

**STRONG BONDS
STAY TOGETHER
THROUGH
CHEMISTRY!**

**SPECIAL
ACHIEVEMENTS
THIS YEAR**

- **ACS APPROVAL ON CHEMISTRY PROGRAM**
- **ALUMNI EVENT: CSI**
- **ΓΣΣ NATIONAL CHEMISTRY HONOR SOCIETY**
- **UNDERGRADUATE RESEARCH ACTIVITIES**

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Cornelia Hall
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Associate Professor and
Chair

Ines Silva '12 Editor



IONIC BONDS

Iona College Chemistry Newsletter

VOLUME 5, ISSUE 1

FALL 2010

American Chemical Society (ACS) Approves Iona's Chemistry Program

Iona College's undergraduate chemistry program has recently been approved by the Committee on Professional Training of the American Chemical Society (ACS). This accomplishment allows professors and students alike the opportunity to advance as professionals in all fields of chemistry and sciences which involve chemistry.



Approval means that the program offered by the Iona College Department of Chemistry meets guidelines established by the ACS for a coherent chemistry curriculum that is delivered by an accomplished and professional faculty via a modern and well-maintained academic infrastructure.

The ACS has authorized the Chair of the Department to certify graduating Iona College students who complete a BS degree meeting these guidelines.

Graduates who attain a certified degree will have been provided an excellent foundation for a career in the molecular sciences.

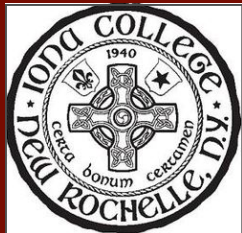
ACS-approved programs offer a broad-based and rigorous chemistry education that provides students intellectual, experimental, and communication skills to become effective scientific professionals.

The ACS promotes excellence in chemistry education for undergraduate students through approval of baccalaureate chemistry programs. ACS-approved programs offer a broad-based and rigorous chemistry education that gives students intellectual, experimental, and communication skills to become effective scientific professionals.

Over the years Iona College has had some significant advances making it a more accredited, and recognized institution. Approval by the ACS has contributed toward these accomplishments. For more information on ACS, please visit the Web site at www.acs.org.



IONA



*"CHEMISTRY not
only helps you
understand the
world, it opens
a world of
opportunities!"*



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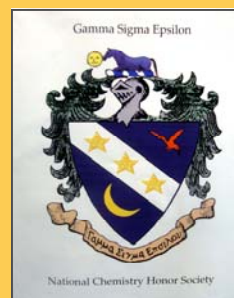
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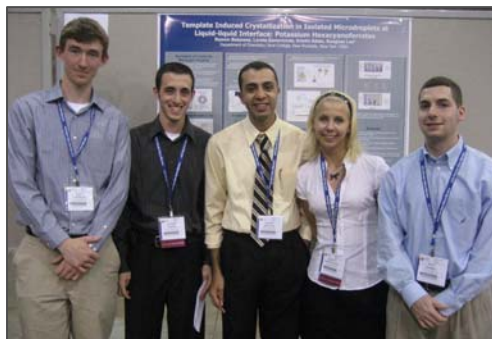
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**Pg 8 Careers in Science at Iona (CSI)
Program**



Chemistry Students Present at the 238th American Chemical Society (ACS) National Meeting, Washington, DC

Dr. Sunghee Lee and five Iona Chemistry major students, Remon Bebawee ('10), Loreta Geneviciute ('10), Joseph Wiener ('10), Paul Sanstead ('11), and Nick Florio ('11) presented their research at the 238th American Chemical Society National meeting in Washington, DC during August 16-20, 2009.



Potassium Hexacyanoferrates" by R. Bebawee, L. Geneviciute, and Dr. Lee. In addition, Dr. Lee presented a poster, "Project CSI (Careers in Science at Iona College): a Catalyst For Motivating Students Through Career Exploration", coauthored by Dr. Jerome Levkov in Chemistry.

