could include information about: the number of citations, impact factors of certain articles (or aggregate numbers), especially influential articles/book chapters, important invited talks, previous awards by other societies, patents, funding, important leadership positions, etc. Mentioning an extremely productive collaboration is possible so long as the role/contributions of the nominee are clear. The award is not given for mentoring students (as a specific criteria) but nominators often mention if this has occurred, especially if these students have gone on to significant posts on their own.

Two Seconding Letters – limited to 500 words each

It is helpful if these be from established experts in the nominee's field, and best if they are from experts at institutions other than the nominee's unless a notable expert in the nominee's area is also from the nominee's institution.

Curriculum Vitae - the candidate must be a member of CSW

The CV should strongly emphasize individual academic backgrounds, appointments, publications, presentations, and patents.

List of Publications

This is critical in determining the specific scientific contribution of the nominee or team.

Proposed Citation – limited to 25 words

This is a brief statement that should be understood by chemists in almost any area. It should avoid highly specialized language but still give the reader the area of accomplishment and why this is a significant accomplishment in chemistry. In some ways it is a one or two sentence abstract of the first paragraph of the nominating letter. Since it is 25 words, you may simply want to provide 1 or 2 examples of previous awardees.

Hillebrand, Continued from Previous Page

We strongly recommend that the nominator collect all materials and forward in one email, preferably as PDF files(s), to csw@acs.org. Nominations will be active for three years.

If you would like to verify the eligibility of an individual as a nominee or nominator, please contact the CSW Administrator at csw@acs.org. All materials must be received by November 1, 2017. The awardee will be announced before the end of the year, and the Prize will be presented at the CSW dinner meeting in March 2018.

If you have any questions about the award or the procedure for nominating someone for the award, please contact our office – csw@acs.org or 202.659.2650.

Call for Nominations: Leo Schubert Memorial Award

The Chemical Society of Washington (CSW) is pleased to announce the call for nominations for the Leo Schubert Memorial Award to recognize an outstanding teacher of high school chemistry in the Washington, D.C. area. The award was established in 1979 to honor Dr. Leo Schubert, a chemistry professor at American University who devoted much of his career to developing programs for high school teachers and students. The Schubert award consists of a \$500 honorarium and a certificate, which will be presented at the March 2018 CSW dinner meeting.

Nominations for the award must be comprehensive in describing the nominee's accomplishments in areas such as innovation in teaching, writing curricula, outside teaching, papers published, involvement in science fairs, and postgraduate study. The application may also include supporting letters, as well as any supporting documents that concisely illuminate the nominee's accomplishments.

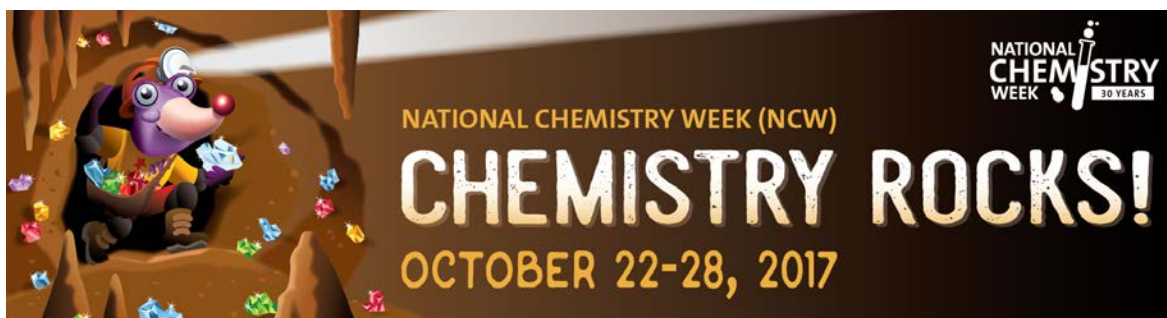
To be eligible for the CSW Schubert award, the nominee must currently teach chemistry at a secondary school in the geographic region of the Chemical Society of Washington, which includes metropolitan Washington, D.C. and the neighboring counties in Maryland (Montgomery, Prince George's, Charles, Calvert and St. Mary's Counties) and Virginia (Arlington, Fairfax and Loudoun Counties). The region of CSW also includes six counties on the Eastern Shore of Maryland: Caroline, Talbot, Dorchester, Wicomico, Worcester, and Somerset.

