Identifying Gemstones
Are They Real?

Dr. James Shigley
GIA Research
Gemological Institute of America (GIA), Carlsbad, California

DATE: Thursday November 19, 2015
TIME: 6:00 PM Social hour, light appetizers
       7:00 PM Presentation
PLACE: Takeda California
       10275 Science Center Drive
       San Diego, CA 92121
RESERVATIONS: Tuesday, November 17, 2015
       www.jamesshigley.eventbrite.com

ABOUT THE SPEAKER:
Dr. James Shigley is a distinguished research fellow at the Gemological Institute of America in Carlsbad, California. Prior to joining GIA in 1982, he studied geology as an undergraduate at the University of California Berkeley, and later received his doctorate in geology from Stanford University. He helps direct GIA’s research activities on the identification of diamonds and colored gemstones, and has ongoing research interests in the natural geological environments of gem mineral formation as well as the characterization of gem materials. Dr. Shigley is the author of more than 180 published articles on diamonds and other gemstones in various journals, and has been a well-known speaker on gemological topics to both professional and general audiences on nearly 250 occasions.

ABOUT THE PRESENTATION:
A wide variety of natural, synthetic, treated, and imitation gem materials are available and have a proper place in today’s jewelry market. To maintain consumer confidence and fulfill ethical practices, jewelers must correctly identify, appropriately price, and fully disclose information about gemstones to consumers. While many gem materials can be recognized by a trained gemologist, others can present difficulties for detection especially when the synthesis or treatment processes used simulate conditions to which natural gemstones could be exposed in the earth. This presentation will highlight some current gem identification challenges, and will discuss the forensic methods used at GIA to document the properties of gem materials as the basis of their recognition.
Dear ACS Members:

With fall here, the San Diego Local ACS Section hosted several of its annual events. The Distinguished Scientist Award Banquet took place on October 22nd at the UC San Diego Faculty Club. The Award Committee, chaired by Tom Beattie, selected Dr. Rick Anderson as the 2015 Distinguished Scientist. His lecture titled, "Development of In vitro Diagnostics for Point of Care Applications", chronicled the development of three different medical devices that utilize antibody technology to provide a clinical diagnosis within a few minutes at the point of care. We also honored our ACS Local Section volunteers: Bill Szabo earned the Tony Bottone Award for Outstanding Service, Ryan Smith earned the Outstanding Committee Chair Award, and Linda Woods has earned the Outstanding Chemistry Educator Award. Tom Beattie was honored with the ACS Outreach Volunteer of the Year Award - San Diego Local Section.

ChemExpo 2015, our 28th year, was held at Miramar College on October 24th. The event caters to high school students and showcases a wide variety of science being performed in the San Diego community. It is a great forum for sparking enthusiasm in the potential scientists of the future. If you would like to be involved, please contact the organizer, Paul Bruinsma (paulb@sandiegoacs.org), to volunteer for next year.

Mark your calendars for these upcoming events:
The November monthly meeting will feature a lecture from Dr. James Shigley from the Gemological Institute of America (GIA). His title "Identifying Gemstones: Are They Real?" will address the increasing complexity of artificial gemstones and the forensic methods used to detect them. The event will be held at Takeda San Diego on Thursday, November 19th. Please register at www.jamesshigley.eventbrite.com

The year-end wrap up and holiday party will again be at the Butcher Shop Steakhouse on Thursday, December 3rd. I will summarize the Local Section's activities in 2015, and Graeme Freestone will give an introduction for his plans for the San Diego Section of the ACS in 2016. Please register at www.sandiegoacsdec2015.eventbrite.com

Be sure to vote in the ACS Local Section elections for Executive Committee Officers, polls close November 25th. Our last Executive Committee Meeting will be on November 5th. Please join us and share your ideas for what you would like to see from the ACS in 2016.

On behalf of the San Diego ACS Executive Committee, I would like to extend our thanks to the event sponsors, general sponsors, the volunteers and the membership. See the rest of this newsletter for additional information regarding upcoming ACS and other events in the San Diego area.

Best,
Ben Pratt
2015 Chair
American Chemical Society – San Diego Section
E-mail: bpratt@sandiegoacs.org
Web: www.sandiegoacs.org

FREE EVENT ANNOUNCEMENTS FOR NON-PROFIT ORGANIZATIONS!

Did you know that The San Diego Chemist is the only monthly e-newsletter that targets chemists and chemical engineers in San Diego and Imperial Counties? As soon as our newsletter is uploaded on www.sandiegoacs.org a separate notification is sent to the 2,400 members of the ACS-San Diego Section, each potential customers for your products and services! Quick turnaround: Ad copy submitted by the 23rd of each month will be published by the end of that month. For more information, please contact: Renate Valois, renae@sandiegoacs.org.

ATTENTION ADVERTISERS

The San Diego Chemist, the official newsletter of the San Diego Section of the American Chemical Society, published on a monthly basis, can be viewed at http://www.sandiegoacs.org/newsletter.

