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THE INDICATOR

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Indicator

http://www.theindicator.org/

The monthly newsletter of the New York & North Jersey Local Sections of the American Chemical Society. Published jointly by the two sections and distributed to their 6,200 members.

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EDITORIAL DEADLINES

September 2024	August 16, 2024
October 2024	September 16, 2024
November 2024	October 16, 2024
December 2024	November 16, 2024
January 2025	December 16, 2024
February 2025	January 16, 2025
March 2025	February 16, 2025

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June Calendar

NEW YORK SECTION

Monday, June 10, 2024Board of Directors Meeting *See page 4*



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NORTH JERSEY SECTION

Saturday, June 1, 2024 Edison Day *See page 5*

Wednesday, June 12, 2024

North Jersey Executive Committee Meeting *See page 5*



ADVERTISE IN THE INDICATOR

Do you need to reach over 6,000 chemists in the tri-state area to inform them of your products/services to grow your business?

Whether your target audience is scientists working in industry, academia The Indicator offers government, affordable option for your marketing campaign. As shown at left, a ¼ page fullcolor advertisement costs only \$200 / month (\$1500/yr). The deadline for an ad placement is the 16th of the month prior to publication, so your ad can be published within two-weeks of receipt. advertisement will be seen on the first of the month by each member of the New York and North Jersey ACS. Semimonthly emails to these memberships will also include your advertisement ensuring full coverage of your potential clients.

<u>Contact our Ad Sales Manager for more details</u>

NEW YORK SECTION MEETINGS

BOARD MEETING DATES FOR 2024

The New York ACS Board of Directors meetings dates for 2024, are, as follows:

Monday, June 10, 2024 (hybrid) Monday, September 16, 2024 (hybrid) Monday, November 25, 2024 (hybrid)

These meetings will be held on the campus of the United States Merchant Marine Academy in Kings Point, NY (directions) in the Library's Crabtree Conference Room. These meetings are open to all members, however, an RSVP for in-person attendance is required 5 days before the meeting, i.e. the Wednesday before the Monday meeting. All members who would like to attend any of the meetings should inform the New York Section office by emailing Ms. Bernadette Taylor. Prof. Ping Furlan will Chair all meetings. The meetings will start at precisely 6:30 PM.

More information will be posted in future monthly issues of *The Indicator* and on the New York ACS website.

NEW YORK SECTION'S OUTSTANDING SERVICE AWARD FOR 2024 – CALL FOR NOMINATIONS

Many members of the New York Section provide their time, leadership talent, and knowledge to the New York Section. The tradition of excellence of the New York Section is attributable directly to the cumulative effect of these dedicated individuals. Each year the New York Section presents the <u>Outstanding Service Award</u> to a most deserving member of the section. The New York Section is now accepting nominations for this award.

A nomination letter with supporting data should be <u>emailed</u> to the Office Administrator Ms. Bernadette Taylor. Nominations will be accepted **until June 30**, **2024**.

The nominations will be reviewed by a committee consisting of the previous five winners of the award. The Outstanding Service Award for 2022 will be presented at the New York Section's Sectionwide Conference in January 2025 – Save the Date.



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NORTH JERSEY SECTION MEETINGS

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2024 NORTH JERSEY ACS EXECUTIVE COMMITTEE MEETINGS

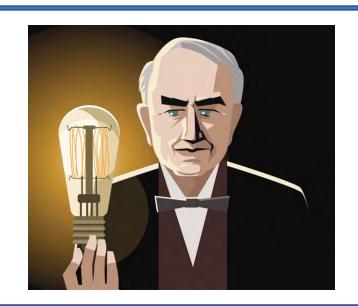
2024 North Jersey ACS Chair Sandra Keyser and the Executive Committee welcome you to our monthly NJACS meetings. Each meeting is held **Wednesday night from 6:30 pm to 8:30 pm**. All members are welcome to attend and become more involved in section activities. The dates for 2024 are, as follows:

Wednesday, June 12, 2024 (hybrid) Wednesday, October 9, 2024 (hybrid) Wednesday, September 11, 2024 (hybrid) Wednesday, November 13, 2024 (virtual) 2025 Planning Meeting in December, TDB

For links to the virtual meetings and RSVP for in-person attendance at hybrid meetings, please check out the calendar on our website.