National Meetings occur twice a year in various cities around the US and each

one attracts an estimated 11,000 to 13,000 chemists, chemical engineers, academicians, graduate and undergraduate students, and other related professionals. Each meeting features more than 7,000 presentations organized into technical symposia that highlight important research advances.

Two research posters presented in the Division of Chemical Education are titled (1) "Visualization of Phase-Transfer Coordination Complexation by J. Wiener and Dr. Lee, and (2) "Template Induced Crystallization in Isolated Microdroplets at Liquid-Liquid Interface:



Photo left: Remon and Loreta presenting at the Undergraduate Research Poster Session-Nanotechnology

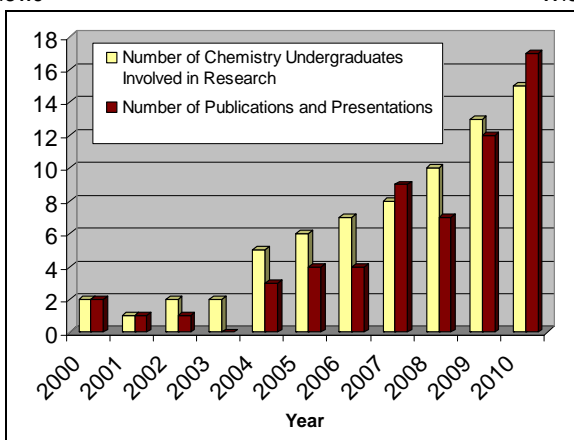


Chemistry Students are Co-Authors in ACS Peer-Reviewed Articles!

The Department of Chemistry has demonstrated a strong track-record of providing increasing research opportunities for undergraduate students. The chart below shows numbers of Iona Chemistry students involved in research activities and publications and presentations for the past 10 years.

Undergraduate students are main participants in all aspects of research, from performing experiments and analyzing data to presenting findings at professional conferences. Most students who participate in research present their research at local and national meetings, as well as having co-authorship of published peer-reviewed articles.

A selected list of Chemistry undergraduate student research activity include:



(1) "Effect of Specific Anion on Templated Crystal Nucleation at the Liquid-Liquid Interface", Sunghee Lee, Paul Sanstead, Joseph Wiener, Remon Bebawee, and Aileen Hilario, *Langmuir*, 26 (12), 9556-9564, 2010.

(2) "Controlled Nucleation of $K_3Fe(CN)_6$ In Isolated Microdroplets at Liquid-Liquid Interface," Kristin Allain, Remon Bebawee, and Sunghee Lee, *Crystal Growth and Design*, 9 (7), 3183-3190, 2009.

(3) "Visualizing Microdroplet Fluidic Reactions One Droplet at a Time", Sunghee Lee and Joseph Wiener, *J. Chem. Edu.*, Accepted for publication (in print), 2010.

58th NY Section Undergraduate Research Symposium Adelphi University, Garden City, NY

On May 8, 2010, 10 research students from Iona College presented their research in Chemical Sciences at the 58th American Chemical Society Undergraduate Research Symposium at Adelphi University in New York.

Iona College Chemistry faculty Sunghee Lee, PhD, and Thomas Castanguay, PhD supported their presentation alongside student researchers. The symposium presenters were: Paul Sanstead ('11 Chemistry), Nick Florio ('11 Chemistry), Gregory Roughton ('10 Computer Science), Kiersten Giusto ('12 Biochemistry), Catherine Morris ('12 Biochemistry), Erin Morgan ('13 Chemistry), Zuzanna Michalak ('13 Chemistry), Nousin Haque ('13 Biochemistry), Daniel Lutolf ('13 Chemistry), and Darius Fartash ('13 Biochemistry).

Of the various research projects presented, one presentation was the result of collaborative efforts by Chemistry and Computer Science students. Greg Roughton, who is majoring in Computer Science, utilized his expertise in software engineering to design a program which aims to automatically identify the object in an image. The resulting product will be utilized in



measuring solute concentrations, varying refractive indices, and color change.

