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**April 2021**

**A Joint Publication of the Southern California and  
San Gorgonio Sections of the American Chemical Society**

## **Southern California Section**



**Announcing the 2020  
Richard C. Tolman  
Award Recipient  
Prof. Pingyun Feng,  
University of California,  
Riverside  
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**Chemists Celebrate Earth Week Activities  
Theme: Reducing Our Footprint with Chemistry  
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## Southern California Section

### Chair's Message



It is now over a year since we met with the COVID-19 pandemic, which indeed has caused a paradigm shift in our life pattern. I wish to thank and admire you all for your resilience and perseverance while we have been facing the challenges together as fellow chemists. As we aim for the needed preventive care through the vaccines, we see again, the pivotal role of chemistry in winning the race.

**Professor Pingyun Feng**, University of California, Riverside is the 2020 Tolman Award winner. Professor Feng is a highly acclaimed chemist with outstanding contributions in the development of various functional solid-state materials. Congratulations!

We would also like to congratulate **Barbara Belmont** for receiving the 2021 ACS Outreach Volunteer of the Year Award for her work coordinating the High School Olympiad and Tolman Awards last year. See more information on Page 7.

"Chemists Celebrate Earth Day" events have been organized. We have **Household Chemistry Zoom Demos** planned for April 18th (see page 5), and the **CCEW Illustrated Poem Contest** (see page 6). Let us all join to celebrate the day with the pledge to restore and keep our habitat pollution-free, safe and sound.

It is good to see our members coming up with great ideas to promote chemists' interaction with the society. Jerry (Gerald Delker, SCALACS Senior Chemists Committee chair) has proposed the formation of small groups among chemists with common interests who live in the same neighborhood ("Chemists' Club"), passionate in contributing their chemistry background and knowledge for the betterment of our community. You can find more details on page 7 and look for upcoming events in this newsletter.

With thanks, and best wishes,  
Thomas Mathew, Chair  
([tmathew@usc.edu](mailto:tmathew@usc.edu))

## Southern California Section



**Announcing the  
2020 Richard C. Tolman Award  
Recipient:  
Professor Pingyun Feng  
University of California, Riverside**

**June 16, 2021**

**6:30 pm virtual Social Time**

**7:00 pm Presentation of Award and Address**

**Tolman Address:  
“All about Crystalline Porous Materials”**

**The Award:** The Richard C. Tolman Medal is awarded each year by the Southern California Section of the American Chemical Society in recognition of outstanding contributions to chemistry in Southern California. The Tolman Medal recognizes broad accomplishments in chemistry rather than a single fundamental discovery. These contributions may be of several kinds, including seminal research of widely regarded influence, achievements of broad impact in chemical technology, significant contributions to chemical education, and outstanding leadership in science on a national level. To be eligible for the Medal, the recipient must have accomplished a major portion of his or her work while a resident of Southern California.

**Abstract:** Crystalline porous materials such as zeolites play pivotal roles in diverse applications. Using the basic chemistry principle of charge matching, chalcogenide-based crystalline porous materials with semiconductivity and diverse functionality have been synthesized. Through self-assembly, the single-sized chalcogenide tetrahedral clusters acting as building blocks form well-ordered three-dimensional superlattices in the presence of either organic or inorganic species as structure directing agents. The single crystal structural analysis reveals detailed information that could serve as the basis for the elucidation of larger colloidal nanostructures. The diversity of superlattices is achieved by modifying the cluster size, the cluster composition, and the inter-cluster linkage mode. The atom-precise nanoclusters prepared in this research include those that are currently the largest known single-sized  
(Continued on Page 5)

## Southern California Section

**Congratulations to the 2020 Recipient of the  
Richard C. Tolman Medal  
Professor Pingyun Feng  
University of California, Riverside**

*"For outstanding achievements, and exceptional creativity, in the synthesis and design of solid-state materials across multiple length scales and compositions of matter";  
Joshua Figueroa, Tolman Chair*