EDISON DAY IS JUNE 1st

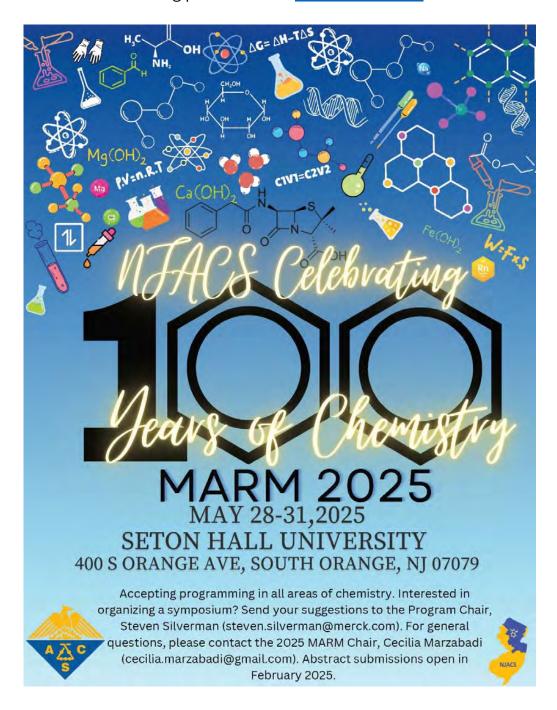
Edison Day is a public outreach event held by the Edison Museum in West Orange during the West Orange Street Fair on June 1, 2024. On a good day hundreds of people will come through the West Orange Street Fair and have the chance to learn about chemistry as well as inventor Thomas A. Edison. The event runs from 11AM to 5 PM all are welcome.





CALL FOR SYMPOSIUM PROPOSALS : MARM 2025 JOIN US IN A CELEBRATION OF THE NORTH JERSEY ACS' CENTENNIAL

The North Jersey ACS solicits symposium proposals for the 2025 Middle Atlantic Regional Meeting of the American Chemical Society (MARM2025) being held at Seton Hall University on May 28-31, 2025. Programming ideas in all areas of chemistry will be considered. Please submit proposals to the Program Manager, <u>Steven Silverman</u>. For general information about the meeting please contact <u>Cecilia Marzabadi</u>.



Deadline for submitting articles and advertisements for the September 2024 issue is August 16, 2024

MEETING REPORTS

WESTCHESTER CHEMICAL SOCIETY'S STUDENT AWARD LECTURE AND DINNER

This annual event was a little different this year: There was no Distinguished Scientist Award as no nominations had been received. Instead, a lecture geared towards students and families was given by Michael Tunick from the ACS Speaker Service on April 23, 2024.. More details below.

The lecture and dinner were held in the Stephen Friedman Room, Wilcox Hall, at Pace University in Pleasantville, NY, with 40 attendees in all, including one on Zoom. The event began with a reception at 5:30 pm with appetizers as the awardees and attendees arrived. Dr. Kay Whiten, current chair of the Westchester Chemical Society, acted as the Master of Ceremonies for the evening. Dr. Whiten first introduced New York Section Chair Dr. Ping Furlan, who spoke briefly of the many Section Activities for students and professionals. The meeting then took a moment to remember with sadness the passing of Joan Laredo-Lidell, former Board Member and active in multiple regional Chemical Society functions for many years. Dr. Whiten then introduced ACS Speaker Dr. Michael Tunick, currently a fulltime faculty member at Drexel University, PA, since he retired from his research position at the US Department of Agriculture. He serves on the ACS Speaker Service with more than 50 presentations at universities and at ACS local sections. Dr. Tunick has authored or coauthored over 140 publications, has coedited ten books, and Oxford University Press has published his book *The Science of Cheese*. He gave an interesting talk on *Four Decades of Dairy Research* at USDA, including personal reflections and four case studies.



Michael Tunick lecturing at the WCS Awards Night.

WESTCHESTER CHEMICAL SOCIETY'S STUDENT AWARD LECTURE AND DINNER (continued)

The Student Awards for 2024 were then presented by Dr. Peter Corfield, Education Chair and Treasurer. There were 9 awardees for 2024 – including two for students who were unavoidably absent. The Student Awardees were given a certificate, a \$50 coupon for Educational Innovations, and the choice of a number of books, including Mary Virginia Orna's *The Chemical History of Color*. Awards were given to:

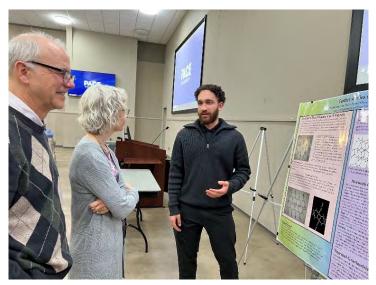
- Lorenzo Salegna, University of Mount Saint Vincent, Faculty: Pamela Kerrigan.
- Katherine Konjalka, Fordham University, Faculty: Christopher Koenigsmann.
- Joseph Mitchell, Iona College, Faculty: Rodney Versace.
- Mikayla Walton, Manhattanville College, Faculty: Darlene Gandolfi (in absentia).
- Amanda Kapiti, Pace University, Pleasantville, Faculty: Irina Gazaryan.
- Mark Dutan, Westchester Community College, Faculty: Jody Reifenberg.
- Joseph Berger, Briarcliff High School, Faculty: Shaniece Mosley.
- Sonia Magalhees, Ossining High School, Faculty: Angelo Piccirillo, Valerie Holmes.
- Bill Chen, Rye High School, Faculty: Sally Mitchell (in absentia).



Student Awardees with Peter Corfield and Kay Whiten

In a new venture, there were two student research posters on display, one from Ossining HS and one from Fordham University. The event concluded with a buffet dinner and interesting conversation between the attendees and the awardees.