This kind of collaboration was very encouraging to both Chemistry and Computer Science students, as it led to a better appreciation of other disciplines among them.

Chemistry is both a central science and an enabling science. Chemistry plays a key role in conquering diseases, solving energy problems, ameliorating environmental problems, providing the discoveries that lead to new industries, and developing new materials for national defense and new technologies for homeland security.

Eight Research Projects Presented at the annual Undergraduate Research Day at Iona College

On April 18, 2010, Iona College hosted the first Undergraduate Research Day in Spellman Hall. This annual event provides the perfect opportunity for students to highlight their research accomplishments, share their work with fellow students, and inspire others. Of the 32 posters presented from various disciplines of the School of Arts and Science, eight research projects performed by chemistry/biochemistry students were presented:

1. Diana Nunes: 2-D Maps of HDO on Mars for $L_s=50^\circ$
2. Joseph Wiener: Visualizing Microdroplet Reactions One Droplet at a Time
3. Garner Soltes: Polarized Morphologies During Mating of *S. Cerevisiae*
4. Remon Bebawee, Loreta Geneviciute, Kristin Allain:

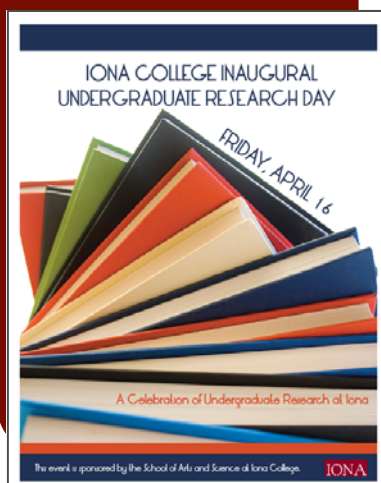
Template Induced Crystallization in Isolated Microdroplets at Liquid-liquid Interface: Potassium Hexacyanoferrates

5. Paul Sanstead, Remon Bebawee, Joseph Wiener, Aileen Hilario: Effect of Specific Anion on Templated Crystal Nucleation at the Liquid-Liquid Interface

6. Loreta Geneviciute: Polytype selectivity in a model inorganic crystal

7. Nick Florio, Catherine Morris, Kiersten Giusto: Determining Solute Concentration in Shrinking Microdroplets by Refractive Index

8. Paul Sanstead, Remon Bebawee: 2-D Maps of the $O_2(a^1\Delta_g)$ Emission during the Mars Aphelion Season



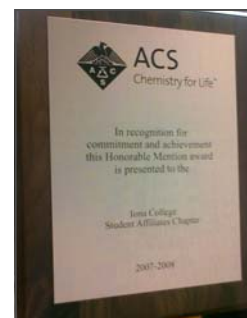
Five Freshmen Chemistry Students Recognized For Their Academic Achievements



the Taylor and Francis Group. For his accomplishment, he received a copy of the 90th edition of the *CRC Handbook of Chemistry and Physics*.

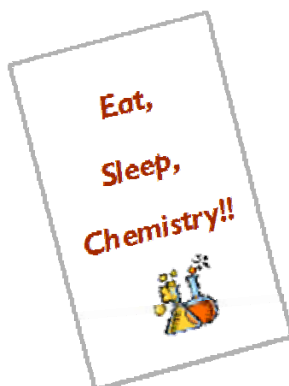


Erin Morgan (photo, above with Dr. Lou Campisi), a freshman majoring in Chemistry, has been named the recipient of the American Chemical Society Westchester Section Outstanding Chemistry Award. She attended the award symposium and dinner sponsored by the Westchester chapter of the American Chemical Society.



