

Bonding Students to Chemistry & Biochemistry

Editor-in-Chief: Jacqueline Dominguez ▪ **Co-Editor-in-Chief:** Brandon Graham

Staff: Cindy Pham

Website: <http://chemistry.csulb.edu/thebeaker.html> ▪ Facebook: [facebook.com/thebeakersulb](https://www.facebook.com/thebeakersulb)

▪ E-Mail: thebeakersulb@gmail.com

Event Announcements

By: Jacqueline Dominguez

University Deadlines:

- 9/10: Self-service registration and adjustments ends
- 9/10: Deadline to withdraw or drop classes using MyCSULB (by 10:00 pm)
- 9/10: Deadline to withdraw or drop classes without 'W' grade
- 9/10: Deadline for partial withdrawal with refund of fees
- 9/17: Deadline to add courses with NO \$10 missed deadline fee
- 9/17: Deadline to file for CR/NC or Audit grade options with NO \$10 missed deadline fee
- 9/17: Deadline to file for Credit by Examination
- 9/24: Final deadline to file for CR/NC or Audit grade options with \$10 missed deadline fee

Seminar Series:

- 9/5: Peter Qin, USC. "Nucleic Acids Structure and Dynamics: A Spin Label's Perspective" Host: Dr. Narayanaswami
- 9/12: Benjamin Schwartz, UCLA "Long-range Energy Transfer between Conjugated Polymers and Fullerenes: Implications for Plastic Solar Cells" Host: Dr. Mezyk
- 9/19: Gregory Kalyuzhny, San Diego State "Synthesis of Ultra small II-VI, III-VI, and II-V Semiconductor Nanostructures" Host: Dr. Shon
- 9/26: Neil Garg, UCLA "Complex Molecule Synthesis as a Fuel for Discovery" Host: Dr. Nakayama

SAACS

- 9/3, 9/4, & 9/5 @ 12pm-1pm: Lab Garb Sale. Location HSCI-338. New and used items available (while supplies last); this includes lab goggles, lab coats, lab notebooks and study guides. Cash sale only.
- 9/6 @ 5pm: First SAACS meeting. Location TBA. Bowling social afterwards. For details, email csulbchemclub@gmail.com
- 9/15 @ 9:45-10:45am: Beach clean up. For details, email csulbchemclub@gmail.com

Career Development Center:

- 9/4 @ 1:00pm: Searching for a part-time job
 - 9/5 @ 12:00pm: Resume Writing Techniques
 - 9/6 @ 2:00pm: Search & Secure an Internship
 - 9/10 @ 1:00pm: Applying to Graduate School
 - 9/11 @ 3:00pm: Resume writing for STEM jobs
 - 9/12 @ 12:00pm: How to find scholarships
 - 9/13 @ 1:00pm: Prepare for the job fair
 - 9/17 @ 12:00pm: Interviewing techniques
 - 9/19 @ 2:00pm: Prepare for the job fair
 - 9/20 @ 12:00pm: 2012 STEM (Science, Technology, Engineering, Mathematics) Job Fair
 - 9/24 @ 2:00pm: Letters of recommendation
 - 9/25 @ 12:00pm: Applying to graduate school
 - 9/26 @ 1:00pm: Writing personal statement
- [All events are held in BH-250 unless otherwise noted]

CNSM Department:

- 9/7 @ 12:00-2:00pm: Department Research/ Poster Session
- 9/14 @ 11:00am-1:00pm, USU Ballrooms A&B: CNSM Student Research Symposium
- 9/31: Abstract Deadline

Faculty Spotlight: Young-Seok Shon

By: Jacqueline Dominguez Editors: Brandon Graham, Cindy Pham

From a rebel, to a master of organic chemistry; the journey of Dr. Shon's success is an all but familiar tale that many young students can relate to. His love for science sprung from a young age. When in high school, as he explains, he was fascinated with chemicals and their properties and was inspired to pursue a chemistry degree because of his high school chemistry teacher. As Dr. Shon says, "he was very influential and I like the way he taught the class, I learned a lot". Following high school, he was accepted to Sogang University in South Korea. Like many undergraduate students, his college career started off rocky and unstable; he would skip class and would not do any work. He admits that he was not focused and committed to school for the first couple of years of college. Finally, in his fourth year, he realized the importance of school and whole-heartedly dove himself into his education. After receiving his undergraduate degree, Dr. Shon pursued a master's degree in organic chemistry, which he completed in two years. In that time frame, he realized he loved doing research and yearned to have his own lab.

