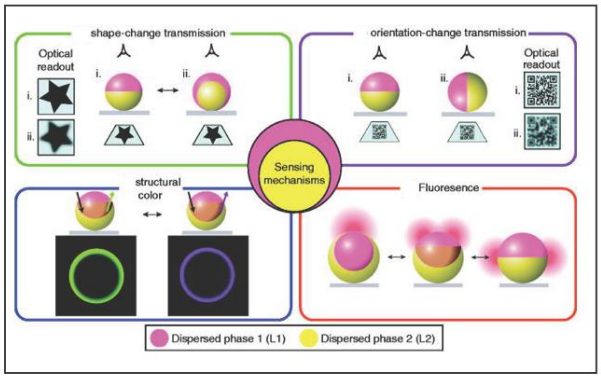
NEWSLETTER OF THE LEHIGH VALLEY SECTION
OF THE AMERICAN CHEMICAL SOCIETY

MARCH 2022
VOL. 105, NO. 3

THE OCTAGON

March Meeting (Hybrid Format)

"Color from Colorless Materials"



Speaker: Lauren Zarzar, Penn State University

Lauren is assistant professor of chemistry and an affiliate of the Materials Research Institute. Lauren was among the 36 scientists and engineers selected for a 2020 AFOSR Young Investigator Award. The Zarzar Lab studies stimuli-responsive materials, the behavior of active matter, and laser fabrication methods to synthesize and pattern both inorganic and organic materials. https://www.zarzarlab.com/

Thursday, March 10th, 2022

Muhlenberg College, 2400 Chew Street, Allentown, PA 18104
Campus Map: https://www.muhlenberg.edu/campus-map/
5:30 social reception: Crudites with Ranch Dip in Seegers Union 113
6:00 dinner: Prosser Buffet in Seegers Union 113
7:00 Talk followed by LVACS Business Meeting in Trumbower 130
Cost: $20 for full members, $10 for students, retired, and unemployed

RSVP date: March 8, 2022 to mariaeden@muhlenberg.edu

Remote? Live streaming link: https://american-chemical-society.zoom.com/j/83239978222?pwd=UEVCVGhkUGx1TkRIRjkvZDJJWllRUT09

CONTACT: Justin Sparks, justinsparks@muhlenberg.edu

LVACS Events Calendar

March 2022

March Meeting (Hybrid Format)
"Color from Colorless Materials"
Speaker: Lauren Zarzar, Penn State University
Muhlenberg College, 2400 Chew St., Allentown
Thursday, March 10th
5:30 reception; 6:00 dinner; 7:00 Talk
RSVP date: March 8, 2022 to mariaeden@muhlenberg.edu
CONTACT: Justin Sparks, justinsparks@muhlenberg.edu

April 2022

April Meeting (In-Person Format)
- Undergraduate Poster Night
- Undergraduate Senior Excellence Awards
- Talk: "Density Functional Theory (DFT) as a Non-Destructive Probe in the Field of Art Conservation Science"

Speaker: J. W. Bennett, Ph. D.,
University of Maryland Baltimore College
DeSales University, 2755 Station Ave, Center Valley, PA 18034
https://www.desales.edu/about/location-directions
Monday, April 11th
Social Hour/Poster Session, 4:45pm-6:00pm
Dinner: 6:00-7:00pm; Talk/Meeting: 7:00pm
RSVP by April 4th 2022 for poster session, dinner, & meeting
REGISTER: https://forms.gle/fAZ5S6Ean4seMexu9
CALL FOR ABSTRACTS!! SEE PAGE 5 FOR MEETING DETAILS
CONTACT: Sara Hayik, sara.hayik@desales.edu

Chemists Celebrate Earth Week (April 17-23)
"The Buzz about Bugs: Insect Chemistry"
Community Outreach Events (TBA)
Annual CCEW Poetry Contest (see page 10)
CONTACT: Lindsey Welch, coordinator lawelch@cedarcrest.edu

SPRING IS DRAWING NEAR (NO THANKS TO CERTAIN UNNAMED RODENTS)!
CELEBRATE THE EARTH WITH SOME PUBLIC OUTREACH: NEIGHBORLY CHEMISTRY

CONTACT: Nigel Sanders, LVACS secretary and newsletter editor, nigel53.sanders@gmail.com

Also In This Issue…

Call for LVACS Standing Committee Chairs

Lindsey Welch, LVACS Section Chair, along with the Section's Executive Committee invite members to volunteer to serve your section as a Standing Committee Chair. Please consider taking an active role in guiding one of the following Committees. No formal nomination process is required. Simply let us know of your interest.
CONTACT: Lindsey Welch, lawelch@cedarcrest.edu

Chemistry Olympiad. Coordinates the U.S. National Chemistry Olympiad, a national competition for talented high school students, sponsored by the ACS.

Diversity. Develops programs and activities that encourage and support diverse, equal, inclusive and respectful participation in the chemical sciences.

Education. Plans and implements activities to assist area precollege and college teachers, students, and student affiliate chapters, including scholarship programs, competitive examinations, science fairs, teacher/student nights, and journal subscriptions. Also host special activities such as short courses, satellite courses and mentoring for the benefit of section members.

National Chemistry Week/Chemists Celebrate Earth Week. Plans activities and arranges events to highlight the importance of chemistry to the public during National Chemistry Week.

Nominations. Identifies and recruits candidates for section offices and conducts local elections.

Professional Relations. Plans and implements activities related to the members' employer/employee relationships, such as job-seeking assistance and layoff investigations.

Public Affairs. Develops assurances for scientific and technical input into local public policy considerations involving chemistry, including matters related to the environment, energy, health, education, and research funding.

Public Relations. Develops and implements a program using local media contacts and members to publicize section programs and activities and to enhance the visibility and the public image of the section, Society, and profession.

Safety. Promotes safe laboratory practices through the presentation of safety symposia for teachers and students and provides advice to local officials on safety-related issues.

Younger Chemists. Identifies the needs and concerns of younger chemists and develop programs responsive to their needs; facilitates professional networking among younger chemists.