All contents are published at the discretion of the Section’s Executive Committee. Events of interest to chemistry professionals in the community may be included in the events calendar as space permits and are subject to editing for brevity. Advertisements and announcements from the chemistry community are accepted at published rates. The deadline for items submitted is the 23rd of the month for publication by the end of that month.

Advertisers: Ad prices as of January 1, 2015:

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Please send your jpg to:
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Make checks payable to:
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SECTION E-MAIL LISTSERVER!

Get up-to-the-minute reminders of local events and develop dialogs with your fellow members!
To subscribe to our moderated listserver:
1. Send an e-mail with SUBSCRIBE TO LISTSERVER in the subject line, and your name and e-mail in the body of the message to Ken Poggenburg at jkp135@att.net.
2. If you receive a message from the postman, reply to confirm that you wish to be added to the list, otherwise it will not take effect.
3. You will receive reminders approx. 5-7 days prior to upcoming events and messages of general interest to members.
4. To post topics for discussion, or informational items to the listserver members, send the message to sandiego-chemist-l@ucsd.edu.
5. If the moderator approves the post, it will be sent to the members.

NOTE: That is the letter "l", not the number "one" following the word "chemist".

Executive Committee Meeting Date 2015
6:00 – 8:00 pm
Thursday, November 5
Meeting will be held at:
9381 Judicial Drive, Suite 160
San Diego, CA 92121
The San Diego Section of the American Chemical Society would like to thank our Corporate Sponsors. Here are a few examples of our annual outreach programs that are made possible by their generous donations:

**Mad Science** - Stage demonstrations for 4th and 5th graders which make science fun for kids! Last year the program was viewed by over 8000 students in low-income areas and from military families.

**ChemExpo** - A science event for middle and high school students held annually for the past 28 years. It features live stage demonstrations and interactive booths that teach kids about applied science. Last year over 1000 local students participated!

**Monarch Elementary School Program** - This unique school accommodates children who are impacted by homelessness, and who would otherwise have little or no exposure to hands-on science.

**EarthFair** – We participate in the world’s largest free annual environmental fair, held in Balboa Park.

### CONSIDER SPONSORSHIP OF THE ACS SAN DIEGO SECTION
The San Diego Section of the ACS is looking for organizations that are committed to advancing science and education in the greater San Diego area by providing financial support. There are several ways to get involved and each one comes with its own benefits and privileges.

For further information please contact: Gulin Erdogan, Chair, Fundraising Committee, gerdogan@sandiegoacs.org

### VOLUNTEER OPPORTUNITIES
**MAKE A DIFFERENCE!**
Share your passion for chemistry with others. We’ve organized many ways for you to promote chemistry to children within your community, and to lawmakers. Explore to find opportunities that fit your interests and schedule!

**BE A CHEMISTRY AMBASSADOR** - [http://www.acs.org/content/acs/en/volunteer/chemambassadors.html](http://www.acs.org/content/acs/en/volunteer/chemambassadors.html)

**VOLUNTEER WITH KIDS & CHEMISTRY** - [http://www.acs.org/content/acs/en/education/outreach/kidschemistry.html](http://www.acs.org/content/acs/en/education/outreach/kidschemistry.html)

### ORGANIZERS NEEDED!
The San Diego Section of the American Chemical Society is looking for volunteers to organize an **ACS Western Regional Meeting**. Exact dates are flexible and yet to be determined, but it will be held between 2018 and 2020. We are currently looking to fill the positions of General Meeting Chair and Program Chair(s). If you are organized, work well with others and want to expand your professional network to a national scale, you may be a great fit for either of these positions. The **General Meeting Chair** will be responsible for overseeing the planning of the meeting venue and logistics while the **Program Chair(s)** will fill events and speaker lists. Location, duration and desired attendance are based on the vision of the organizers. If you have an idea for a large meeting held here in San Diego, this is your way to make it happen.

For more information please contact:

**Ben Pratt, 2015 Chair**
San Diego Section of the American Chemical Society
bpratt@sandiegoacs.org

### ACS PUBLICATIONS LAUNCHES MOBILE-OPTIMIZED WEB PLATFORM
ACS Publications has introduced **ACS2Go**, pubs.acs.org/acs2go, a new, mobile-optimized website that enriches the reading and browsing experience for readers of ACS content.

Mobile pairing technology provides authorized users from subscribing institutions with on-the-go access to the entire content of the ACS Publications web platform. That includes more than 1 million scientific journal articles, the full collection of ACS eBooks, C&EN Archives, and the ACS Style Guide, all via a mobile-optimized interface. ACS members can also access their personal subscriptions on this platform.

**ACS2Go** can be accessed at pubs.acs.org on a tablet or smartphone. A brief video, a highlight of features and functionality, and frequently asked questions are available at: pubs.acs.org/acs2go.

### ACS ELECTIONS ARE HERE!
Voting will be done electronically using your e-mail address on record with the ACS. If you wish to receive a paper ballot instead, please call or email Jackie Trischman, Election Coordinator, at 858-414-3323 or trischma@csusm.edu, by Monday, November 2nd, and leave your name and mailing address. You will be mailed a paper ballot.