After working for a national lab in South Korea, Dr. Shon was determined to have his own lab, so that he could set his own rules and study what he truly desired. He went back to school and received a Ph. D. at the University Of Houston in 1999; followed by a Post Doc training at University of North Carolina at Chapel Hill from 1999-2001. He soon realized that having his own lab was not the only



passion he had for chemistry. Once he began teaching, he truly understood the impact and influence he could have on his students; this became his second passion. His first teaching opportunity was at Western Kentucky University in 2001. Attracted by the urban cities and beautiful weather in Southern California, Dr. Shon and his family packed up and moved to the sunny state of California. He then began his teaching career at CSULB in 2006. Here he has the ability to balance both teaching and devote plenty of time to his lab. Dr. Shon teaches organic chemistry 320A/B and 322A/B, and advanced organic chemistry 420. According to him, the key in succeeding in his classes are: coming to class every day; studying and keeping up with lectures so you don't fall behind, because it will be difficult to catch up. He also encourages his students to stop by his office hours. Dr. Young-Seok Shon is an accomplished organic and materials chemist. His work focuses on organic, inorganic, and solid-state synthesis of Nano-materials for technological applications. He is currently working on several different projects

that include: nanoparticle synthesis using gold, silver, palladium and other bi-metallic elements for catalytic conversion of organic functional groups; exploring the use of gold nanoparticles and dendrimers for efficient drug delivery and use as biomarkers; and the investigation of metal nanoparticle hybrid films formed by layer-by-layer assembly and heat treatment. Dr. Shon encourages all students to join a lab during their undergraduate study. If you are interested in joining his lab, he only requires his research students to be dedicated and driven individuals. He does not require a minimum G.P.A. and you only need to have one-year experience of general chemistry (111A/B). For more information contact Dr. Shon at ys.shon@csulb.edu.

Fun Facts:

- Has published over 60 papers
- Has two daughters (a senior in high school and the other in elementary school)
- Spends most of his time being a soccer dad
- Enjoys watching Sci-Fi movies and dramas.
- Favorite movies: The Gladiator, The Last Mohican, and Inception
- Favorite type of music: Korean Pop
- Has read all Hunger Games trilogy and some Harry Potter Books
- If he could be any element, he would be gold because it is a stable element, much like his personality.

Selected Publications:

- (1) Sadeghmoghaddam, E.; Gu, H.; Shon, Y. S. Pd Nanoparticle-Catalyzed Isomerization vs Hydrogenation of Allyl Alcohol: Solvent-Dependent Regioselectivity, *ACS Catalysis* 2012, 1838-1845.
- (2) Vaccarello, P.; Tran, L.; Meinen, J.; Kwon, C.; Abate, Y.; Shon, Y.-S. Characterization of Localized Surface Plasmon Resonance Transducers Produced from Au₂₅ Nanoparticle Multilayers, *Colloids and Surfaces: A* 2012, 402, 146-151.
- (3) Nuño, Z.; Hessler, B.; Dunlap, T.; Shon, Y.-S.; Abate, Y. Nanoscale Near-Field Infrared Spectroscopic Imaging of Silica-Shell/Gold-Core and Pure Silica Nanoparticles, *J. Nanopart. Res.* 2012, 14:766.
- (4) Nuño, Z.; Hessler, B.; Ochoa, J.; Shon, Y.-S.; Bonney, C.; Abate, Y. Nanoscale Subsurface- and Material-Specific Identification of Single Nanoparticles, *Optics Express* 2011, 19, 20865-20875.
- (5) Sadeghmoghaddam, E.; Gaieb, K.; Shon, Y.-S. Catalytic Isomerization of Allyl Alcohols to Carbonyl Compounds using Poisoned Pd Nanoparticles, *Applied Catalysis A: General* 2011, 405, 137-141.
- (6) Shon, Y.-S.; Aquino, M.; Pham, T. V.; Rave, D.; Ramirez, M.; Lin, K.; Vaccarello, P.; Lopez, G.; Gredig, T.; Kwon, C. Stability and Morphology of Gold Nanoisland Arrays Generated from Layer-by-Layer Assembled Nanoparticle Multilayer Films: Effects of Heating Temperature and Particle Size, *J. Phys. Chem. C* 2011, 115, 10597-10605.
- (7) Sadeghmoghaddam, E.; Lam, C.; Choi, D.; Shon, Y.-S. Synthesis and Catalytic Property of Alkanethiolate-Protected Pd Nanoparticles Generated from Sodium S-Dodecylthiosulfate, *J. Mater. Chem.* 2011, 21, 307-312. (Feature Article)
- (8) Adaligil, E.; Shon, Y.-S.; Slowinski, K. Effect of Headgroup on Electrical Conductivity of Self-Assembled Monolayers on Mercury: n-Alkanethiols vs. n-Alkaneselenols, *Langmuir* 2010, 26, 1570-1573.
- (9) Choi, H. Y.; Guerrero, M. S.; Aquino, M.; Kwon, C.; Shon, Y.-S. Preparation of Gold Nanoisland Arrays from Layer-by-Layer Assembled Nanoparticle Multilayer Films, *Bull. Korean Chem. Soc.* 2010, 31, 291-297.
- (10) Shon, Y.-S. Nanoparticle-Cored Dendrimers and Hyperbranched Polymers: Synthesis, Property, and Applications, In *Advanced Nanomaterials*, Geckeler, K. E., Nishide, H. Eds.; Wiley-VCH: Weinheim, 2010; pp 743-766. ISBN-10: 3-527-31794-5 (Invited review)