Pingyun Feng received her PhD in 1998 from the Department of Chemistry, University of California, Santa Barbara (UCSB). After two years of postdoctoral study at the Department of Chemical Engineering, UCSB, she joined the University of California at Riverside in 2000. Feng's research focuses on the synthesis, characterization and application of various types of functional solid-state materials. These materials range from porous metal-organic framework materials to high-surface area semiconductors based on metal chalcogenides. Her group has published about 240 peer-reviewed, high-impact scientific papers. Her accomplishments have been recognized by the Beckman Young Investigator Award, NSF CAREER Award, Camille Dreyfus Teacher-Scholar Award, and an Alfred P. Sloan Fellow award. She is a Fellow of the American Association for the Advancement of Science. Most recently she was recognized by the ACS 2017 F. Albert Cotton Award in Synthetic Inorganic Chemistry.

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## Southern California Section

### Tolman Address Abstract (Continued from Page 3)

semiconducting tetrahedral clusters. Such clusters serve to bridge the size gap between colloidal nanoclusters and small molecular clusters. Metal-organic framework materials (MOFs) are another family of fascinating crystalline porous materials because of their highly tunable compositions, structures, and properties. In this presentation, strategies for the synthesis of new porous MOFs will be discussed, with the focus on the use of different metal ions and their various heterometallic combinations. In addition, the talk will cover our recent strategies developed to optimize the MOF composition and pore architecture for enhanced gas storage and separation through pore space partitioning and engineering. The pore space of MOF can be engineered by using extra-framework ligands or nested cage-in-cage configurations. Furthermore, a broadly applicable synthetic paradigm based on the pore space partition by using complementary coordination properties of multitopic ligands and metalloligands have been developed. This discovery led to a large family of highly stable and tunable porous materials with exceptional performance properties for gas sorption applications including record-setting storage capacity for gas molecules such as acetylene.

**Registration:** To make a reservation to attend the virtual presentation and address, please sign up at:

<http://bit.ly/RSVP-Tolman2020>

You will receive a confirmation email with the zoom meeting link.

### Chemists Celebrate Earth Week

**Theme: Reducing Our Footprint with Chemistry**

**Sunday, April 18, 2021**

**2:00—4:00 pm PST**

Join the Southern California Section for **Household Chemistry Zoom Demos**. Check out our website for more information on the Demos at: [https://scalacs.org/?page\\_id=29](https://scalacs.org/?page_id=29).

**Registration:** Please sign up at [bit.ly/2PcCMdh](http://bit.ly/2PcCMdh). You will receive a confirmation email with the zoom meeting link.

## Southern California Section



### 2021 CCEW Illustrated Poem Contest Theme: Reducing Our Footprint with Chemistry

**Eligibility:** K-12th grade students sponsored by a local school or community group (for verification purposes).

**Deadline:** April 25th, 2021 at 8:59 PM Pacific Time

**Rules & Submission:** <https://bit.ly/CCEWpoems>

**Local Section:** Southern California

**Prizes:** Best in each grade category (K-2nd, 3rd-5th, 6th-8th, 9th-12th) will be awarded Professor Molenium! Winners at the local section level are qualified for the national contest (national awards are \$300 for first place and \$150 for second place).

#### **Poems must be:**

- original work without aid or clipart
- less than 40 words and easy to read
- in one of the following styles: Haiku, Limerick, Ode, ABC poem, Free verse, End rhyme, and Blank verse

#### **Judging Criteria:**

- Incorporation of theme
- word choice and imagery
- adherence to poem style
- creativity and use of color
- overall presentation

If illustrated poem is digital, include name of program on the entry form.

Illustrated poems become the property of ACS. Acceptance constitutes consent to use winners' names, likenesses and entries for editorial, advertising and publicity purposes.



## Southern California Section

### **Congratulations to Barbara Belmont 2021 ACS Outreach Volunteer of the Year Award Recipient**



The Southern California is pleased to announce that Barbara Belmont has been selected as the recipient of the 2021 ACS

Outreach Volunteer of the Year Award. Barbara, we appreciate your long and faithful service!