WESTCHESTER CHEMICAL SOCIETY'S STUDENT AWARD LECTURE AND DINNER (continued)



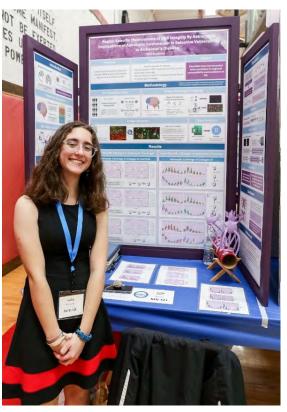
Ahmed Sayed with Fordham U. poster



Speaker Michael Tunick, with Board Members Peter Corfield, Kay Whiten, and Rolande Hodel



Mary Virginia Orna with student holding her book.



Sonia Magalhees, Ossining High School, presents her research



HS Teacher Valerie Holmes is presented with a Thank You gift

NEW YORK ACS 71st ANNUAL UNDERGRADUATE RESEARCH SYMPOSIUM: CELEBRATING EARLY RESEARCH, MENTORSHIP, AND DIVERSITY



On Saturday, May 5, from 8:00 - 2:00 pm. the New York ACS marked a milestone with the successful hosting of its 71st Annual Undergraduate Research Symposium at Medgar Evers College in central Brooklyn. For nearly three-quarters of a century, this Symposium has been a cornerstone of mentorship and discovery, providing an essential platform for nurturing the next generation of scientific leaders. It encourages important early research experiences, offering opportunities to showcase student findings and avenues for their professional networking and growth. This year, under the leadership of the dedicated Student Activities Committee (SAC), led by Drs. Michele Vittadello, Naphtali O'Connor, Harsha Rajapakse, Pratikkumar Rathod, Kevin Mark, and Richard Denton, the event brought together close to 200 attendees including 65 undergraduate student presenters, from nearly 30 surrounding universities and the ACS Student Chapters, alongside their mentors and peers. Special thanks to Ms. Nadia Makar, the ACS DIER Grant, NYACS, and ChemSource, area high school students who participated in the ACS Project SEED program attended and presented their 8-week summer research results at the Symposium for the first time. Symposium sponsors, including PepsiCo, CUNY Graduate Programs, National ACS Student Communities Team, and New York Society of Cosmetic Chemists, showcased their exciting programs to the attendees. Click here for the Program Book.



NEW YORK ACS 71st ANNUAL UNDERGRADUATE RESEARCH SYMPOSIUM: CELEBRATING EARLY RESEARCH, MENTORSHIP, AND DIVERSITY (continued)

Attendees were warmly greeted by SAC leaders and volunteers early in the morning in the Founders Auditorium Lobby where they mingled and connected during the Breakfast Social in the President's Conference Room. Opening remarks were delivered by Dr. Ping Furlan, the 2024 New York ACS Chair, and Dr. Sandie Han, Dean of Science and Allied Health of Medgar Evers College, in the Founders Auditorium. Dr. Furan, echoing Dean Han's sentiments, drew experience from her own undergraduate research and emphasized the immense value of early research. She further encouraged attendees to leverage the rich resources offered by ACS and New York ACS, inviting them to explore opportunities and engage in events. This was followed the Keynote Address delivered by Professor Marvin Parasram from New York University. Dr. Parasram enlightened the audience with his career journey and his innovative research in organic chemistry. Dr. Parasram highlighted the importance of sustainable approaches to functionalizing hydrocarbons and showcased his lab's use of economical 1,3-dipoles under visible-light irradiation. Dr. Parasram's work not only offers greener solutions but also provides valuable insights for aspiring undergraduate and high school researchers, demonstrating the impact of fundamental research in advancing science and sustainability.



After Dr. Rajapakse's instruction of the day and a group photo session, student presentations took place from 1040 to 1210 across Bedford and AB1 Health and Science buildings, each session moderated by the ACS student members from Medgar Evers, Lehman College, and University of Mount Saint Vincent. With twelve simultaneous sessions covering Analytical Chemistry, Biochemistry, Environmental Chemistry, Inorganic Chemistry, and Organic Chemistry, a total of 65 undergraduate student presenters delved into diverse topics, posted intriguing questions, and shared their results with the engaged attendees. The participating institutions included Adelphi University, Columbia University, Fordham University, Hofstra University, Manhattan College, Macaulay Honors College - CUNY, New

NEW YORK ACS 71st ANNUAL UNDERGRADUATE RESEARCH SYMPOSIUM: CELEBRATING EARLY RESEARCH, MENTORSHIP, AND DIVERSITY (continued)



York University, Pace University - NYC, Pace University - Pleasantville, Princeton University, Rutgers University, University of Mount Saint Vincent, Warsaw University, William Patterson University, St. Pete University, and various CUNY campuses, such as the Graduate Center, Baruch College, Borough of Manhattan Community College, Brooklyn College, City College, Guttman Community College, Hunter College, Lehman College, Medgar Evers College, Queens College, Queensborough Community College, and College of Staten Island.