LVACS February 18th Meeting Report: PRIDE in STEM

Our Friday, February 18th Section Meeting was a hybrid affair with 7 in-person attendees in East Stroudsburg University's Beers Lecture Hall and 9 virtual attendees present. After a brief snack/social interval, the meeting was devoted to a panel discussion of "PRIDE in STEM: Processing the LGBTQ Identity in STEM Professions" with panelists Bryan Trimm of IBM, Christopher Dubbs of ESU and moderator Ariel Tucci of ESU's Gender & Sexuality Center. After introducing themselves with a summary of their STEM careers, Bryan and Christopher answered questions posed by the moderator and the audience. Here are some of their responses:

Why did you choose a STEM career?
B: Both of my parents were in STEM but I initially chose finance. That only lasted 6 months! I returned to the STEM fold interested in materials.
C: Neither of my parents attended college. I started as a Spanish major and went through business and IT before I settled on mathematics.

Can you describe your LGBTQ identity experience at the start of your STEM career?
C: I started my career at Chrysler which had a GALA program with spaces for posts.
B: I had a good experience at my undergrad school which had an RPU. IBM is very supportive for both general and technical employees.

What is the current atmosphere for LGBTQ in STEM?
C: LBGTQ are most likely to go the STEM route – not sure why. Important to listen carefully to job interviewers for a sense of the atmosphere in an organization.
B: Look for networks that will provide support.

What are the challenges you have faced and how did you address them?
B: Be an ally: listen and offer help to others.
C: I second that! Inclusion in the workplace is key: shift the climate.

How can we break the glass ceiling?
C: Is there a glass ceiling? Where? I have found lots of variety with respect to fields and depth.
B: Push more people into STEM period! Zoom, etc. helps to increase reach.

What was your 'Aha!' moment?
B: There were lots of them! I've found it to be more of a journey of learning steps.
C: There were two: one was during my master's. I was a TA and loved it! But I went to industry for 2 years before coming back to teaching. Second one was during PhD: making a unique contribution.

So why are we talking about this?
B: We need outreach of this kind to encourage LGBTQ youth to consider STEM.
C: Visibility is key: we need 'windows and mirrors.'

Reflecting on your experiences, do you have any advice for being authentic?
B: 'Don't worry so much!' 'You're not alone.'
C: Be safe; it's a process. Look for allies and safe spaces.

[There was no section business meeting this month]

LVACS would like to thank Prof. Steve Boyer of ESU's Chemistry Department and Lyesha Fleming of ESU's Diversity and Inclusion Committee for hosting this meeting!

CALL FOR ABSTRACTS: 2022 LVACS UNDERGRADUATE POSTER SESSION APRIL 11th MEETING AT DESALES UNIVERSITY

DeSales University, 2755 Station Ave, Center Valley, PA 18034
Trexler, Hurd, and Commonwealth Rooms
https://www.desales.edu/about/location-directions

Monday, April 11th
Social Hour/Poster Session, 4:45pm-6:00pm
Dinner: 6:00-7:00pm; Talk/Meeting: 7:00pm
Dinner Menu: Italian themed with a vegetarian option
Cost: $25 for full members, $15 for students, retired, and unemployed
RSVP by April 4th 2022 for poster session, dinner, & meeting
REGISTER FOR POSTERS/DINNER/MEETING: https://forms.gle/fAZ5S6Ean4seMexu9
CONTACT: Sara Hayik, sara.hayik@desales.edu

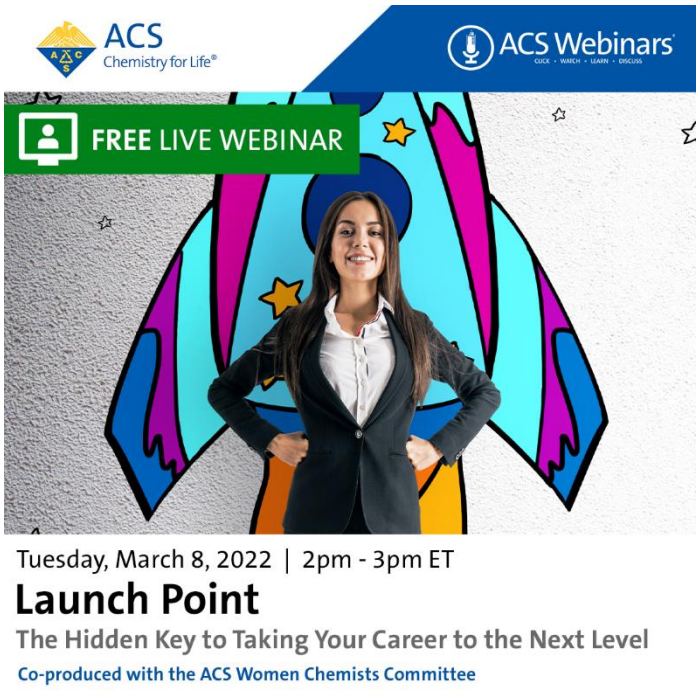
Speaker: J. W. Bennett, Ph. D.
University of Maryland Baltimore College, Department of Chemistry & Biochemistry

"Density Functional Theory (DFT) as a Non-Destructive Probe in the Field of Art Conservation Science"
Synopsis: Art conservation science requires a suite of spectroscopic methods, some of which are invasive and irreversible, to understand what happens to objects of significant cultural heritage. Therefore, we need new types of noninvasive probes to complement existing techniques that can be used to inform and guide conservation scientists in the care of artifacts that have been preserved, stored, or displayed under a wide range of conditions. We put forth density functional theory (DFT) for this purpose. DFT is a quantum mechanical tool used to map out interactions at the atomistic level, where the length scales are in the Angstrom to nanometer regime. The types of atomistic calculations that were developed concurrent with developments in DFT were for bulk materials, whether they be metals, semiconductors, or insulators. It has only been in the last 15 years that advances in computing, which include improved network connections, computing materials, and architectures, and algorithms, have made it possible to investigate complex surface phenomena. The types of surface interactions that we can easily investigate are at the interface of small molecule adsorbates and material surfaces. Using DFT we can do this for different terminations across a wide range of chemical environments for different sized surface cells. Here we focus on using DFT as a noninvasive probe to determine which small molecule interactions are weak and relatively innocuous and which are strong and result irreversible changes for mineral oxide and carbonate surfaces. Our modeling work looks at oxide and carbonate mineral surfaces common to artifacts, and through the lens of the Baltimore SCIART program, we describe our efforts to better understand the effects of small molecule adsorbates on aragonite surfaces.