Barbara Belmont has been our Section's technology savant since 1998, and that was crucial this year. When Covid 19 shut down our High School Olympiad, Barbara used Blackboard Course Sites to give our local section test online before National developed their test. Once National developed their local section and National Olympiad tests, Barbara continued to be involved and proctored the National Test online. When it came time for our High School Awards night, Barbara hosted our zoom event to honor our students. She also hosted our Tolman Award celebration with Prof. Andrew Borovik that was attended by over 100 people.

### **Senior Chemists Committee**

I know that some of you are still working or are just enjoying retirement. I would like to reach out to you to see if there is some way you might like to become more involved in promoting or assisting with chemistry-related activities, or maybe just want to meet with other chemists in your community. In the near-term, I will try to help those of you who would like to meet other chemists either virtually or in person. We can also discuss ways you might like to be involved. Some of our senior members have become involved as members of our SCALACS board, or in providing chemical advice to their local city councils. Some are involved in education. There may even be the possibility of developing small groups of chemists who live near each other, have common interests, etc. that would enable us as chemists to continue to use our backgrounds for the betterment of our community and chemistry. I hope to hear from you as your time permits. Please email me at [Delker@earthlink.net](mailto:Delker@earthlink.net).

Gerald Delker, Ph.D, Univ. Illinois, 1976  
SCALACS Senior Chemists Chair

## Southern California Section

### High School Chemistry Olympiad

The Southern California Section had 680 students registered for the High School exam. **The Local Section exam took place online on Saturday, March 27, 2021.** All the students who qualified from the Local Section Exam will take **Part I of the National Exam on Saturday, April 17, 2021.** The top 200 students nationally will take **Part II of the National Exam on Saturday, April 24, 2021.** Participating students for the National Study Camp will be notified by May 3, 2021.

The National Exam will be proctored and we are looking for volunteers to help proctor the exams. Proctors will need a web cam and a stable internet connection to participate. **If you'd like to volunteer to proctor online, please email Nancy Paradiso at [office@scalacs.org](mailto:office@scalacs.org).**

The High School Award Presentations will be at the end of May. See our website at [https://scalacs.org/?page\\_id=29](https://scalacs.org/?page_id=29) for more information.

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## **Southern California Section**

### **In Memoriam Hermenegildo “Gil” Misláng**

Hermenegildo Benavidez Misláng, beloved husband, father, grandfather and a community leader passed away on February 23, 2021 in Las Vegas, Nevada. He was 67 years old.

Gil was born in the Philippines and came to the United States in the late-1950's as his father was a serviceman in the United States Navy. In 1966, his father retired and moved the family back where Gill attended college and obtained a Bachelor of Science in Chemistry from the Far Eastern University in Manila. Gil moved back to the US in 1977, married his college sweetheart Violet in 1978, raised two kids in the City of Downey where they lived for 41 years. Last year, Gil and Violet moved to a home in Las Vegas, Nevada.

Gil was employed by the Dunn-Edwards Paint Corporation where he served in several capacities as Lab Technician, Quality Control Chemist, R&D Chemist, and Director of Research and New Product Development. In 1991, he attended and completed the Executive Program in Management at UCLA's John Anderson Graduate School of Management. While working, Gil joined the American Chemical Society Southern California Section and served as Chair in 2004 and 2005. In 2009, Gil was the recipient of the Sister Agnes Ann Green Award for Distinguished Service in recognition of his continued exemplary service in wide variety of leadership roles in the Section. Over the course of his career, Gil had opportunities to travel including countries such as Germany, Canada, Mexico, China, and Thailand. He often looked forward to attending the Annual Paint and Coatings Symposium, meeting colleagues in the industry, and excited to visit his favorite places to eat, such as Commander's Palace, and Cafe Du Monde in New Orleans.

Gil participated in many Filipino-American non-profit organizations providing support with the goal of enhancing and uplifting Filipino cultures and image in addition to helping those in need. Gil served as President of the Philippine Disaster Relief Organization, Kalayaan Incorporated, and board member of the Filipino American Service Group, Inc. Gil supported the Philippine Scouts Heritage Society in promoting and seeking equity, and recognizing the contributions of the Filipino World War II veterans

Gil was survived by his wife Violeta, sons Jan-Michael and Christopher Misláng, 3 grandchildren, mother Felicidad and six siblings. He will be missed by the Southern California Section and all who knew him.