NEW YORK ACS 71st ANNUAL UNDERGRADUATE RESEARCH SYMPOSIUM: CELEBRATING EARLY RESEARCH, MENTORSHIP, AND DIVERSITY (continued)

The New York ACS Project SEED (Summer Experiences for the Economically Disadvantaged) students presented their research results in posters from 1210 to 1240 in the AB1 Health and Science Building Lobby. Sponsored by the ACS, their projects, garnered numerous regional awards, were well received at the Symposium and were conducted over 8-10 weeks under the guidance of local chemists and professors serving as mentors at various institutions including Steven Institute of Technology, Rutgers University, Jose Manti STEM Academy, NJ Institute of Technology, NJ City University, Columbia University, Hudson County Community College, and NJ Medical School. Highlights included:

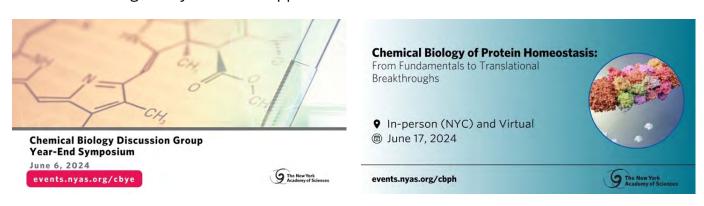
- Jamilett Aldaz: Enzymatic Degradation of Polyesters for Tissue Engineering
- Andy Gonzalez: Engineering Metal Oxides for Chemical Looping Combustion (CLC)
- Juan Andrade: Tuning Metal Particle Powders Shape and Surface Reactivity Using Ball Milling with Varying Organic Solvents
- **Viviana Nunez**: Development of 2D MoS₂ Based FET Sensors For the Detection of PFAS
- Lizzie Laurzardo: Design and Synthesis of Novel Antagonists for Blocking the Action of Estrogen Receptors in Drug-Resistant Breast Cancer
- **John Flores:** Utilizing YOLO and OpenCV to Reduce Landfill Pollution
- **Linda Flores:** Analysis of Soil Carbon Content and Soil Moisture and its Effect on Soil Respiration
- **Yamanni Tay:** The Effect of Lemongrass Essential Oil on Antimicrobial Efficacy with Dough
- Krystinna Arevalo: Ultrastructural Analysis of Engineered Skin Tissue
- Vanessa Mejia: How Can White Rot Fungi Enzymes Clean Contaminated Soil? Using Enzymes to Prevent Contaminated Soil by Understanding the Biochemistry of Bioremediation
- Hillary Guarango: The Impact of Contaminants in Tap Water on Urban Agriculture in Union City
- Jesly Arias: Structural DNA Nanotechnology: Nucleic Acids as an Ideal Building Block for Systemic Drug Delivery Nanostructures
- **Jennifer Ferman:** How Green are Eco-friendly Detergents? Comparing Green and Conventional Cleaners using Planaria

The Indicator is posted to the web 1ST of the month (September – June) at

http://www.theindicator.org/

NEW YORK ACS 71st ANNUAL UNDERGRADUATE RESEARCH SYMPOSIUM: CELEBRATING EARLY RESEARCH, MENTORSHIP, AND DIVERSITY (continued)

The Symposium facilitated invaluable connections between Program Sponsors, Exhibitors, students and faculty. Over lunch, representatives from sponsoring units presented their education programs, fellowship opportunities, and career prospects, and provided one-on-one interactions through Q&A sessions. The event concluded with Certificates awarded to all presenters, followed by a lively Raffle. Participants expressed their enthusiastic support, looking forward to the 2025 Symposium, which will take place on April 26, 2025 at University of Mount Saint Vincent in Riverdale, NY. The ACS New York Section applauds all the presenting students for their remarkable achievements, and extends heartfelt appreciation to Medgar Evers College for graciously hosting, the Student Activities Committee for their meticulous organization, and all mentors, supporting units, and funding agents for their commitment to promoting diversity and fostering academic excellence through early research support.





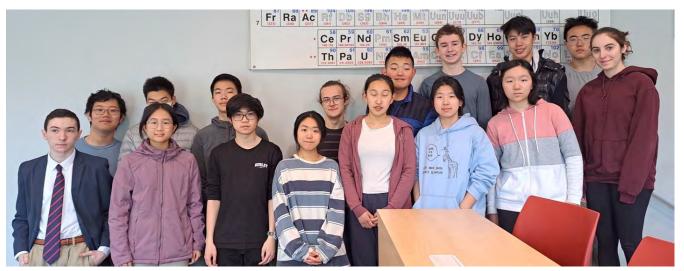
The New York Academy of Sciences is currently recruiting for its <u>Scientist-in-Residence</u> <u>program</u>, which pairs scientists with New York City public school educators and supports them in creating and implementing a year-long research project.

The New York Academy of Sciences is currently looking for graduate students, postdocs, and STEM professionals who are interested in volunteering in a Grades 2-12 STEM classroom, mentoring students and sharing their passion for the sciences. In addition to the chance to develop their teaching and mentoring skills, accepted participants also receive a stipend, and a year membership to the Academy!