Iona Chemical Society Awarded "Honorable Mention" Award for their Outstanding Work and Dedication by the American Chemical Society

Chimuka Cheepa (photo, above with Dr. Lou Campisi), a freshman majoring in chemistry, has been named the recipient of Iona's 2010 CRC Press Chemistry Achievement Award. He received the award for his outstanding scholastic achievement in chemistry. The award is sponsored by



Cari Anderson (Chemistry Major)



Kathryn Lynch (Chemistry Major)



Zuzanna Michalak (Chemistry Major)

Cari Anderson, Kathryn Lynch, and Zuzanna Michalak, freshmen majoring in chemistry, have been named recipients of the Iona College Chemistry Department Award, "Rising Star Award". They have been awarded a one-year membership with the American Chemical Society.

2010 GRADUATES! CHEMISTRY & BIOCHEMISTRY



Joe Wiener graduated with a BS in chemistry (*magna cum laude*). He works at PepsiCo as research assistant.



Loreta Geneviciute graduated with a BS in chemistry (*summa cum laude*). She will be attending NYU Dental School.



Remon Bebawee graduated with a BS in chemistry (*cum laude*). He works at Albert Einstein School of Medicine as research assistant.



Kiera Schiavetta graduated with a BS in biochemistry. She will be attending the Registered Nursing program at SUNY Stony Brook.



Kyla D'Angelo graduated with a BS in biochemistry (*cum laude*). She will be attending NY College of Osteopathic Medicine.

IONA CHEMISTRY GIVES BACK TO THE COMMUNITY

2nd Annual Chemistry Society Halloween Party



For the second consecutive year, the Iona Chemical Society partnered with the Success Center to put on a Halloween Party for the children. The Success Center is a program affiliated with the Iona's Campus Ministries that offers tutoring services to children from kindergarten through fifth grade. The Iona Chemical Society's contribution was a "Mad Scientist's Lab." Members decorated a room to fit the part, covering the windows with heavy paper to create the proper atmosphere for Halloween.

An Iona Chemical Society member dressed as a "mad scientist" and each student was given a pair of child-sized safety glasses, which was theirs to keep and to wear into the lab. Upon entering the room, the excitement of the kids was fantastic and they enthusiastically followed the demonstrations. Demos included color changing solutions, oobleck, a luminol light show, magic pepper, and disappearing glassware among others. We had a wonderful time with the kids!

Annual National Chemistry Week Celebration

New York Hall of Science Queens, NY and Iona Campus

The National Chemistry Week Celebration of 2009 took place in Queens, NY, and on the Iona College campus. Eight Chemistry students participated in this annual event along with Dr. Lee, Dr. Levkov, and Dr. Castonguay. The students presented the project, The Elemental Identity Challenge (pictured

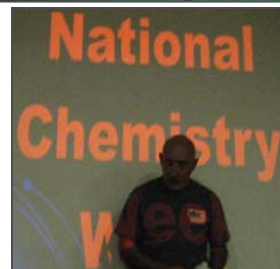


on the right), which is consistent with the ACS theme for NCW this year: "Chemistry- It's Elemental". The Elemental Identity Challenge consisted of element lamps and handheld spectrometers. Visitors were challenged to identify which elemental gas was in each lamp using a spectrometer to match the elemental emission spectrum with those displayed on a poster board. Through the event, a positive image of chemistry was promoted and children, adults, and chemical society members all had a great time.

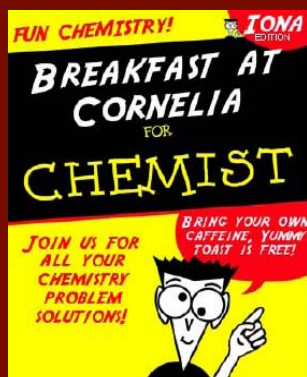
At Iona, the National Chemistry Week Celebration event was held in the LaPenta Student Union Endzone. In this event, groups of students produced a commercial or presented an advertisement for an element of their choice. In addition, the program features the "Chemistry Magic Show," by Dr. Jerome Levkov, and the "Chemistry Jeopardy" game designed by our chemistry students.