The CSW Schubert Award nomination form is available directly via The Capital Chemist website (<http://www.capitalchemist.org/wp-content/uploads/2016/09/Leo-Schubert-Memorial-Award-Nomination-Form-2016.pdf>). Alternatively, a pdf version of the nomination form can be obtained by an email request to csw@acs.org. Completed pdf nomination forms can be sent directly to csw@acs.org. All nominations must be submitted by November 15, 2017.

Call for Nominations: Charles L. Gordon Memorial Award

Named after Charles Gordon for his years of service as managing editor of the *Capital Chemist*, the Charles L. Gordon Memorial Award is given in recognition of exemplary service by a CSW member to the profession of chemistry, to the science of chemistry, and/or to the Chemical Society of Washington. Nominations are invited for this award, consisting of a plaque that will be presented at the February CSW dinner meeting. A written nomination should include a description of the accomplishments on which the nomination is based. Additional documentation that includes seconding letters and the nominee's CV are welcome.

Completed nominations for the Charles L. Gordon Award are due on or before November 15, 2017. The nomination should be submitted electronically to csw@acs.org. Please contact the Chair of the Awards Committee, Philip R. DeShong, deshong@umd.edu, if you have any questions.



Celebrating 30 years of National Chemistry Week. This year marks the 30th anniversary of National Chemistry Week. This year's theme is "Chemistry Rocks!", focusing on geochemistry. You will learn more about gemstones and the interesting world of rocks and minerals in this year's issue of *Celebrating Chemistry*. The electronic version of the Celebrating Chemistry Newsletter is available from the ACS website (www.acs.org/ncw).

Each year the American Chemical Society's (ACS) NCW campaign reaches millions of people with positive messages about the contributions of chemistry to their daily lives. NCW is a community-based annual event that unites ACS local sections, businesses, schools, and individuals in communicating the importance of chemistry to our quality of life. It is the one time during the year that chemists, regardless of background, unite with the common goal of spreading the word that chemistry is good for our economy, our health, and our well-being.

The Chemical Society of Washington (CSW), along with the ACS Office of Community Activities, is planning several NCW events. Volunteers are needed for these outreach activities. We are in the early stages of planning, so watch for additional information in the October *Capital Chemist*, or on the Capital Chemist and CSW websites.

You can contribute to the NCW campaign by performing chemical demonstrations at a neighborhood school (and consider having an illustrated poem contest!); conducting hands-on activities with children at museums, malls, or libraries; or writing articles or letters to the editor of your local paper. If you would like to lead an activity at your local school or library, CSW will provide you with some grade-specific materials to hand out to the students, as well as some simple demonstrations that you can use.

More information about local activities will be posted on the CSW (www.csw-acs.org) or the Capital Chemist (www.capitalchemist.org) websites as they become available. For further information, or to volunteer, contact the CSW NCW coordinator, Kim M. Morehouse via email at Kim.Morehouse@FDA.HHS.GOV, or by phone at 240-402-1889 (day) or 301-384-7311 (evening).

CSW participation in National Chemistry Week at Crystal City Family Festival

As part of National Chemistry Week on Sunday, October 29, 2016, CSW will once again participate in the Family Festival event in Crystal City, Arlington, VA in conjunction with the Marine Corp Marathon, from 9:00am to 2:00pm. CSW Volunteers will perform hands-on activities for the children who attend and will distribute copies of the *Celebrating Chemistry* newsletter and other chemistry-themed items.

To volunteer, please contact the CSW NCW Coordinator, Kim M. Morehouse via email at kim.morehouse@fda.hhs.gov.



ACS
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NATIONAL
CHEMISTRY
WEEK 30 YEARS

2017 NCW Illustrated Poem Contest CHEMISTRY ROCKS!

The American Chemical Society (ACS) is sponsoring an illustrated poem contest for K-12th grade students.

Local Section: Chemical Society of Washington

Contest Deadline: Monday, October 30, 2017

Prizes: The winning entry for each grade level will receive a chemistry themed tee shirt.