A flyer for our program is <u>here</u>. Please pass this opportunity along to anyone in your network who might be a good fit. Interested individuals can also contact the program coordinator, Rea Ruiz at <u>rruiz@nyas.org</u> if they have any additional questions.

2024 UNITED STATES NATIONAL CHEMISTRY OLYMPIAD

Contributed by Stephen Z. Goldberg, Professor Emeritus, Adelphi University, Chair NYACS Olympiad Committee



Back row left to right: Clayton Yu (New Hyde Park Memorial High School), Ryan Tao (Syosset High School), Joshua Li (The Wheatley School), Adam Schaaf (Lakeland High School), Dale Yang (John L. Miller Great Neck North High School), Henry Burton (Hunter College High School), Winston Zhou (Syosset High School), Jeffrey Louie (The Bronx High School of Science)

Front row left to right: Vincent Cacciola (Deer Park High School), Charlotte Huang (W. T. Clarke High School), Kevin Zhang (Stuyvesant High School), Lisa Jin (Jericho High School), Jolene Cao (Smithtown High School East), Alice Kim (William A. Shine Great Neck South High School), Anna Xing (Ward Melville High School), Ayelet Yablon (Sharon High School, Massachusetts)

The New York Section participated in the 2024 United States Chemistry Olympiad (USNCO). The local exam was administered in high schools during the testing window of March 1-24, and a total of 505 students from 83 high schools took the exam. The New York Section extends special thanks to the high school teachers who administered the exam and provided the opportunity for their students to participate in the USNCO.

On April 21 Iona University in New Rochelle hosted the 15 highest scorers from the New York Section and one high scoring visitor from the Northeastern Section for the three part National Exam. We congratulate all 15 outstanding students and their teachers. The teachers who mentored these students are Ms. Ashley Balgobind (Syosset High School), Mrs. Pooja Bansal (New Hyde Park Memorial High School), Ms. Wendy Ganz (Lakeland High School), Ms. Bakhtawar Ghaffar (The Bronx Science High School of Science), Miss Stephanie Giatas (Deer Park High School), Dr. Jeffrey Kivi (Stuyvesant High School), Dr. Marnie Kula (Ward Melville High School), Dr. Stephanie O'Brien (Smithtown High School East), Mrs. Halina Reinhardt (William A. Shine Great Neck South High School), Mrs. Theone Rinaudo (Jericho High School), Mr. Kurt Rogers (Syosset High School), Ms. Courtney Ruvolo (W. T. Clarke High School), Mrs. Jessica York (John L. Miller Great Neck North High School)

Special congratulations to two students, Joshua Li (The Wheatley School) and Anna Xing (Ward Melville High School) who earned high honors and to six students, Jolene Cao (Smithtown High School East), Lisa Jin (Jericho High School), Alice Kim (William A. Shine Great Neck South High School), Jeffrey Louie (The Bronx High School of Science), Dale Yang (John L. Miller Great Neck North High School) and Kevin Yang (Stuyvesant High School) who earned honors. Additionally we note with pride that Joshua Li has been invited to attend the USNCO Study Camp.

LONG ISLAND SUBSECTION CHEMISTRY CHALLENGE



The Long Island Subsection held its Chemistry Challenge on April 19, 2024 at St. john's University. This chemistry knowledge competition was held following a light dinner between student teams from area two- and four-year institutions. Thirty multiple choice questions (approximately 75% General and 25% Organic Chemistry) are asked in a friendly and exciting atmosphere that brings colleges, students, and faculty together. All were welcome to attend.

Medals are awarded to first, and second place winners in the twoand four-year categories. There were ten teams of three-students each, representing St. John's University, Hofstra University, LaGuardia Community College, the New York Institute of Technology, and Queensborough Community College. Hofstra came in first place and NYIT came in second place for the four-year colleges. LaGuardia CC was in first place and QCC came in second place for two-year colleges.



COMMITTEE ON THE HISTORY OF THE NEW YORK LOCAL SECTION

Over the past twenty-three years the New York Section has participated in the designation of seven National Historic Chemical Landmarks and four New York Section Historic Chemical Landmarks. A brief description of these National and local section landmarks may be found on the NY Section website. These landmark programs recognize achievements in the chemical sciences and related areas, in order to enhance public appreciation for the contributions of the chemical sciences to modern life.

Please consider making a nomination for an historic chemical landmark. The Committee on the History of the NY Section will consider all nominations. In addition to a particular achievement, an historic library, building or association may be worthy of this distinction. Please send your nomination, with supporting documentation, to the Committee Chair, Dr. Neil Jespersen.

NEW YORK SECTION AWARDS CERTIFICATES OF EXCELLENCE

The New York Section honors the following college students for their academic excellence in the field of chemistry. We wish them well in all their future pursuits.