If you do not request a paper ballot, you will receive instructions on how to vote via e-mail. Please be sure your e-mail address on file with the ACS is current! To update your e-mail address with the ACS, use www.chemistry.org
EXECUTIVE COMMITTEE CANDIDATES FOR 2016
ACS SAN DIEGO SECTION
CANDIDATE BACKGROUNDS

CHAIR-ELECT  OPEN

SECRETARY
WILLIAM TOLLEY
Bill earned a B.S. and M.S. in Metallurgical Engineering from the University of Utah and a Ph.D. in Inorganic Chemistry from the Brigham Young University. His research focused on the interactions of inorganic compounds with supercritical fluids. This work led to a patent describing novel processing to purify metals using vapor-phase chemistry. He worked for seven years as Production Manager, and then promoted to Director of Quality Assurance at Quantum Group Inc. in San Diego.

In 2008, he joined Seacoast Science, Inc., located in Carlsbad, CA. He led development of the Mini-GC, which was successfully launched in August 2009. His responsibilities include sensor design and testing, and proposal development. In 2007, he chaired the subgroup to write new alarm certification protocols under UL 2035 - Single Station Gas Detectors. He is a member of the American Chemical Society, where he is a member of the San Diego Section executive committee and in his twelfth year as Secretary to the Section. He is a lifetime member of Sigma Xi (The Scientific Research Society). He has authored or co-authored 26 U.S. patents and over 75 journal articles and presentations in chemical sensing, process control and materials production.

TREASURER
BILL SZABO
Bill received his undergraduate degree in chemistry from Lehigh University, worked for two years as an R&D chemist at Johnson & Johnson’s McNeil Laboratories near Philadelphia, and earned his Ph.D. degree in heterocyclic and medicinal chemistry from the University of Florida. He held a two-year postdoctoral fellowship in natural product synthesis at Wesleyan University with Professor Max Tishler, former President of Merck Research Laboratories and a past ACS President.

Next, Bill was recruited by Alfred Bader, co-founder of the Aldrich Chemical Company, and worked for 18 years at Aldrich in Milwaukee in various management positions in R&D, production and advertising. He then relocated to the Sigma-Aldrich corporate headquarters in St. Louis and spent four years in the sales and marketing of bulk pharmaceutical intermediates, positions which included Sales Director for North America and Vice President of International Sales.

In 1998 he took an early retirement, moved to San Diego, and consulted for the next 14 years in drug and business development. In 2012 he co-authored a chapter in a book on transition metal-catalyzed asymmetric cross-coupling reactions. He is a 38-year member of the AAAS and a lifetime member of the Japan Society of San Diego & Tijuana.

Bill is a 47-year member of the ACS. He served on the Organizing Committee of the 2007 ACS Western Regional Meeting, was Chair of the San Diego Section’s Public Relations and Fundraising Committees, and organized the Section’s 2009 and 2010 San Diego Science Festival exhibits. Bill was Chair of the ACS-San Diego Section in 2011, for which year the Section received the ChemLuminary Award for Outstanding Performance by a Local Section (Large Size Category). He received the Section’s Outstanding Committee Chair Award in 2014 and the Tony Bottone Award for Outstanding Service in 2015. Bill has served as the Section’s Treasurer since 2012.

COUNCILOR
TOM BEATTIE
Tom has served as a Councilor in the San Diego ACS Section for the last 12 years and prior (2001-3) was an Alternate Councilor. In 1999, a year for which the Section received the ACS Outstanding Large Section Award, he was Section Chairman.

Currently he is vice chair of the National Senior Chemists Committee and formerly was a member of the National Senior Chemists Task Force (2009- 12) and chair of the ACS National Silver Circle (seniors) Working Group (2005-9). From 2004 to 2012 he was a member of the National Local Section Activities Committee and served as chair of its LSAD subcommittee.

In the San Diego ACS Section he chairs the annual Distinguished Scientist Award Selection Committee (18 years) and was the organizer of the annual San Diego Medchem Symposium (16 years). In 2008 he initiated and continues to manage the Section’s quarterly seniors/retirees/consultants/ part-timers breakfasts.

Since 2001 he has managed the Section’s educational programs in the schools. Since 2005 the programs have focused on science shows for 4th/5th graders in which >58,000 school children have viewed >300 Mad Science shows. In 2012 this program received a San Diego Science Alliance award.

Tom was the Program Chair of the San Diego ACS Section-sponsored 1995 ACS Western Regional Meeting (WRM), which still holds the record as the largest ACS regional meeting. For the 2007 WRM he was Technical Program Advisor and a session chair.

He received the Section’s Outstanding Service Award in 1996, 2005 and 2013 and the 2011 E. Ann Nalley ACS Western Region Service Award. In 2011 he was named an ACS Fellow.