Photo left: Dr. Levkov with two student assistants at the magic show



Don't forget to join us
"Breakfast at
Cornelia", weekly
Chemistry problem
solving session run by
Chemistry
upperclassmen and
Chemistry faculty.



GAMMA SIGMA EPSILON (ΓΣΕ) Iona Chemistry Honor Society



Iona College has been approved as a new chapter of *Gamma Sigma Epsilon* – National Chemistry Honor Society. Our chapter will be known as the Kappa Nu chapter.

This is the reflection of the recent active involvement and achievement of our students in the Chemistry/Biochemistry program and adds even greater significance to our program standing.

The installation ceremony of Iona chapter and initiation of its new members took place on May 7 in the Faculty Reception Room at Spellman Hall. Dr. Kerrigan, executive president of the Gamma Sigma Epsilon National Chemistry Honor Society, installed the new chapter and presented the engraved charter. Dr. Alex Eodice (Philosophy Department) delivered the Keynote Speech.



Chemistry/Biochemistry Summer Research Activities in Cornelia Hall and Off Campus

Special Thanks for Sponsoring Student Research:

Iona College, The Patrick Martin Foundation, ACS, NSF

While summer is a time for beaches and vacations, for some ambitious science students, this is not exactly the way they spend their summer hours. Many of our Chemistry/Biochemistry students were involved in rewarding research activities during this summer. Cornelia Hall is busy with summer research activities, especially in Dr. Lee's laboratory. Eight students were awarded research fellowships this summer working with Dr. Lee under the NSF funded project. They are: Nousin Haque, Zuzanna Michalak, Nick Florio, Kiersten Giusto, Catherine Morris, Darius Fartash, and Ines Silva. Off campus, Paul Sanstead ('11 Chemistry) is working at the Department of Chemistry at the University of Minnesota, Twin City, as a prestigious

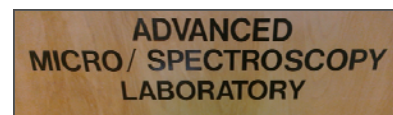
NSF (National Science Foundation) sponsored REU (Research Experience for Undergraduate) Scholar. Garner Soltes ('11 Biochemistry) is participating in the highly-competitive Summer Undergraduate Research Program at the University of North Carolina, Chapel Hill. Freshman Erin Morgan ('13 Chemistry) is working as a research intern at the company Metabolix.

At the end of the summer, all research students will attend the 240th American Chemical Society National Meeting at Boston, MA in August 22-26, 2010. Two research projects have been accepted for the presentation, one in the Colloid and Surface Chemistry Session, and another in the Undergraduate Research: Analytical Chemistry Session.



ACS provides a wonderful experience especially designed for undergraduate students every year, to encourage networking with other chemical science students and researchers in the world.

This year's theme is "Chemistry for Preventing & Combating Disease" and more than 7,000 presentations will be organized into technical symposia that highlight important research advances.