More info online





Madelaine Dolich Barnard College



Katherine Johnston Fordham University



Clyde Rypins Columbia University



Sophia Abrahamson Columbia University

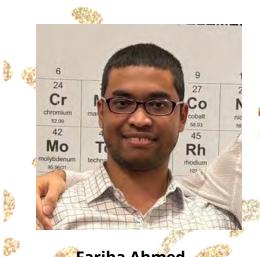


David Kolade Lehman College - CUNY



Patrick Garana Lehman College - CUNY

NEW YORK SECTION AWARDS CERTIFICATES OF EXCELLENCE (continued)



Fariha Ahmed
Brooklyn College - CUNY



Tatyana Popkova Brooklyn College - CUNY



Cristina A. Altamirano Fairleigh Dickinson University



Michael R. Hoffmann Fairleigh Dickinson University



Mary A. Biggs Fordham University



Henna Chaudhry Hofstra University



Olivia Golebiewski Hofstra University



Jamie Gudyka Iona University

NEW YORK SECTION AWARDS CERTIFICATES OF EXCELLENCE (continued)



T.J. Hawkins Iona University



Retalia Bissoo New Jersey City University



Stephanie Cuaycong New Jersey City University



Jannatul Ferdaous Barsha NYC College of Technology





Yuwei Chen **NYU Tandon School of Engineering**



Jessica Higgins **Pace University**

3



Michael Fuks **Pace University**



Rachel Harmon Pace University

NEW YORK SECTION AWARDS CERTIFICATES OF EXCELLENCE (continued)



Daisy A. Rubio
St. John's University



Jaelyn N. Palmer St. John's University



Abanob Fekri St. Peter's University



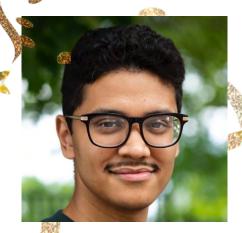
Jia Chen Stevens Institute of Technology



lliana Vigil York College - CUNY



Michelle Huang Stony Brook University



Mohammed Rhakib
The Cooper Union for the
Advancement of Science and Art

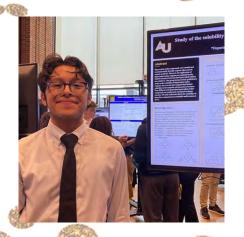


Cristopher Furcal
University of
Mount Saint Vincent



William Gornell
United States Merchant
Marine Academdy

NEWYORK SECTION AWARDS CERTIFICATES OF EXCELLENCE (continued)



Matthew Lucero Rodriguez
Adelphi University



Sophia Coraci Adelphi University



Eva Scholz-Carlson Barnard College



Michella Chiaramonte Stevens Institute of Technology



Angelica Arjune York College - CUNY



Haoxian Zheng
NYU Tandon School of
Engineering

Also honored, but not pictured:



Deana Davidova, Queens College _ CUNY
Hua Fu , Queens College _ CUNY
Ali Hoy, Pace University
Andrew Awad, Ramapo College of New Jersey
Steven Korolov, Ramapo College of New Jersey
Brandon Matos, Saint Peter's University

OPPORTUNITIES

GRANT OPPORTUNITIES

VILCEK PRIZE FOR CREATIVE PROMISE IN BIOMEDICAL SCIENCE

Recognizes three young, immigrant biomedical scientists that demonstrate outstanding achievement with an \$50,000 unresticricted cash prize.

DUE JUNE 10, 2024

Learn more

LOCAL SECTION INNOVATIVE PROJECT GRANT

Local Sections may request up to \$3500 to support new programs that stimulate member involvement and are sustainable. Projects that support interactions with other ACS local sections, divisions or committees, other professional associations or community groups are especially encouraged.

DUE JUNE 30, 2022

Learn more

AWARDS

WOMEN CHEMISTS COMMITTEE RISING STAR AWARD

Recognizes up to 10 individuals approaching mid-career who have demonstrated outstanding promise for contributions in their respective fields.

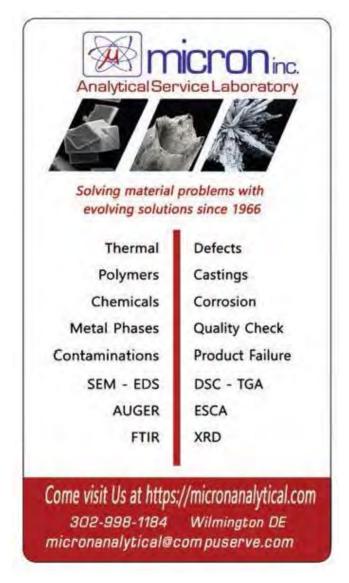
DUE JUNE 15, 2024

Learn more

NYACS OUTSTANDING SERVICE AWARD

Recognizes up to 10 individuals approaching mid-career who have demonstrated outstanding promise for contributions in their respective fields.