Apart from ACS, Tom spent a 27-year career at the Merck Research Labs in Rahway, NJ working as a medicinal chemist in early stage drug discovery. After retiring from Merck in 1993, he came to San Diego and worked at Amylin Pharmaceuticals and IRORI/ChemRx/Discovery Partners. Since 2001 he has been consulting for many organizations within and outside of San Diego, has taught at UCSD and U. Kansas, and served on several advisory boards. He has a B.S. (U. Pennsylvania), Ph.D. (U. Wisconsin) and was a postdoctoral fellow at M.I.T.
**COUNCILOR DESIREE GRUBISHA**

Desiree is currently an adjunct faculty member in the Department of Chemistry and Biochemistry at California State University, San Marcos. She has worked in Lab QA in Commercial Quality Control at AstraZeneca/Amylin Pharmaceuticals supporting diabetes medicines in the worldwide market. Prior to this, she worked at Amylin Pharmaceuticals in Analytical R&D supporting clinical trial programs for diabetes and severe lipodystrophy. Desiree has been an active volunteer with the San Diego ACS Section since 2004. She has been involved with ChemExpo, YCC and WCC activities, planning committee for the 41st Western Regional Meeting in 2007, and has served on the Public Relations committee. She is currently serving the San Diego Section in the Communications Committee and as a Councilor. Desiree earned a PhD in inorganic chemistry from the University of Wisconsin, Milwaukee, and did postdoctoral research toward novel detection platforms for molecular diagnostics in the Microanalytical Instrumentation Center at Iowa State University.

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**COUNCILOR DAVID WALLACE**

David is an experienced medicinal chemist and registered patent agent with over 23 years experience in the pharmaceutical industry. He is founder and president of Wallace Scientific Consulting. WSC provides services to early and clinical stage biotech companies, providing prior art/FTO searches and patent application drafting as well as synthetic and medicinal chemistry expertise in the area of small molecule drug discovery. Current and past companies include Synamed, CyanoTech, AnhWalker Therapeutics, Kemin Pharma, EyeCyte, Rempex Pharmaceuticals, Allylix and Mirable. David was also a Scientific Advisory board member and co-founder of Amalyte, Inc., a Bay area biotech company focusing on the treatment of immune and inflammatory diseases. Amalyte was acquired by Kemin Pharma in 2009. He was previously Principal Scientist at Senomyx, Inc., where he served as chemistry group leader of a team focused on the discovery of agonists to G-protein coupled taste receptors. Prior to Senomyx, David held senior scientific and leadership positions at Chugai Pharma, USA, where he contributed to several multidisciplinary research programs directed toward discovery of novel therapies for cancer, cardiovascular, inflammatory, and metabolic diseases. He is an inventor or co-inventor on numerous issued or pending patents. David holds a Ph.D. in Organic Chemistry from the University of California, Davis. He has been a member of the ACS for 30 years and is currently a councilor of the San Diego Section and member of the ACS National Committee on Economic and Professional Affairs (CEPA).

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**VOTE BY NOVEMBER 25TH**

Dear Editor,

There was an error in the clock that was posted on page 7 of the October 2015 issue of *The San Diego Chemist*. Can any of your readers find and correct it?

-Bill Szabo

*Editor’s note: The same clock appears above.*
BIOSIMILARS

The San Diego ACS Law Section presented a seminar on Biosimilars on September 17th at the Scintillon Institute. It was great to hear from both an in-house perspective (Diane Retallack, of Pfenex) and an experienced attorney in the field (Vicki Norton, of the law firm Duane Morris).

Dr. Retallack discussed the regulatory issues and commercial processes regarding bringing a biosimilar product to market when a branded product exists. Dr. Norton discussed the legal requirements to meeting the FDA’s requirements for bringing a generic biosimilar to market and recent caselaw impacting the requirements.

The attendees ranged from scientists, regulatory affairs specialists, contract manufacturer representatives, patent agents, patent attorneys, and those just interested in the topic. There were about 34 attendees, which was high considering there were competing events to a similar audience at that time. The high interest level could be measured in the number of questions to the presenters following their talks.

The week after the presentation, an article in Forbes was published titled “Biosimilars” and described it as a new buzzword that many will soon be talking about. So the ACS Law Committee is at the forefront of organizing relevant and exciting topics for the local chemistry and legal community.

Many attendees complimented the (1) subject matter presented, and (2) the food. There were many follow up requests for the caterer’s contact info (Wild Thyme Catering). The event was sponsored by Harbor Consulting, Inc., a well-known preparer of Sequence ID Listings, which is important to many biotech patent attorneys. The sponsor also sent over several cases of “Wicked Whoopies” (highly caloric cookie-things).

Ryan Smith, Chair, Law Committee

AMERICAN CHEMICAL SOCIETY
45TH WESTERN REGIONAL MEETING (WRM 2015)
NOVEMBER 6-8, 2015
SAN MARCOS, CA

For more information, please visit  http://wrm2015.sites.acs.org/
AN EVENING WITH DR. RICK ANDERSON

Our San Diego ACS Section’s Annual Distinguished Scientist Award Banquet was held on October 22nd at the UCSD Faculty Club.