Density Functional Theory (DFT) as a Non-Destructive Probe in the Field of Art Conservation: Small Molecule Adsorption on Aragonite Surfaces; Heimann, Jessica; Tucker, Jasper; Huff, Layla; Kim, Ye Rin; Ali, Jood; Stroot, M. Kaylor; Welch, Xavier; White, Harley;Wi lson, Marcus; Wood, Cecelia; Gates, Glenn; Rosenzweig, Zeev; Bennett, Joseph; ACS Appl. Mater. Inter. (Acct'd, Feb. 2022)
Baltimore SCIART: A Fully Virtual Undergraduate Research Experience at the Interface of Computational Chemistry and Art; J. E. Heimann, T. H. Williams, J. W. Bennett, and Z. Rosenzweig; J. Chem. Ed., 2021 (in press) https://pubs.acs.org/doi/10.1021/acs.jchemed.1c00425
A Density Functional Theory (DFT) Investigation of How Small Molecules and Atmospheric Pollutants Relevant to Art Conservation Adsorb on Kaolinite; J. E. Heimann, R. T. Grimes, Z. Rosenzweig, and J. W. Bennett; Appl. Clay Sci., 2021 (206) 106075 https://www.sciencedirect.com/science/article/pii/S0169131721000995?dgcid=author

UNDERGRADS: WE WANT TO SEE YOUR SCIENCE!! CALL FOR POSTERS!!
REGISTER & SUBMIT YOUR ABSTRACT BY APRIL 4th: https://forms.gle/fAZ5S6Ean4seMexu9

LEHIGH VALLEY ACS CAREER PAGE



Congratulations to WCC: 95 Years of Excellence across the chemical enterprise!

For this year's celebration, WCC will focus on its mission to advocate and promote women chemists and their work around the world. At this moment in history, it is especially important for women to understand their identities, strengths, weaknesses, how they are perceived by their colleagues, and how they can use this heightened awareness to successfully navigate their careers.

JOIN US for the webinar titled "Launch Point: The Hidden Key to Taking Your Career to the Next Level" on Tuesday, March 8 at 2:00 p.m. ET. Keynote speakers Katherine Lee, Pfizer and Kathryn McHugh, Mclean Hospital and Harvard Medical School discuss why and how self-awareness is a foundation for women to elevate their careers.

Register: https://www.acs.org/content/acs/en/acs-webinars/professional-development/launch-point.html
WCC member Danniebelle Haase from Dow will be the moderator of this webinar organized by Anna Waclawa Sromek and Lorena Tribe.

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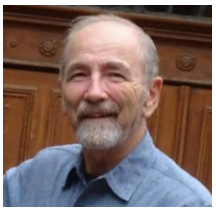
Check out the Career page on our website lvacs.org/careers for a wealth of information on the services provided by LVACS to chemists at all stages of their careers. Online courses, 1-on-1 consulting, professional development grants and the ACS Career Navigator™ package are some of the benefits offered to ACS members to assist in planning and executing your career. Greglynn Gibbs, our local section ACS Career Consultant, would be happy to assist any member seeking more information. greglgibbs@gmail.com

Polymer Chemists, Mussel Polymers, Inc.
Mussel Polymers, Inc. located at 116 Research Dr, Bethlehem, PA 18015 in Bethlehem PA is a biomimetic specialty adhesive and formulations company. We are seeking Polymer Chemists and Adhesion Scientists to join our team while we expand our scientific development and pilot manufacturing. This is an opportunity to join an innovative startup looking to rapidly grow and develop new solutions to previously unsolvable problems. Qualities desired in ideal candidates are: Pilot scale polymerization design and operations experience, Commercial scale specialty polymer production experience, Experience with catechol chemistry, Experience with functional protection/de-protection chemistry, Organic monomer synthesis chemistry experience and cGMP production experience. Interested? CONTACT: letsbond@musselpolymers.com

Retirement is for the Birds



Dwight Chasar and his wife use retirement to indulge their ornithological interests

[reprinted from Industry Matters Newsletter February 17, 2022]

Dwight Chasar graduated from the University of Pittsburgh with a BS in chemistry in 1964, earned his PhD from Case Western Reserve University in 1968, and was a post-doctoral fellow and teaching associate at SUNY Buffalo in 1968-69. He served in the US Army for two years after that at the US Army Natick Research Labs in Massachusetts. He was an assistant professor at the University of Pittsburgh, Johnstown, for three years, and then joined BF Goodrich. Dwight spent 33 years working at the same telephone extension and lab, and he saw BF Goodrich's transition from Noveon to Lubrizol and then Emerald Performance Materials. In 2007, Dwight retired as a research and development fellow. Dwight enjoys bird watching in US and has traveled to more than 20 countries, which has allowed him to see more than 3000 species. He is currently a reviewer for eBird (Cornell Lab of Ornithology) for three counties in Ohio. What he enjoys most about his life: He is never bored.

Did you choose retirement? Or was it chosen for you?

I chose to retire when I wanted and that was in 2007. My position was safe. However, there developed circumstances that reinforced my decision. I wanted to spend more time on my hobby of ornithology as a volunteer for the Ohio Breeding Bird Atlas. It was a six-year study, that had just started, and the company planned to move my lab from the R&D center where I spent my career in industry to the plant, which was 10 miles further away from home.

How was the transition from the working world to retirement?

The transition to retirement was very easy. I was hired back as a consultant the day after I retired to help train my replacement and help on technical problems, consisting of one to three afternoons a week. This lasted almost three years. By that time, I was very happy to end the consulting. These days some companies allow employees to phase out of full-time employment and into retirement. There was actually nothing that surprised me about retirement that I needed to know more about before retiring. What surprised me most about retirement may have been that I missed my technical interactions with colleagues more than I expected I would.

George Bernard Shaw said, "Youth is wasted on the young." Assuming they would listen, what's your best advice for someone in their 20s/30s?

My advice to young people is this: Experiences are more important than things. Experience what you can in the world while you are young because it gets harder to do as you age. Owning things in the end is not important.

What do you enjoy most about being retired?

In retirement I have lots of time to enjoy my hobby of ornithology, which I share with my wife. We can be out everyday enjoying the birds and each other and almost anywhere we are. We do a number of volunteer projects in this hobby and have travelled to many countries to see their birds and experience their culture as a result. We belong to a number of Audubon chapters and bird clubs, and have made bird presentations to them as well. Some of our projects have even led to publications.