## This Month in Chemical History

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

Most of the works I have discussed or will discuss in upcoming columns dedicated to “Great Books of Chemistry” are by authors whose names are likely to be familiar to you. But this column’s book is by someone you probably have not heard of unless you are quite familiar with 17th. Century science. This author is Nicolas Lemery, born in Rouen in November 1644 or 1645, died in Paris in 1715. His father was a lawyer to the Normandy Parliament and a Protestant. Nicolas was apprenticed to a pharmacist who was a relative, but he moved to Paris in 1666 to work at the Jardin du Roi, the Royal Botanic Garden that included science laboratories, and sponsored science lectures. (Lavoisier, a century later, learned much of his chemistry at this institution.) Lemery’s mentor was Glaser but they did not get on and he moved to Montpellier where he set up a laboratory, made and sold chemicals and pharmaceuticals, and began to give lectures on chemistry illustrated by experiments. These lectures established his fame and attracted many (paying) attendees including women and foreign students.

Lemery’s Protestant faith led to conflicts with the Catholic authorities and from 1683-84 he visited Protestant England. Returning to France he earned an M.D. and he became a practicing Catholic in 1686 and was accepted into the Paris Academy in 1699.

In 1675 Lemery published his “Cours de Chymie” which became by far the most popular chemistry text published to that date and is the reason for the inclusion of Lemery in this series. The “Course of Chemistry; containing the way of carrying out the operations useful in medicine, with the rationale for each operation, for the instruction of those who want to apply themselves to this science” was a volume of over 500 pages with many illustrations. It went through at least 11 authorized editions in French in the next 40 years; there were also pirated editions. The work was first translated into English and published in 1677 and three further editions appeared, the last in 1720. The “Cours” was also translated into German, Dutch, Italian, and Spanish.

Lemery also compiled a popular Pharmacopeia (first edition in 1698) and a monograph on antimony (1707) that echoes Basil Valentine’s “Triumphal Chariot of Antimony”.

(Continued on Page 11)

## **This Month in Chemical History**

*(Continued from Page 10)*

Lemery's text is clear and reasonably concise. It follows on from earlier German and French authors, particularly Le Fevre, and shows Paracelsian influences in its endorsement of remedies derived from antimony and other metals. Its period is before the rise of the phlogiston theory and it was eventually replaced by texts that embraced the newer ideas. Lemery was unimpressed by the claims of alchemy. He described them as mostly trickery. However he does support an element theory; his five elements or principles are mercury, oil, sulfur, water and earth. The incorporation of the fire principle into sulfur is familiar in the writings of many Arabic alchemists.

The "Cours" is eminently pragmatic and describes in detail the apparatus, including furnaces, needed to embark on practical chemistry. It includes a glossary and tables of symbols. The body of the book covers the three separate areas of minerals; vegetable materials; and animal materials. These three divisions were not novel to Lemery but his book helped popularize them. He did add one new theoretical speculation derived from the ideas of the corpuscularists (including Gassendi, Descartes, Boyle and Newton) – that corpuscles might have particularly shaped spikes and orifices. This became a popular way of explaining acid/base interactions.

A clear, comprehensive, and popular view of practical chemistry in the late 17<sup>th</sup>. Century Nicolas Lemery's "Cours de Chimie" takes its place among the "Great Books of Chemistry".

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## Insights Into IP Law

**Keith Orso\***, Irell & Manella LLP  
KOrso@irell.com

As prior editions of this column have discussed, “the on-sale bar” is a doctrine under which an invention can be ruled unpatentable if the inventor sold or offered for sale the invention more than a year before applying for a patent. As its name implies, the doctrine is in one sense an obstacle or “bar” for inventors. But in another sense, the on-sale bar provides a safe harbor for inventors, allowing them to test the market and try to commercially exploit their inventions for up to a year before finally deciding whether to invest time and resources in pursuing patent protection.