Section Chair Ben Pratt gave a brief introduction and overview of Local Section activities and presented awards to: Bill Szabo, 2015 Tony Bottone Award for Outstanding Service to the ACS San Diego Section; Ryan Smith, Outstanding Committee Chair Award; and Linda Woods, Outstanding Chemistry Educator Award. Tom Beattie was honored with the ACS Outreach Volunteer of the Year Award - San Diego Local Section. Congratulations to all!

Award Committee Chair, Tom Beattie, introduced the 2015 Distinguished Scientist Awardee, Dr. Rick Anderson, R&D Director, BD Diagnostics POC, who presented the award lecture "Development of in vitro Diagnostics for Point of Care Applications".

Preprandial gathering

Renate Valois
Photo credits: Jim Shih
EXECUTIVE COMMITTEE MEETING MINUTES
OCTOBER 1, 2015

Treasurer’s Report – Since last: no revenue added; expenditures:
Year-End Wrap-Up - $1K for deposit; $21K for sending all 6 councilors
to both National Meetings: Awards - $1450 for cash awards; YTD – $5400 surplus; total assets $312K, down ~$2K from 2014; time to
consider budget needs for 2016; Ken Ajayi has volunteered to serve as
backup treasurer

Year-End Wrap-Up – Possible menu selections: two hot selections,
continue carving station; price $25 for members, $15 for students;
room reserved beginning at 5:30 p.m.

Law Committee – Sept. 17, speakers: Dr. Vicki Norton, Dr. Diane
Retallack, ~30 attendees, good catering, held at Scintillon Institute

Awards Banquet – Event published on Website, Eventbrite is set up to
accept registration; BD Diagnostics has reserved two tables for
employees

ChemExpo – Event coming together; needing more volunteers;
Science Alliance has been advertising this event; ACS Store lean on
items appropriate as raffle give-aways; Girl Scouts planning to attend;
Miramar College may be able to provide some shade

Nov. Monthly Meeting – Panel discussion has not materialized; working
toward Gemological Society on Nov. 19, holding meeting at the facility
requires hiring docents; looking for alternate venue

ACS Project SEED – Awardees presented posters at their institutions;
suggestion to invite students to present posters during networking
portion of Awards Banquet

Local Section Advancement – Letter from National asking for
suggestions to reduce administrative requirements and guidelines to
reduce legal risks

Long-Term Planning – Alt. Councilor Ruo Steensma will remain to Dec.
31 and replacement can be appointed for 2016

Elections – Still needing nominee for chair-elect, but election will go
forward with chair-elect as a write-in

SLAS – Sponsoring mentoring program as part of Jan. 2016 meeting in
San Diego; seeking mentors from ACS

Western Regional Meeting 2015 – Little information currently
available; call for papers open currently

Next meeting: Nov. 5

ACS-HACH PROGRAMS

ACS-Hach Land Grant Teacher Scholarship
Provides financial support to obtain a chemistry undergraduate degree
and chemistry teaching credentials at one of our 72 partner
institutions.
Application Period: Contact participating universities directly for
application details

ACS-Hach Post-Baccalaureate Teacher Scholarship
Provides financial support for chemistry graduates with limited work
experience to obtain a masters degree in education or teacher
certification in chemistry.
Application Period: February 1st – April 1st

ACS-Hach Second Career Teacher Scholarship
Provides financial support for chemistry professionals to obtain a
masters degree in education or teacher certification in chemistry.
Application Period: February 1st – April 1st

About ACS-Hach Programs
Learn more. Contact us: Email: hach@acs.org
Phone: (800) 227-5558 ext. 8178

ACS Webinars™
Featured Events

ACS Webinars® is a free, weekly online event serving to
connect ACS members and scientific professionals with
subject matter experts and global thought leaders in the
chemical sciences. Each session is about 60 minutes,
comprised of a short presentation followed by Q&A with
the speaker. Live presentations are held on Thursdays
from 2-3pm ET. Recordings of the webinars are
available online to ACS members at
http://acswebinars.org/.

From Truth Serum to Anesthesia: The Discovery
and Uses of Sodium Thiopental
Thursday, November 5, 2015

Chemistry of Addiction
Thursday, November 12, 2015

2015 Drug Design and Delivery Symposium
Symposium Schedule
11/19/2015 Prodrugs in Drug Discovery
Visit the site to register for the monthly series:
http://www.acs.org/content/acs/en/acs-
webinars/drug-discovery.html

251ST AMERICAN CHEMICAL SOCIETY NATIONAL
MEETING & EXPOSITION
Convention Center
San Diego, CA
March 13-17, 2016
Registration opens December 14!
For more information visit www.pacifichem.org

2015 ACS REGIONAL MEETINGS
Southeast (SERMACS) Nov. 4-7 Memphis, TN
Western (WRM) Nov. 6-8 San Marcos, CA

2016 ACS REGIONAL MEETINGS
CERM May 18 – 21 Cincinnati, OH
MARM June 9 - 12 Riverdale, NY
NORM June 26 - 29 Anchorage, AK
ICS (Specialty) July 16 -19 New Orleans, LA
NERM October 5 – 8 Binghamton, NY
SERMACS October 23 – 26 Columbia, SC
MWRM TBD Manhattan, KS
SWRM October 10 - 14 Galveston, TX