What's the biggest challenge you have confronted to this point in your retirement?

Our biggest challenge, besides health, is how to condense 50 years of stuff to a minimum to make our last years simpler. Some of this stuff consists of old chemically related items (memorabilia) to which I am attached.

How do you stay connected to the chemistry enterprise as a retiree?

I have stayed connected to the chemistry enterprise mainly through ACS activities. As a councilor for the Cleveland Section for over 30 years, as least 10 of those in retirement, I attended all the national meetings, worked on committees, attended council and technical meetings, and most local section meetings. I am still an Alternate Councilor and Trustee for the section. I still read C&EN cover to cover. I also developed a talk called "Chemistry is for the Birds," which I presented to a number of ACS local sections throughout the US and published as installments in the Senior Chemists Committee newsletters.

What's a travel destination you can't wait to get back to?

A travel destination to get back to would be South America to see more of their birds. There are new species still being discovered there. A new destination might be Mexico, as we saved this country for last to bird thinking travelling there would be easier in later years. COVID-19 has put a crimp in that plan.

What do you like most about where you are living in retirement? What's one thing you wish you could change about where you live?

We live in northeast Ohio, just a few miles from the Cuyahoga Valley National Park, the Cleveland and Akron Metroparks, and Lake Erie. All of these areas provide excellent bird-watching experiences and opportunities for volunteering. I wish we could get more sunshine.

What guidance do you have for people who are getting ready to retire?

Before you retire, I suggest that you have a solid plan of what you will do to occupy your time and make sure it can be done year-round, and best with a partner.

ACS Project SEED Applications

Special Notice to High School Students and Teachers: Summer 2022 Internship Applications Now Open!

Project SEED provides sustained STEM research, learning, and growth opportunities for high school students with diverse identities and socioeconomic backgrounds. The American Chemical Society is now accepting applications for summer 2022 internships. *The application will be open until Monday, March 21st.* Students should read and collect all necessary information before beginning the application. You can find the list of necessary information and the application on the Project SEED Website. Want to learn more about the Project SEED Program? Check out the Project SEED flyer and consider posting it in your school. Encourage interested students to visit the application information webpage for students and parents. If you have any questions, comments, or concerns, you can contact your local coordinator, Jeremy Heyman (jbheyman@gmail.com), or the national office at projectseed@acs.org. We hope to see many of your students apply!

ACS Fellows Nominations Open through April 1!

Recognize an ACS member's outstanding contributions to science and the profession, as well as their exemplary service to ACS by nominating them to be an ACS Fellow! The ACS Fellows Program recognizes members of the ACS for excellence and leadership in both of two areas: (1) science, the profession, education, and/or management, and (2) volunteer service in the ACS community. National Committees, Local Sections, Divisions, International Chemical Sciences Chapters, and individual members may all submit nominations for ACS Fellows online. Visit the ACS Fellows webpage for complete nomination details, and email any questions to fellows@acs.org.

Bonding Through Chemistry: ACS Spring 2022

Last Call for the ACS Spring Meeting, March 20-24! Access the ACS Spring 2022 Meeting **Program**. Explore the Technical Program and start planning your meeting experience. Find information about the symposia schedule and session types planned, use the filtering capabilities to find programming by division, date, session type, symposia, and time block. Visit the website to find information on booking your stay, attendee resources, and **register**. Attend courses and workshops, both in-person and virtually, to grow your **career**. Discover the latest **Student Programming** details planned for ACS Spring 2022. Find information about the technical programming and engagement events for students.

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ACS Fall 2022 Abstract Deadline – March 14

The deadline to submit your abstracts for ACS Fall 2022 is quickly approaching! The theme, Sustainability in a Changing World, is at the core of programming for the hybrid meeting in Chicago, IL, August 21 – 25. Those who wish to submit an abstract will have the option of selecting a virtual or in-person presentation.

List of Topics Submit Now

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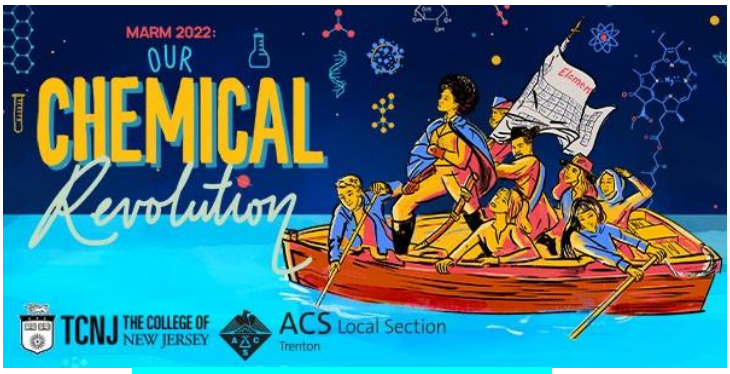

https://marm2022.tcnj.edu/

Abstract Submission deadline March 7, 2022.
Early Bird Registration is now open.
Keynote Speakers:
Devin Swiner, Senior Scientist, Merck and Co, Co-founder of #blackinchem
Kei Koizumi, Chief of Staff, White House Office of Science and Technology Policy
Lisa Jones, Associate Professor of Pharmaceutical Sciences, University of Maryland, Baltimore
Lingyun Chen, Professor of Agricultural, Life, and Environmental Science, University of Alberta

We will be fully in person! We can't wait to see you and your science at MARM June 1-4 at TCNJ!
Undergraduates! Consult with your research mentor to submit a poster or an oral presentation.

2022 CCEW Illustrated Poem Contest
The Buzz About Bugs: Insect Chemistry

The Lehigh Valley Local Section of the American Chemical Society (ACS) is hosting an illustrated poem contest for students in kindergarten through 12th grade. Entries must be sponsored by a local school or community group for verification purposes.

Contest Deadline: Sunday, April 24, 2022 at 11:59 PM Eastern
Local Prizes: ACS Gear from the ACS Shop
Local Contact: Dr. Lindsey A. Welch, lawelch@cedarcrest.edu
Submission: Submit entries online at bit.ly/CCEWpoems

Winners of the Lehigh Valley Local Section's Illustrated Poem Contest will advance to the National Illustrated Poem Contest for a chance to be featured on the ACS website and to win prizes!