The patent statute contains other safe harbors—some in the form of exceptions to a general rule—for inventors in connection with activities relating to their inventions. For example the general rule is that a person is not entitled to a patent if his or her invention was patented or described in a printed publication before the effective filing date of an invention. In other words, under this rule, an inventor is generally unable to patent an invention that was already disclosed in “prior art” such as a patent, journal article, or published paper dated before the inventor filed his or her patent application.

Such a general rule is sensible. Patents, journal articles, and published papers, for example, are all public, so if an invention was disclosed in such a document before the effective filing date of the claimed invention, the invention was already public. The government is not in the business of granting patent monopolies for inventions that people may have plucked from the public domain.

But what if the patent, journal article, or published paper was by the inventor herself or himself? For example, what if the inventor published a paper describing an important scientific discovery that the inventor, or his or her employer, later pursued in a patent application? Or what if a reporter attended a scientific conference, heard the inventor make a presentation about the invention, and then wrote an article in a trade journal describing what the inventor said before the inventor could file for a patent? Suppose someone had no direct contact with the inventor but read something the inventor wrote about the invention and incorporated it a new article?

The patent statute generally exempts from “prior art” a disclosure made one year or less before the effective filing date of the claimed invention if the disclosure was made by an inventor or joint inventor, or by another who obtained the subject matter disclosed directly or indirectly from the inventor or joint inventor.

\* The author earned engineering and chemical engineering undergraduate and graduate degrees, and is a patent attorney and partner at the law firm of Irell & Manella LLP. This column does not constitute legal advice and does not necessarily reflect the views of the firm or its clients.

# San Gorgonio Section

## Chair's Message



Welcome to a new monthly message, with some continued uncertainty as to when in-person events will be prudent. In the meantime, the section continues with our traditional activities, in a modified format. The first activity for our section this year was participation in the National Chemistry Olympiad Exam. The local exam was given virtually on March 27<sup>th</sup>. Students having the 10 highest scores were nominated to participate in the **National Chemistry Exam Part 1, to be held April 17<sup>th</sup>. Those scoring in the top 200 students nationally will be allowed to participate in Part II of the exam on April 24<sup>th</sup>.** More detailed information regarding this activity is available on the section's website. We are very appreciative of the teachers, students, parents, and volunteer proctors who participated in the Local Exam. Later in the spring, we will have an awards event honoring the top scoring students, their teachers, and parents. This may be a virtual event, unless conditions at that time permit an in person setting.

We are planning an online scientific seminar for late April or early May, however, final details were not available in time to be included in this newsletter. Notice of the event will be posted to the Section website and Instagram page, and will also be emailed to the Section mailing list.

We hope to return to in-person events starting approximately mid-year, depending on status of the pandemic at that point.

As a reminder you can access the local section information on the websites shown below--a link to the National ACS website is provided therein:

---ACS San Gorgonio Local Section website: <http://www.sgacs.org>

---ACS San Gorgonio Local Section Instagram:

<https://www.instagram.com/sangorgonioacs/>

As always I welcome any questions, suggestions or comments from members of the section or other interested parties. My email is: [rm.riggin@yahoo.com](mailto:rm.riggin@yahoo.com). Feel free to contact me at any time.

Ralph Riggin, Chair

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Contains Dated Meeting Announcement

**PERIODICAL**

**Bi-Section Chemists' Calendar**

**April**

- 17 Part I of the National High School Olympiad Exam—see page 8 & 13  
18 SC CCEW Zoom Demos—see page 5  
24 Part II of the National High School Olympiad Exam—see  
pages 8 & 13  
18-24 Chemists Celebrate Earth Week—Theme: “Reducing Our Footprint  
With Chemistry”  
25 SC CCEW Poem Contest deadline—see page 6

**May**

- TBD SC High School Virtual Awards Program

**June**

- 16 SC Tolman Award Zoom Presentation—see page 3

**For more information or to find virtual events,  
please see our websites:**

**[www.scalacs.org](http://www.scalacs.org)**

**[www.sgacs.org](http://www.sgacs.org)**