DUE JUNE 30, 2024 Learn more





For High School Students & Teachers

ACS Hach High School Chemistry Classroom Grant

<u>Due June 1</u>

For Undergraduates

ACS Division of Inorganic Chemistry
Undergraduate Award in Inorganic Chemistry
Nomination by June 30

ACS Division of Physical Chemistry
Undergraduate Award in Physical Chemistry
Nomination by June 30

For Graduate Students / Postdocs

Division of Inorganic Chemistry Travel Award

<u>Due June 1</u>

Women Chemists Committee/Eli Lilly Travel Award

Due June 1

ACS Bridge Travel & Professional Development Award

Due June 14

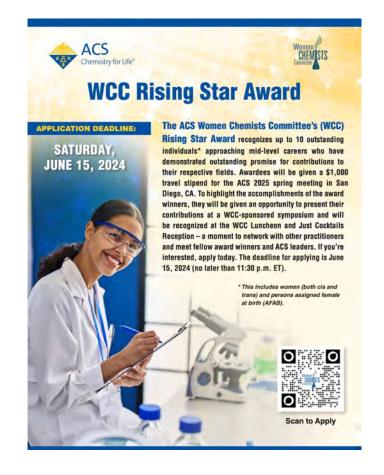
For Professionals

Trust in Science and Scientists Grant

Due June 1

Carl S. Marvel Award for Creative Polymer Chemistry

Due July 10





UPCOMING POLY AWARD

Call for Nominations

Carl S. Marvel Award for Creative Polymer Chemistry

Deadline: July 1, 2024

Purpose: to recognize and encourage accomplishments and/or innovation of unusual merit in the field of basic or applied polymer science by younger scientists.

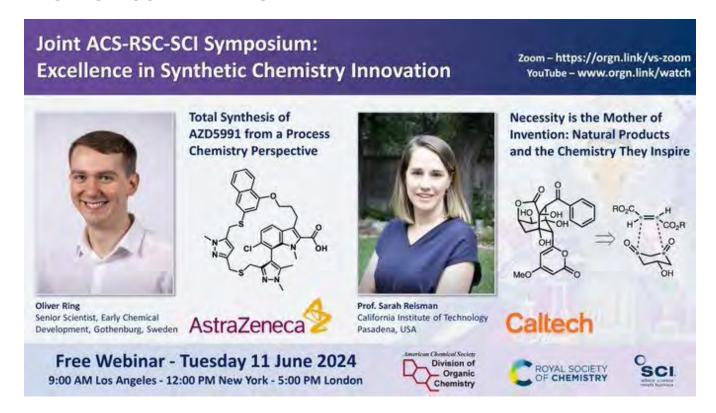
For complete information visit the POLY Award Webpage listed below

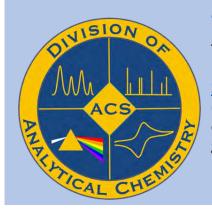
Award Information: https://polyacs.org/carl-s-marvel-award-for-creative-polymer-chemistry/



The Central Pennsylvania Section of the ACS is proud to present the 2024 Middle Atlantic Regional Meeting of the ACS on June 5-8 in Happy Valley, PA. The theme of this year's MARM is "Celebrating Discovery" and honors the discovery of oxygen in 1774 by Joseph Priestley.

NEWS FROM OUR PARTNERS





DIVISION OF ANALYTICAL CHEMISTRY

The <u>Analytical Division</u> organizes programs for the spring and fall ACS Meetings, <u>Pittcon</u>, the <u>SciX conference</u> and the <u>Eastern Analytical Symposium</u> (EAS). In addition, the Chromatography and Separation Chemistry subdivision addresses the issues of interest to its members. The division has a wide range of outreach programs including student travel grants and regional meeting support. Its award program includes undergraduate, graduate and professional awards. We welcome new members. Please join and/or volunteer to help with one or more activities.





NEWS FROM OUR PARTNERS (continued)



Empowering Women in Organic Chemistry 6th Annual Conference

A meeting open to all to learn, support, guide, and network June 20–21, 2024 – Virtual Registration Available



Jessica Lamb Assistant Professor University of Minnesota



Courtney Sobers Associate Teaching ProfessorAssociate Vice President **Rutgers University**



Rebecca Ruck



Michelle Chang Professor Merck & Co., Inc. University of California, Berkeley

Scientific Talks **Poster Sessions** Networking Workshops **Career Panel**

Meet-the-Sponsor Events



Tianning Diao New York University



Corinna Schindler Professor University of Michigan



Lesley-Ann Giddings Assistant Professor Smith College

Register here:



http://ewochem.org/ Follow us @ewoc8 for updates.















July 11-12, 2024

POLYMER WOMEN EMPOWERMENT & RESEARCH Northwestern University

Empowering Women and Gender Minorities in Polymer Science & Engineering polymerwomenempowermentresearch.com











NEWS FROM OUR PARTNERS (continued)



WOMEN CHEMISTS SOCIAL WITH SUNSET SLUSH THURSDAY, JUNE 6, 2024 3:00-4:30 PM ET



THE PENNSYLVANIA STATE UNIVERSITY
UNIVERSITY PARK, PA
OUTSIDE EAST ENTRANCE OF WILLARD BUILDING

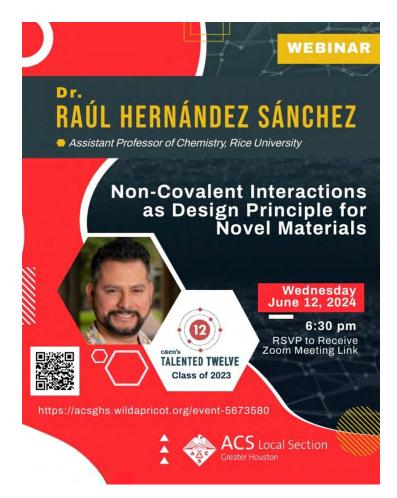
Join the Women Chemists Committee for a networking social complete with slushies provided by Sunset Slush Happy Valley