Write and illustrate a poem using the CCEW theme, "The Buzz About Bugs: Insect Chemistry." 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 related to the CCEW 2022 theme include:

Entomology	Eating Insects	Insect Molecules
Insect Bites	Pollination	Pollinators

Entries will be judged based upon:

Artistic Merit - use of color, quality of drawing, design & layout
Poem Message - fun, motivational, inspiring about yearly theme
Originality Creativity - unique, clever and/or creative design
Neatness - free of spelling and grammatical errors

Contest rules:

- All poems must be no more than 40 words, and in one of the following styles to be considered: Haiku, Limerick, Ode, ABC poem, Free verse, End rhyme, and Blank verse.
- Entries are judged based upon relevance to and incorporation of the yearly theme (The Buzz about Bugs: Insect Chemistry), word choice and imagery, colorful artwork, adherence to poem style, originality and creativity, and overall presentation.
- All entries must be original works without aid from others. Physical drawings may be scanned or captured via camera and submitted to the online form. Illustrations may be created using crayons, watercolors, other types of paint, colored pencils, or markers.
- The illustration may also be electronically created by using a digital painting and drawing app on a computer, tablet, or mobile device. If the illustration is created using a digital painting or drawing app, the name of the program must be included on the entry form.
- The text of the poem should be easy to read and may be typed before the hand-drawn or digital 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.
- No clipart or unoriginal images can be used.
- Only one entry per student will be accepted.
- Students must be sponsored by a school or another sponsoring group *(e.g. Homeschool Association, Boys and Girls Club, Scout Troop, 4-H, etc.)*.
- 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.

LEHIGH VALLEY SECTION OF THE AMERICAN CHEMICAL SOCIETY
2022 EXECUTIVE COMMITTEE

OFFICERS

Chair:
Lindsey Welch
lawelch@cedarcrest.edu

Chair Elect:
Steve Boyer
lawelch@cedarcrest.edu

Immediate Past Chair:
Roger Egolf
rae4@psu.edu

Secretary:
Nigel Sanders
nigel53.sanders@gmail.com

Treasurer:
Lorena Tribe
lut1@psu.edu

COUNCILORS

Jeanne Berk (term ends 12/31/24)
jrberk@cedarcrest.edu

Kelley Caflin (term ends 12/31/23)
caflinacs@yahoo.com

ALTERNATE COUNCILORS

Mike Bertucci (term ends 12/31/23)
bertuccm@lafayette.edu

Ned Corcoran (term ends 12/31/24)
ewc777@gmail.com

The Octagon Newsletter is published by the Lehigh Valley Section of the American Chemical Society to provide information to section members and the public about activities and programs which support the section mission "To promote the chemical sciences in the Lehigh Valley section for the benefit of our members and our community." Send all queries to the editor at: nigel53.sanders@gmail.com

APPENDIX: 2022 LVACS Competitions Announced

Information, eligibility and nomination/application forms

Chemagination
Foundation in Chemistry Scholarship
Organic Chemistry Award
High School Teacher of the Year
Small College Teacher of the Year

CHEMAGINATION 2022

January 30, 2022

Dear High School Teachers,

The Lehigh Valley American Chemical Society (LVACS) will be holding a Chemagination Competition. Chemagination is a great learning experience for students. In addition to increasing their knowledge of science and chemistry, they can improve their creative, teamwork and public speaking skills. Such skills will serve them well in their future careers.

High school students are asked to imagine that they are living 25 years in the future, 2047 and are writing for ChemMatters, a magazine for high school students that focuses on the role of chemistry in everyday life. The editor chooses them to them to write the cover article for the next issue of the magazine describing a recent breakthrough or innovation in chemistry and its applications that improve the lives of those living in 2047. Along with the article they have the honor of designing the magazine's cover. The subject of the article is: "Describe a recent breakthrough or innovation in chemistry (and/or its applications) that has improved the quality of people's lives today." The article must be written to fit in one of four categories: Alternative Energy, Environment, Medicine/Health, or New Materials.

The local section competition will be completely electronic. Teams should submit their articles and cover design to by April 18, 2022. The articles will be judged based on the MARM 2022 rules. Please refer to the attached document titled 2022 MARM CHEMAGINATION DESCRIPTION AND RULES for the official rules.

The winners of the LVACS local section competition will advance to the regional meeting, MARM 2022 sponsored by the Trenton of the ACS. This will be held on Saturday, June 4. First place category winners from Local ACS Section's Chemagination contests are eligible to participate in MARM 2022. If a first place winning team chooses not to participate, a second place team can serve as an alternate.

At this time the plan is for an in-person event. At that event masks covering the nose and mouth will be required. Students and faculty will be required to comply with any existing NJ Covid regulations for large gatherings. If an in person event is not possible the regional competition will move to virtual event

DEADLINES

March 15: Teams should submit their intent to participate (this allows for appropriate judge recruitment but is not a firm deadline.)

April 18: Teams submit their articles online for the LVACS competition to lvacschemagin@gmail.com. (this is a firm deadline)

May 9: Teams notified of award status (this is a firm deadline)

May 2022 or September 2022: Teams honored at Lehigh Valley ACS awards meeting

Late May (TBD): Local section winning teams submit their articles for pre-judging to MARM 2022

June 4: The 2022 MARM Chemagination Competition takes place either virtually or in person at The College of New Jersey, 2000 Pennington Rd, Ewing, NJ 08628-0718 https://tcnj.edu/

Regards,
John Freeman, Chemagination 2022 coordinator
lvacschemagin@gmail.com

2022 MARM CHEMAGINATION DESCRIPTION AND RULES

CONTEST OVERVIEW

For this event, high school students are asked to imagine that they are living 25 years in the future and have been invited to write an article for ChemMatters, a magazine for high school students that focuses on the role of chemistry in everyday life. The subject of the article is: *"Describe a recent breakthrough or innovation in chemistry (and/or its applications) that has improved the quality of people's lives today."* To view a sample ChemMatters magazine visit acs.org, and look under Education: http://www.acs.org/content/acs/en/education/resources/highschool/chemmatters.html.