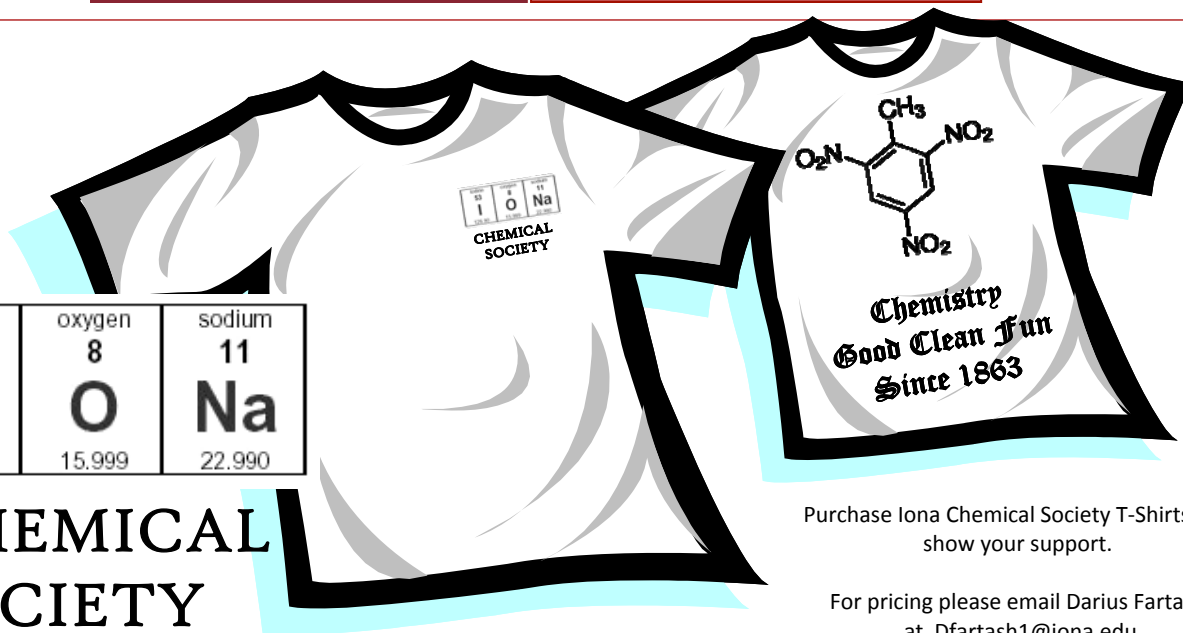


**Eight Students will attend and two research projects will be presented
at the 240th ACS National Meeting in Boston, August 22-26, 2010!**



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Iona College
Department of Chemistry
715 North Avenue
New Rochelle, NY 10801



iodine 53 I 126.90	oxygen 8 O 15.999	sodium 11 Na 22.990
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CHEMICAL SOCIETY

Purchase Iona Chemical Society T-Shirts and show your support.

For pricing please email Darius Fartash at Dfartash1@iona.edu

Careers in Science at Iona (CSI) Program Approaching Our 7th Year Since Inception... Alumni, We Need You!



Thank you to all of the guest speakers who participated in our popular program, CSI.

Photo left: Dr. Savarese (Iona '61 Chemistry) speaking with a student, Spring 2010.

Spring 10	Fall 09
Mr. Tom Blackburn (Iona Alumni, Computer Science) Finance Transformation, IBM	Iona Science Students Internship Experience
Dr. John Savarese (Iona Alumni, Chemistry) Cornell School of Medicine	Iona Faculty Science Program at Iona College
Dr. John Morgan Biodegradable Materials	Dr. Gregory Bard Mathematics, Fordham University
Mr. Mike Sancimino (Iona Alumni, Computer Science) 3RD ANGLE Technologies, Inc.	Mr. Terry Crutcher International Flavors and Fragrance
Dr. Margaret Pisani (Iona Alumni, Physics) Yale School of Medicine	Dr. Jon Friedrich, Cosmic Chemistry Fordham University
Dr. Loretta Puoso (Iona Alumni, Biology) Science of Dentistry	Dr. Philip Barnett, CUNY Information Science

CSI can help you focus on your career planning question of "What do I want to do?"

- Meet the professionals in different areas of science
- Discover your true potential in science
- Find the career in science that fits you
- Build the network in and outside of college
- Stay informed through your Blackboard account

IONA

Discovering Your
Passion Through...

CAREERS IN
SCIENCE AT
IONA COLLEGE

Remember blazing the trail from classroom to career? Now you can share your wisdom with Iona's science students. The Careers in Science at Iona (CSI) program actively seeks alumni to serve as guest speakers at our events.

To sign up as a guest speaker, please contact:

Sunghee Lee, PhD, at SLee@iona.edu or
Jerome Levkov, PhD, at JLevkov@iona.edu

For more information, visit our website:

www.iona.edu/academic/artsscience/departments/chemistry/CSI/chemistry_CSI.cfm