NEWS FROM OUR PARTNERS (continued)



WEBINAR: The Impact of Sustainability Trends on Construction/Infrastructure Chemicals and Materials Featuring Jack Armstrong(ACUMEN, LLC), Amy Ericson (Marine Coatings, PPG), Michael A. Mahoney (Euclid Chemical) and Chuch Robitaille (Dow) Monday, July 16, 2024 1:00 PM EDT Register here





JOB BOARD

Starting your career or looking for the next challenge? Review these and other postings at the New York ACS <u>Job Board</u>. Email your job postings to <u>Jobs@NewYorkACS.org</u> for inclusion.

Academic Program Manager, Chemistry – New York University

Apply here

Science Advisor for Public Access (Program Director) – National Science Foundation

Apply here

Analytical Chemist – Haleon

Apply here

Associate Principal Scientist – Merck

Apply here

Chemist - US Food and Drug Administration

Apply here

Senior Flavorist, Re-Imagine Wellness - IFF

Apply here

Senior Scientist, Formulation Development

Apply here



ACS VIRTUAL OFFICE HOURS

Join ACS Virtual Office Hours on the first Thursday of each month at noon (ET). These FREE virtual career guidance sessions are open to ACS members AND non-members alike. Upcoming webinars are focused on the following topics"

Careers in Academia June 6, 2024 Register here Networking July 11, 2024 Register here Entrepreneurship August 1, 2024 Register here

THIS MONTH IN CHEMICAL HISTORY

Harold Goldwhite, California State University, Los Angeles • hgoldwh@calstatela.edu

This month's column returns to a subject I often cover, namely "Great Chemistry Books". The work in question is a 1960 volume: "An Introduction to Transition-Metal Chemistry: Ligand-Field Chemistry" by Leslie E. Orgel, who was at that time an Assistant Director of Research at Cambridge University (my alma mater). In my undergraduate years (1950 – 1953) I had a number of lecturers in the inorganic chemistry courses. They presented a wide range of facts and theories, but the coordination chemistry of the transition metals was something of a puzzle. The theory did not go much beyond the ideas of Werner which were then a half century old.

I did not encounter the new ideas of ligand-field theory until I began to get involved in teaching inorganic chemistry at the University of Manchester Institute of Science and Technology in 1958. Orgel's book came along at just the right time to put a coherent structure on ideas I had sometimes been struggling with in preparing my lectures.

The book is a slim volume of 180 pages and is non-mathematical. Its premise is "the approximation by which we regard a transition-metal compound as made up of individual metal atoms or ions, perturbed by their immediate environment, but interacting only weakly with each other." Consequently, the scope includes complexes of the transition metals but excludes alloys, and interstitial carbides and nitrides. An initial chapter covers the preliminaries of ionization energies of the metals; ligands; the definition of "stability"; and the fundamental concepts of coordination number and valency. The second chapter is a clear explanation of orbitals, especially the d-orbitals, and their energies. It includes the electrostatic crystal-field theory developed by Bethe and Van Vleck that completely (and deliberately) ignores covalent bonding. It then explains how in an octahedral environment of nearest neighbor ions or oriented dipoles the five d-orbitals split into two groups of different energies labelled as three t_{2g} and two e_g orbitals. A further section goes into molecular orbital theory, and that, of course, explicitly includes covalent bonding.

Chapter 3 is the heart of the matter considering ions with several d electrons and how they are distributed among the d orbitals with resultant magnetic and spectroscopic effects. The agreement or otherwise of the predictions of ligand-field theory with experimental results gives strong support for the theory in most cases. The treatment covers not only octahedral complexes but also tetrahedral and square planar complexes. Stereochemistry cannot be neglected in any discussion of transition-metal compounds; that subject was crucial to Werner's Nobel Prize work in the early 20th. century. The subject is covered in Chapter 4 of Orgel's text. Refinements include the Jahn-Teller effect, planar low-spin d8 complexes, and distorted tetrahedral complexes. Chapter 6 includes a detailed discussion of energy-level diagrams and electronic spectra.

Later chapters include discussions of reaction rates and mechanisms; covalent versus ionic bonding; low valency complexes; complexes of unsaturated hydrocarbons (historical note: the first such complex was discovered by Zeise in the early 19th. Century but was not characterized for 100 years); and the highest valencies of the transition metals.

Orgel's text was a clear and thorough exposition of the most modern views (in 1960) of the structures, and physical and chemical properties of transition-metal complexes. It was a true breakthrough in the teaching of the subject. It deserves recognition as a great chemistry book of the twentieth century.