In addition to the article, students are asked to design a cover for the magazine. The article must be written as if the student is living in the year 2047, looking back at innovations that have occurred since 2022. The innovation must fall into one of the following categories:

* Alternative Energy
* Environment
* Medicine/Health
* New Materials

A few examples of areas where development is expected are: nanotechnology, energy efficiency, pollution prevention, green chemistry, sustainability, intelligent devices for sensing, proteomics, climate models, biopharmaceutical therapies, medical devices and/or implants and new energy sources.

Evaluation of the entry is based upon:

(1) the written article which is submitted in advance,
(2) the presentation of the innovation on a self-standing display and
(3) knowledge of and soundness of the science as demonstrated in interviews with judges (much like science fair judging).

RULES

ARTICLES must:

- be written by a team of two or three students; each student may be on only one team.
- be about 1000 words (figure captions are not included in the limit).
- present the chemistry/scientific concepts/ideas/principles behind the innovation.
- describe the innovation and indicate how it has improved people's lives.
- present a "history" of the changes that had to occur over the prior 25 years to develop this innovation.
- include drawings, diagrams, illustrations and descriptions of the chemistry and any technology involved in all key aspects of the innovation.
- cite a minimum of three technical references.
- include a cover design for the magazine. The cover design can be an original computer graphic or a free-hand drawing.

DISPLAYS must:

- be 24" deep, 40" wide and 48" tall or less, and be able to sit on a table, much like at a science fair display.
- include the cover of the magazine.
- be a visual representation of the article's content with a minimum of text.
- include a list of references cited.

ATTENDANCE:

- At least one member of the team must attend the competition to present the display and be interviewed by the judges to be eligible for prizes.

SCORING:

- Winners are selected by the judges based on the quality of the article and display, and the quality and understanding of the science of the innovation.
- Criteria for scoring include scientific thought, creativity, clarity, thoroughness and teamwork.

ELIGIBILITY/REQUIREMENTS:

- Each local section can submit up to four entries (1 per category).
- All students must be currently enrolled in an accredited high school or home school and be taking or have recently completed a grades 9-12 science class.
- Students and their parents are responsible for transportation to and from the meeting site.
- All entries become the property of the ACS and will not be acknowledged or returned.
- The ACS, its agents and contractors, are not responsible for lost, late, misdirected, or postage-due entries.
- Acceptance of the prize constitutes consent to use the winners' names, likeness and entries for editorial, advertising, and publicity purposes.
- Prizes are not transferable.
- Taxes, if any, are the sole responsibility of the winner.
- Participants will be asked to provide a Photo Release Form signed by a parent or guardian prior to attending the contest.

KEY DEADLINES

February 28	Local sections notify 2022 MARM Chemagination competition co-chairs of their preliminary intent to participate in 2022 MARM Chemagination.
March 30	Local sections confirm their intent to participate in 2022 MARM Chemagination
May 1	Local Sections submit their estimate of the number of teams they will be sending to the 2022 MARM Chemagination.
May 15	Local sections confirm the number of participating teams and submit article titles and contact information on each student. (Submission process will be announced at a later date.)
Late May TBD	Teams submit their articles to the 2022 MARM competition for pre-judging.
June 4	The 2022 MARM Chemagination competition takes place on the campus of The College of New Jersey, 2000 Pennington Rd, Ewing, NJ 08628-0718 https://tcnj.edu/

2022 Foundation in Chemistry Award

The Lehigh Valley Section of the American Chemical Society (LVACS) is delighted to announce the 2022 Foundation in Chemistry Award. The award, designed to promote the chemical sciences at the college level, will be given to a high school senior who will be majoring in chemistry, biochemistry, or chemical engineering and attending a college or university in the Lehigh Valley Section. This scholarship award consists of $1000 and a certificate, which will be presented to the winner at the May meeting of the Lehigh Valley Section of the American Chemical Society. We have enclosed the guidelines for the award and the application materials. Please post the flyer and feel free to make additional copies as needed.

As an ACS member, please share this information with parents, students and guidance counselors. The four-part application should be completed and submitted by **April 18, 2022**. We appreciate your help and thank you for publicizing the 2022 Foundation in Chemistry Award. We look forward to many worthy applications.

Instructions: The Foundation in Chemistry Award is sponsored by the Lehigh Valley Section of the American Chemical Society (LVACS) to promote the chemical sciences at the college level. This award, consisting of $1000 and a plaque, will be awarded annually to a high school senior within the membership boundaries of the LVACS (Lehigh, Northampton, Berks, Monroe, Schuylkill, and Carbon Counties in PA, and Warren County in NJ) to attend a college in the Lehigh Valley area (eligible colleges are listed below) and intending to major in chemistry, biochemistry, or chemical engineering. The $1000 check will be given to the student for defraying college expenses.

The applicant for this award should have completed one year of college preparatory chemistry, four years of mathematics, and one semester of college preparatory physics by high school graduation.
The application, which is attached to these instructions, will be evaluated on merit by the LVACS HS Scholarship Committee. The completed four-part application (nomination letter from your chemistry teacher, the application form, transcript, and your essay) must be submitted by April 18, 2022 and emailed to: lvacsfoundations@gmail.com
Please direct any questions about this award to: John Freeman at lvacsfoundations@gmail.com

Sincearly
John Freeman
Chair of the LVACS HS Scholarship Committee
220 W Pierce
Easton, PA 18042

Eligible Colleges for Awardees:

Albright College
Alvernia College
Cedar Crest College
DeSales University
East Stroudsburg University
Kutztown University
Lafayette College
Lehigh Carbon CC
Lehigh University
Moravian University
Muhlenberg College
Northampton County CC
Penn State-Berks
Penn State-Lehigh Valley
Penn State-Schuylkill Valley
Reading Area CC
Warren County CC

Lehigh Valley Section

2022 Foundation in Chemistry Award
Nomination Form

(To be filled out by the student)
Student's Name: _____

Chemistry Teacher's Name: _____
e-mail address: _____

School Address: _____
_____

I hereby ____ waive my right of access to this recommendation
____ do not waive my right of access to this recommendation

(To be filled out by the teacher)
Please submit a letter of recommendation (as an attached letter) addressing such issues as the above student's knowledge of chemistry and the sciences, initiative, leadership potential, and potential as a student in the chemical sciences at college. Any additional information about the student's financial need would be appreciated; we will consider financial need in the event we judge more than one student to be equivalent on the basis of merit.