Contact: Kim Morehouse, kim.morehouse@fda.hhs.gov

Winners of the ACS Local Section Illustrated Poem Contest will advance to the National Illustrated Poem Contest for a chance to be featured on the ACS website and to win \$300 or \$150 in cash prizes!

INSTRUCTIONS

Write and illustrate a poem using the NCW theme, "Chemistry Rocks!"

Your poem must be no more than 40 words and in the following styles to be considered:

HAIKU - LIMERICK - ODE - ABC POEM - FREE VERSE - END RHYME - BLANK VERSE

Possible topics include rocks, minerals, gemstones, salts, crystals, magma, mantle, sediment, stalactites, and stalagmites. Entries will be judged based upon relevance to and incorporation of the theme, word choice and imagery, and colorful, creative artwork

CONTEST RULES

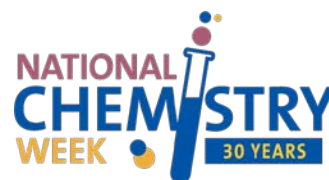
- Poems must conform to a particular style. No poem may be longer than 40 words.
- The topic of the poem and the illustration must be related to the NCW2017 theme.
- All entries must be original works without aid from others.
- Each poem must be submitted and illustrated on an unlined sheet of paper (of any type) not larger than 11" x 14". The illustration must be created by hand using crayons, watercolors, other types of paint, colored pencils, or markers. The text of the poem should be easy to read and may be

printed with a computer before the hand-drawn illustration is added, or the poem may be written on lined paper which is cut out and pasted onto the unlined paper with the illustration.

- Only one entry per student will be accepted.
- All entries must include an entry form.
- All illustrated poems and/or digital representations of the poems become the property of the American Chemical Society.
- Acceptance of prizes constitutes consent to use winners' names, likenesses, and entries for editorial, advertising, and publicity purposes.

www.acs.org/NCW





**2017 NCW Illustrated Poem Contest
Chemistry Rocks!
ENTRY FORM**

Please fill out this form, print, and attach to the back of the poems. All fields are required. Incomplete forms will invalidate the entry.

The deadline for the **Chemical Society of Washington Local Section Contest** is **Monday, October 2, 2017**.

Student and Organization Information			
Student Name:			
Grade:			
Parent/Guardian Name:		Parent/Guardian Email:	
Parent Address:			
City:		State:	Zip:
School or sponsoring group: (e.g. Boys and Girls Club or Scout Troop, 4-H, etc.)			
Teacher Name:		Teacher Email:	
School Address:			
Address Line 2:			
City:		State:	Zip:
Please send any follow up for the student to the school <input type="checkbox"/> or parent <input type="checkbox"/> address.			
Judging Category by Grade (Check one)			
K-2 <input type="checkbox"/>	3-5 <input type="checkbox"/>	6-8 <input type="checkbox"/>	9-12 <input type="checkbox"/>
FOR LOCAL SECTION USE ONLY			
Local Section Name:		Chemical Society of Washington	
NCW Coordinator Name:		Kim Morehouse	
NCW Coordinator Email/Phone:		Kim.morehouse@fda.hhs.gov	

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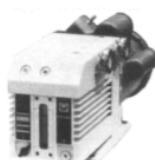
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There are many companies and organizations searching for chemical and biochemical personnel to fill important jobs in their organizations.

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- Universities & Colleges for teaching positions and laboratory personnel
- Hospitals for technical and research personnel

There are several web sites that may help you search for these open positions.

- www.mboservices.net
- <http://membership.acs.org/W/WashDC/career.html>

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Claims for missing issues should be sent to CSW at the above address. **Member change of address** should be sent to ACS, PO Box 3337, Columbus, OH 43210; phone 800-333-9511; e-mail: service@acs.org; or edit member profile online at www.acs.org.

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CSW Calendar of Events

September

September 25: CSW Board Meeting

October

October 2: NCW Illustrated Poem Deadline

October 18: WCDG/CSW Joint Meeting

October 22-28: National Chemistry Week

October 29: Crystal City Family Festival

November

November 1: Hillebrand Nominations Due

November 15: Schubert Award Nominations Due

November 15: Gordon Award Nominations Due

November 20: CSW Board Meeting