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LOOKING FOR A CHEMIST?
CHEMPELOYMENT IS THE ANSWER!
THE SAN DIEGO CHEMIST
is read by nearly 3000 chemists and biochemists in San
Diego and Imperial counties.
A two-month ad costs only $80.00!
For information contact:
Renate Valois - renate@sandiegoacs.org
CHEMISTRY FOR YOU AND YOUR KIDS
STARCH SEARCH!
A major nutrient in the food we eat is carbohydrates. One of the most popular carbohydrates throughout the world is starch. Starch is the major ingredient in bread, potatoes, rice, and pasta. In the activity below, you can use a simple test to see if a food contains starch.

You will need
Safety glasses - Crackers (light-colored) - Rice - Spaghetti - 5 Paper or plastic cups - Masking tape - Tincture of iodine - Tablespoon - Straws - Sheet of white paper - Ballpoint pen - Wax paper

CAUTION:
BE VERY CAREFUL WHEN USING TINCTURE OF IODINE
READ AND FOLLOW ALL DIRECTIONS ON THE LABEL
WHEN YOU HAVE FINISHED THE ACTIVITY, RINSE OUT ALL CUPS AND THE STRAWS AND THROW THEM AWAY
THROW AWAY ALL FOOD ITEMS AND WASH YOUR HANDS.

1. Cover your work surface with newspaper. On your sheet of white paper, label three areas as follows: crackers, rice, and pasta. Place a small amount of each food on its area of paper.
2. Place 1 drop of iodine on each type of food. What do you observe? A dark color shows you that the iodine has reacted with starch in the food. Do all these foods seem to contain starch?
3. Use your masking tape and pen to label the cups, 1, 2, 3, and 4. Break a cracker into 4 equal-size pieces. Place one piece in each of your four labeled cups. Add 1 tablespoon of water to cup 1, 2 tablespoons of water to cup 2, 3 tablespoons of water to cup 3, and 4 tablespoons of water to cup 4.
4. Use separate straws to stir and mix your crackers with the water in each cup until the cracker has completely fallen apart and is well mixed with the water.
5. Use a straw to take a few drops from the top of each water/cracker solution. Place 3 drops of each solution on a piece of wax paper as shown. Rinse the straw with water between uses.
6. Ask your adult partner to add 1 drop of iodine to the drops of each solution, on the wax paper. Did the color change in any of the solutions? Did all the colors look the same? What explains the difference in color if you saw any?


LINKS TO STEM
Links to STEM provides enrichment for students in grades 4-8 from schools throughout San Diego. Links to STEM introduces the students to a broad spectrum of STEM-related topics and emphasizes the skills necessary to participate on a robotics team. The time commitment is from 9:00 am - 12 noon, 2 times monthly/every other Saturday at Francis Parker School in Linda Vista.
Volunteers are needed in the following areas:
• Computer programming
• Scientific experiments, practicing
• Elementary & middle school math
• Robotics competition preparation

Volunteer today to work with students in the Links to STEM Program August 2015 - April 2016.
If you are interested please contact Kemi Akinlabi at olakemi.akinlabi@hp.com
Help Guide ACS with Your Valuable Input by Joining the ACS Insight Lab

You are cordially invited to join the ACS Insight Lab, a forum for you and other ACS members to offer guidance and perspective to help shape the future of ACS and the broader chemistry community. Your feedback and insight will help the ACS improve and develop new programs and services. Your membership in the ACS Insight Lab will give you the ability to share your insights and experiment with new ideas; grant you access to the Lab Report newsletter, covering what we've learned from you and how it has been implemented; notify you of exclusive sneak peeks and early-bird offers from the ACS; and make you eligible to win prizes for participating. Head over to www.acsinsightlab.com/ACSMatters to sign up today!

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YOUR AD HERE!

Place your ad in the next issue of The San Diego Chemist
Please contact Renate Valois at renate@sandiegoacs.org

Attention Companies!
Do you hire student workers?

If you have open positions in chemistry and biochemistry that would be of interest to college students, such as summer internship opportunities, here is a list of contacts you’ll want to keep handy. The people listed below are the faculty advisors of the ACS Student Affiliate groups for all chemistry programs in San Diego County. These professors can get the word out to all chemistry and biochemistry majors at their schools about jobs, career fairs, open houses, etc.