Deadline: April 18, 2022

Lehigh Valley Section

Foundation in Chemistry Award
Application Form

(To be filled out by the student)

Full Name: _____

Home Address: _____

_____

_____

Home Phone #: _____

e-mail address: _____

High School: _____

Names and addresses of your legal guardians:

_____

_____

_____

College you will attend: _____

Proposed major degree program: _____

Please attach an official transcript with your most recent grades.

Please write and attach an one page essay (250 words maximum) on why you have chosen to study the chemical sciences in college.

Deadline: April 18, 2022

Application Check list

☐ Application form/this page

☐ Letter of recomendation

☐ Student Essay

☐ Student Transcript

LEHIGH VALLEY ACS ANNOUNCES 2022 ORGANIC CHEMISTRY SCHOLARSHIP COMPETITION

The Lehigh Valley Section of the American Chemical Society will award its annual Scholarship for Organic Chemistry this spring! To be eligible, students should be below the junior level, currently enrolled in organic chemistry at an institution in the section, and a chemistry, biochemistry, or chemical engineering major. The competition entails taking the ACS Organic Chemistry Examination (45%), a brief, one-page letter of recommendation from the student's organic chemistry professor (10%), and an essay on a topic in organic chemistry (45%). The value of the scholarship is $1000. Additionally, the top essay will receive $100. Details about the exam, letter, and essay follow below. Students should indicate their interest in the scholarship by April 28th, 2022 to Dr. Michael Bertucci (bertuccm@lafayette.edu)

ACS Organic Chemistry Examination: The exam will be administered on **Saturday, April 30th, 2022** at Lafayette College, Easton, PA from 9:00-11:00 AM. Students should report to the entry foyer of the Hugel Science Center. Parking is available behind the Hugel/Kunkle Hall in the lot indicated by the red asterisk on the campus map (see next page). Juice and bagels will be available inside the foyer starting at 8:30 AM.

Essay: The student should address the impact of an organic molecule or process in organic chemistry on society and his or her personal interest in it. The essay should be written at a level to interest and educate a general chemist who has completed sophomore-level organic chemistry. If a molecule is chosen, the synthesis, including key mechanistic features and structural analysis, should be covered. If a process is chosen, the physical and chemical basis for its success should be explained. Appropriate use of structures to facilitate understanding of the chemistry is expected. An additional page with references must be included. References should follow the guidelines as delineated in the ACS Style Guide. The essay should run from 1000 to no more than 1200 words in Times New Roman 12-point font with one-inch margins on all sides. The references and figures are not considered in the overall word count. Each page should have a header with the student's last name, brief essay title and page number. The winning essay after editing may be published in a future issue of the Octagon.

The essay will be rated on:

- Appropriate depth of coverage of the molecule or process
- Appropriate depth of coverage on the impact on society and student's interest
- Ease of reading, including grammar, spelling, and logical flow of the material
- Appropriate use of scholarly references & formatting

The essay should be submitted electronically to bertuccm@lafayette.edu by the student **before the exam begins** on April 30th. The essay can be submitted at any time before the day of the exam; so, you are encouraged to get started early!

Letter of Recommendation: Professors writing a letter of recommendation on behalf of a student who is applying for the Lehigh Valley ACS Scholarship should speak to the student's skills in lecture and laboratory in Organic Chemistry I and Organic Chemistry II. Please provide the course grade for Organic Chemistry I and comment on performance on written exams, proficiency in organic lab, and participation in course-related activities. If possible, address the student's quantitative skills by commenting on her or his performance in quantitative analysis or its local equivalent. The letter of recommendation must be signed on institution letterhead and submitted electronically to bertuccm@lafayette.edu by the student's professor **before the exam begins** on April 30th.

THE LEHIGH VALLEY SECTION AWARD FOR EXCELLENCE IN HIGH SCHOOL TEACHING

AWARD PROGRAM FOR 2022

Dear Principle or Science Coordinator

The Lehigh Valley Section of the American Chemical Society (LVACS) is delighted to announce the 2022 award for excellence in teaching. The award is designed to promote excellence in Chemistry instruction at the high school level within the membership boundaries of the LVACS (Lehigh, Northampton, Berks, Monroe, Schuylkill, and Carbon Counties in PA, and Warren County in NJ). The award consists of a $500 award and a certificate of recognition. We hope that you will Identify an outstanding teacher at your school and support them for the award. Additionally, we hope you will share this with your faculty so that they might identify colleagues deserving of the award. The application should be completed and submitted by **APRIL 1, 2022 to** LVACSTOTY@gmail.com as an attachment.

We appreciate your help and thank you for publicizing the 2022 Excellence in Teaching award . We look forward to many worthy applications. Please contact me by phone or e-mail if you have any questions.

Sincerely,

John Freeman
Chair, LVACS Excellence in teaching award Committee
LVACSTOTY@gmail.com
610 923-3587

THE LEHIGH VALLEY SECTION AWARD FOR EXCELLENCE IN HIGH SCHOOL TEACHING
AWARD PROGRAM FOR 2022

Purpose: To recognize, encourage, and stimulate outstanding teachers of high school chemistry in the Lehigh Valley Section of the American Chemical Society

Nature*:* The Section Award consists of a cash award and a certificate. A meal at the meeting of the Lehigh Valley section of the ACS at which the award will be presented will be paid. A certificate will also be provided to the recipient's institution for display. The Winner's Application will be forwarded to the Mid Atlantic Regional ACS Division of Chemical Education Award for Excellence in High School Teaching for the following year.

Who May Nominate? Any individual, except a member of the award selection committee or currently enrolled student of the nominee, may submit one nomination or support form in any given year. Prior winners are members of the award selection committee for 10 years post their award

Who is Eligible? The nominee must be actively engaged in the teaching of chemistry or a chemical science in a high school (grades 9-12) on at least a half-time basis in Berks, Schuylkill, Carbon, Lehigh, Northampton or Monroe counties in PA or in Warren County, NJ. The nomination should clearly demonstrate as many of the following attributes as possible. :

- The quality of the nominee's teaching; unusually effective methods of presentation should be emphasized;
- The nominee's ability to challenge and inspire students;
- Extracurricular work in chemistry or a chemical science by the nominee, including science fairs, science clubs, and activities that stimulate the interest of young people in chemistry and related sciences;
- A willingness to keep up-to-date in the field, as evidenced by the pursuit of a higher degree in chemistry or a chemical science, enrollment in refresher courses and summer institutes, regular attendance at scientific meetings, membership in professional organizations, and other means of self-improvement;
- Evidence of leadership and/or active involvement within the profession.

Required components of Nomination Portfolio:

- The Awards Committee will consider only **complete** nomination portfolios.
- A complete portfolio shall consist of
  - A Nomination Portfolio Check List (see Page 3), which shall serve as the Portfolio Cover Sheet;
  - Nominator Information Form (see page 5);
  - Nominee Information Form (see page 6);
  - Nominator Recommendation of not more than 750 words submitted by the nominator according to the guidelines outlined on the Recommendation Form (see page 7);
  - A current 2 page curriculum vitae or resume that includes a list of the nominee's honors, professional activities, and additional evidence of service to the profession; **NOTE: Limited to no more than two pages and the activities listed must have occurred within the past five years.**
  - A statement by the nominee of not more than 500 words that describes the nominee's teaching philosophy or commitment to the profession;
  - At least one, but not more than three, letters of support. One letter, of no more than 400 words, must be from the teacher's current principal or supervisor. Additional letters of support, of no more than 400 words, may be sent by colleagues, members of the American Chemical Society, who are familiar with the nominee's achievements, or former students and parents of former students.
  - **NOTE: Some commentary on student reaction to the work of the nominee in either the nominating letter or that of the current principal or supervisor is essential for a well-rounded portfolio.**

Submit nominations to ***John Freeman***) by e-mail attachment to LVACSTOTY@gmail.com by April 1st 2020
***Please state award title in subject line, and the candidates name ***

ACS Lehigh Valley Local Section
Award for Excellence in High School Teaching
2020 Nomination Portfolio Cover Sheet Check List

The following items are required components for a Nomination Portfolio. Please check each item contained in the portfolio. This list, submitted by the nominator, will serve as the cover to every submitted portfolio.

☐ Nominator Information Form;

☐ Nominee Information Form;

☐ Nominator Recommendation Letter of no more than 750 words send as email by Nominator with nominees name in subject line.

☐ Nominee's Statement on Teaching Philosophy of no more than 500 words;

☐ Nominee's Current CV:

A curriculum vitae or resume that includes a list of the nominee's honors, professional activities, and additional evidence of service to the profession. This must be limited to no more than two pages and the activities listed must have occurred within the past five years.

☐ Letters of Support (no more than 400 words) sent separately as email by principal with nominee's name in subject line:

One must be from the teacher's current principal or supervisor.
Up to two additional letters of support may be sent by colleagues, members of the American Chemical Society who are familiar with the nominee's achievements, or former students and parents of former students.

Nominator's

Name:_____ Date:_____

NOMINATION FORM

THE ACS LEHIGH VALLEY LOCAL SECTION AWARD
FOR EXCELLENCE IN HIGH SCHOOL TEACHING

Deadline: *APRIL 1, 2022*

Any individual, except a member of the award selection committee or current students of the nominee, may nominate or support *only* one nominee during any given award year. Submit to ***JOHN FREEMAN*** via e-mail at LVACSTOTY@gmail.com by April 1 2022. Please state award title in the subject line.

The-award will be announced at the May Meeting of the Lehigh Valley Section of the American Chemical Society. Dinner will be arranged

NOMINATOR INFORMATION

Name:	
Company or Institutional Affiliation:	
Present Position (Exact Title):	
Address:	
City:	
State and Zip:	
Telephone:	
Fax:	
e-mail:	
Relationship to Nominee	

NOMINATION FORM

THE ACS LEHIGH VALLEY SECTION AWARD FOR EXCELLENCE IN HIGH SCHOOL TEACHING

Deadline: ***April 1, 2022***

NOMINEE INFORMATION

Name:	
Present Position (Exact Title):	
School:	
Address:	
City:	
State and Zip:	
Telephone:	
Fax:	
e-mail:	
Website: if appropriate	

Give your current teaching assignment including course titles and grade levels. What is your involvement in extracurricular activities

- On a separate sheet, provide a statement of not more than 500 words in which you present your teaching philosophy or otherwise describe your commitment to the profession.

NOMINATION FORM

THE ACS LEHIGH VALLEY SECTION AWARD
FOR EXCELLENCE IN HIGH SCHOOL TEACHING

Deadline: ***APRIL 1, 2022***

RECOMMENDATION STATEMENT OF NOMINATOR

Submit a narrative statement of no more than 750 words that describes and comments upon the following:

- The quality of the nominee's teaching. Unusually effective methods of presentation should be emphasized;
    - **NOTE: Some commentary on student reaction to the work of the nominee in either the nominating letter or that of the current principal or supervisor is essential for a well-rounded portfolio.**
- The nominee's ability to challenge and inspire students;
- Extracurricular work in chemistry or a chemical science by the nominee, including science fairs, science clubs, and activities that stimulate the interest of young people in chemistry and related sciences;
- A willingness to keep up-to-date in the field, as evidenced by the pursuit of a higher degree in chemistry or a chemical science, enrollment in refresher courses and summer institutes, regular attendance at scientific meetings, membership in professional organizations, and other means of self-improvement;
- Evidence of leadership and/or active involvement within the profession.

ACS LEHIGH VALLEY LOCAL SECTION AWARD FOR EXCELLENCE IN TEACHING AT SMALL COLLEGES

You are cordially invited to nominate a colleague to be recognized at the annual awards program of the Lehigh Valley Section of the American Chemical Society (LVACS) to be held in mid-April 2022. The event will feature dinner followed by a keynote speaker and the award recognition program.
We are seeking to recognize, encourage, and stimulate high quality teaching and research at small colleges. Please send the nominee's short curriculum vitae, list of publications, and evaluation of the nominee's achievements as a teacher in a small college. This document should clearly demonstrate the candidate's attributes: the quality of the candidate's teaching; organization and efficiency of lab work; research and/or development work; ability to challenge and inspire students; extra-curricular work in chemistry; courses, meetings, presentations, awards, etc. Seconding letters are not essential but as many as three may be included with each nomination. Letters may include careful evaluations of the teacher's abilities by their superiors, associates, or by local section members.
Please contact Lorena Tribe at lut1@psu.edu for any questions pertaining to the nomination for this award.
The deadline for reception of your emailed application is April 1, 2022.