California State University, San Marcos
Jacqueline Trischman
trischma@csusm.edu 760-750-4206

Palomar College
Greg Elliot
gelliott@palomar.edu 858-531-1149

Point Loma Nazarene University
Sara Choung
SaraChoung@PointLoma.edu 619-849-2627

San Diego Mesa College
Dwayne Gergens
dgergens@sdccd.edu 619-388-2609

San Diego Miramar College
Fred Garces
fgarces@sdccd.edu 619-388-7493

San Diego State University (SDSU)
Mikael Bergdahl
bergdahl@sciences.sdsu.edu 619-594-5865

Southwestern College, Chula Vista
David Hecht
dhecht@swccd.edu 619-421-6700x5461

University of California, San Diego
Joe Cribari
jcribari@ucsd.edu 858-822-4055
Gourisankar Ghosh
gghosh@ucsd.edu 858-822-0469
Judy Kim
judyk@ucsd.edu 858-534-8080

University of San Diego
Tammy Dwyer
tdwyer@sandiego.edu 619-260-4030

FUN FOR CHEMISTS

Chemistry Jokes and Riddles

Q: What is the show that cesium and iodine love watching together?
A: CSI

Q: What is the chemical formula for "coffee"?
A: CoFe2

Q: What is the chemical formula for "banana"?
A: BaNa2

Q: Anyone know any jokes about sodium?
A: Na
UPCOMING EVENTS

DR. JAMES SHIGLEY
GIA Research
Gemological Institute of America (GIA), Carlsbad, California
Takeda California
10275 Science Center Drive
San Diego, CA 92121
Thursday November 19, 2015
**********

HOLIDAY PARTY
The Butcher Shop
5255 Kearny Villa Road, San Diego, CA 92123
Thursday, December 3, 2015
**********

SENIORS/RETIREES/CONSULTANTS/ETC. BREAKFAST
Coco’s Bakery Restaurant
4280 Nobel Drive, San Diego, CA 92122
Thursday, January 7, 2016, at 9:30 AM
**********

SAN DIEGO FESTIVAL OF SCIENCE & ENGINEERING
FESTIVAL WEEK: March 5-13, 2016
EXPO DAY at PETCO Park: Saturday, March 5, 2016
https://www.lovestemsd.org/
**********

251st ACS SPRING NATIONAL MEETING & EXPOSITION
San Diego, California
March 13-17, 2016
**********

THE 62nd ANNUAL GREATER SAN DIEGO SCIENCE AND ENGINEERING FAIR
March 15 - 20, 2016
Balboa Park Activity Center (2145 Park Blvd.)
For information please see http://www.gsdsef.org/
**********

EARTH DAY - EARTHFAIR 2016
Sunday, April 17, 2016
Balboa Park, San Diego, CA
http://www.earthdayweb.org
**********

252nd ACS FALL NATIONAL MEETING & EXPOSITION
Philadelphia, Pennsylvania
August 21-25, 2016

THE SAN DIEGO SECTION OF THE AMERICAN CHEMICAL SOCIETY WELCOMES ITS NEW MEMBERS

Joel Arias
Adam Arroyo
Michael Baude
David Brown
Silvia Calderon
Deyin Chen
Michael Cochran
Melodie Dick
Collin Fischer
Tony Gibson
Adam Grosvirt-Dramen
Natalia Harvey
Heather Hayes
Xia He
Jeff Hernandez
Zhenmin Hong
Gian Itani
John Jaskowiak
Kelsey Krug
Karrie Kwok
Brian Leon
Hiroko Masamune
Quang Nguyen
Michael Nicholl
Joseph Palomba
Michelle Powelson

Derek Price
Alyssa Robbins
Swagat Sahu
Joshua Savage
Chloe Sells
Cassandra Siler
Myoung Song
Sean Toenjes
Qingzheng Wang
Nicole White
Mathew Yanik
Yi Rui Zhu
Zhu
## 2015 EXECUTIVE COMMITTEE & COMMITTEE MEMBERS
### SAN DIEGO SECTION OF THE AMERICAN CHEMICAL SOCIETY

### EXECUTIVE COMMITTEE

<table>
<thead>
<tr>
<th>Position</th>
<th>Name</th>
<th>Company</th>
<th>Contact Details</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chair</td>
<td>Ben Pratt, Akarna Therapeutics</td>
<td><a href="mailto:bpratt@sandiegoacs.org">bpratt@sandiegoacs.org</a></td>
<td></td>
<td>858-945-7893</td>
</tr>
<tr>
<td>Chair-Elect</td>
<td>Graeme Freestone, Dart Neuroscience LLC</td>
<td><a href="mailto:gfreestone@sandiegoacs.org">gfreestone@sandiegoacs.org</a></td>
<td></td>
<td>858-246-8137</td>
</tr>
<tr>
<td>Past-Chair</td>
<td>Mark Tichenor, Janssen Pharmaceuticals, Inc.</td>
<td><a href="mailto:mtichenor@sandiegoacs.org">mtichenor@sandiegoacs.org</a></td>
<td></td>
<td>858-334-8914</td>
</tr>
<tr>
<td>Secretary</td>
<td>William Tolley, Seaocoast Science, Inc.</td>
<td><a href="mailto:b_tolley@juno.com">b_tolley@juno.com</a></td>
<td></td>
<td>858-780-0978</td>
</tr>
<tr>
<td>Treasurer</td>
<td>Bill Szabo</td>
<td><a href="mailto:bszabo1@sanrr.com">bszabo1@sanrr.com</a></td>
<td></td>
<td>858-550-0306</td>
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<tr>
<th>Councilors</th>
<th>Name</th>
<th>Company</th>
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<tbody>
<tr>
<td></td>
<td>Thomas R. Beattie</td>
<td></td>
<td></td>
<td>858-587-1210</td>
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<tr>
<td></td>
<td>Hui Cai, WuXi AppTec</td>
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<td>858-361-8838</td>
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<td></td>
<td>Desiree Grubisha, CSUSM</td>
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<td>858-254-5497</td>
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<td>John Palmer, UCSD</td>
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<td>858-534-5906</td>
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<td></td>
<td>Ken Poggenburg</td>
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<td>760-635-2573</td>
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<td></td>
<td>David Wallace, Wallace Scientific Consulting</td>
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<td>858-638-1866</td>
</tr>
<tr>
<td>Alternate Councilors</td>
<td>Paul Bruinsma, Hewlett-Packard Company</td>
<td></td>
<td></td>
<td>858-655-8232</td>
</tr>
<tr>
<td></td>
<td>Surya K. De, Sanford-Burnham Medical Research Institute</td>
<td></td>
<td></td>
<td>858-337-4961</td>
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<tr>
<td></td>
<td>Julann Miller, Waters Corporation</td>
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<td>800-252-4752 x6802</td>
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<td></td>
<td>John Schindler</td>
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<td></td>
<td>858-353-3943</td>
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<td></td>
<td>Jim Shih, Eli Lilly &amp; Co</td>
<td></td>
<td></td>
<td>626-826-3561</td>
</tr>
<tr>
<td></td>
<td>Ruo Steensma, Steensma Consulting, Inc.</td>
<td></td>
<td></td>
<td>858-205-9371</td>
</tr>
</tbody>
</table>

### Members-at-Large

<table>
<thead>
<tr>
<th>Name</th>
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<th>Contact Details</th>
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<tbody>
<tr>
<td>Ryan Clark</td>
<td>Inception Sciences, Inc.</td>
<td></td>
<td>858-774-2095</td>
</tr>
<tr>
<td>Gulin Erdogan</td>
<td>Avidity NanoMedicines LLC</td>
<td></td>
<td>619-540-8321</td>
</tr>
<tr>
<td>Mark Rosen</td>
<td>Aetheria Therapeutics</td>
<td></td>
<td>858-692-0639</td>
</tr>
<tr>
<td>Patrick Andrew Staley</td>
<td></td>
<td></td>
<td>858-483-4297</td>
</tr>
<tr>
<td>Jean Wang</td>
<td>InRSys Inc.</td>
<td></td>
<td>858-623-1520</td>
</tr>
</tbody>
</table>

### STANDING & SPECIAL COMMITTEES

#### Award Nomination Committee
- Thomas R. Beattie (Chair)

#### ChemExpo
- Paul Bruinsma (Chair), Hewlett-Packard Company
- Julann Miller, Waters Corporation

#### Communications Committee
- Paul Bruinsma, (Chair), Hewlett-Packard Company
- Surya K. De, Sanford-Burnham Medical Research Institute
- Desiree Grubisha, CSUSM
- Ken Poggenburg
- David Wallace, Wallace Scientific Consulting
- Renate Valois (Newsletter Editor)

#### Education Committee
- Haim Weizman (Chair), UCSD
- Joann Um (Co-Chair), Southwestern College

#### EarthFair
- Julann Miller, Waters Corporation

#### Finance Committee
- Bill Szabo (Chair)
- Tom Beattie
- Graeme Freestone, Dart Neuroscience LLC

#### Fundraising Committee
- Gulin Erdogan (Chair), Avidity NanoMedicines LLC

#### Government Affairs Committee
- Hui Cai, WuXi AppTec (Chair)
- Ken Poggenburg

#### Law Committee
- Ryan C. Smith, Duane Morris LLP

#### Mad Science Program
- Thomas R. Beattie

#### MedChem Symposium
- Mark Tichenor (Co-Chair), Janssen Pharmaceuticals, Inc.
- David Wallace (Co-Chair), Wallace Scientific Consulting

#### Membership Committee
- Mark Rosen, Aetheria Therapeutics

#### Nominations Committee
- Jim Shih, Eli Lilly & Co.

#### Picnic Committee
- Jim Shih, Eli Lilly & Co.

#### Professional Development Committee
- Ruo Steensma, Steensma Consulting, Inc.

#### Public Relations Committee
- John Schindler

#### Retired Chemists Committee
- Ken Poggenburg (Chair)

#### Seniors Breakfasts
- Thomas R. Beattie

#### Women Chemists Committee
- Gulin Erdogan (Chair), Avidity NanoMedicines LLC
- Abhi Sharma, Drug Delivery Experts
- Jayasheer Srinivasan, Accelerate-Research

#### Younger Chemists Committee
- Jean-Francois Brazeau (Co-Chair), Celgene
- Corey Anderson, (Co-Chair), Vertex Pharmaceuticals

#### Voice Mail – San Diego Section
- Jean Wang, Waters Corporation
- Bill Szabo, bszabo1@sanrr.com

Phone numbers are for the years listed.