A Word From His Students

By: *Jacqueline Dominguez*

Diego Gavia

Time in Dr. Shon's Lab: 2 Years

Project(s) he has worked on: controlling core size and ligand density of palladium catalysts; synthesis of water soluble palladium nanoparticles and iridium nanoparticles; isomerization of terminal alkenes and alkynes, and synthesis of highly mono dispersed nanoparticles.

Best experience associated with research: "writing my first manuscript"

Advice to students who are considering joining Dr. Shon's Research lab: "Dr. Shon is a really cool professor. If you ever have been curious about research, you should talk to him. He is very welcoming."

Serena Low

Time in Dr. Shon's Lab: Since Summer 2012

Project(s) he has worked on: Synthesis of Gold nanoparticle cored dendrimers with different shapes.

Best experience associated with research: "everything!"

Favorite part of research project: "Synthesizing materials. Knowing they have biomedical applications."

Advice to students who are considering joining Dr. Shon's Research lab: "I would say to just go for it and get involved with Dr. Shon's Lab. Just being here for five weeks, I have learned a lot about research from Dr. Shon. Joining his group is a decision that I know I will never regret."

May Maung

Time in Dr. Shon's Lab: Since Summer 2012

Project(s) she has worked on: Nanoparticle Catalysis

Techniques learned: synthesizing nanoparticles; analyzing data and application to real world study.

Advice to students who are considering joining Dr. Shon's Research lab: "Dr. Shon has a positive attitude and patience to help and work on the projects".

Internship and Scholarship Opportunities

By: *Brandon Graham*

CSUPERB

Prize: \$5000

Description: Interdisciplinary groups of at least two business related majors and two chemistry related majors compete to present a plan to commercialize a biotechnological idea based on market needs. Entries should be unique and innovative, be feasible to implement, address and identified market need, and must have an underlying biotechnology component.

Dates:

11/1/2012 Team rosters due

11/14/2012 one page summaries due by 5pm

Website: www.calstate.edu/csUPERB

Smithsonian Environmental Research Center Internship Program **Prize:** Internship

Description: Internships offer undergraduate and beginning graduate students an opportunity to conduct individual projects in environmental studies under the supervision of professional staff members. Intern projects are offered under the subprograms of Global Change, Landscape Ecology, Population and Community Ecology, Coastal Ecology, and Environmental and Ecology Education. Applicants should be currently enrolled undergraduate or graduate students interested in pursuing a career in environmental research or education. Recently graduated students (within six months) are also eligible to apply. Internships generally last from 10 to 16 weeks. Limited on-site dormitory space may be available.

Requirements: Must be a full-time student sophomore level or higher with a GPA of 3.0 or higher. Must be 18 years old and be a US citizen or permanent resident. The applicant will also be required to complete an application and submit a resume or CV, Academic transcripts, and two letters of recommendation. The applicant must also submit an essay describing the applicants; background, field of interest, career goals, and projects of interest.

Dates: For **Winter/Spring** projects beginning January – April deadline is **November 15th**. For **summer** projects beginning May – August deadline is **February 1st**. For **fall** appointments beginning September-December deadline is **June 1st**.

Website: http://www.serc.si.edu/pro_training/internships/internships.aspx



The Fume Hood

By: Jacqueline Dominguez

"A place where your noxious thoughts can be carefully filtered and fed back to the public!"

What is the most expensive piece of lab equipment that you have broken?

(If possible include prices)

*Please respond on our Facebook page.

Chemistry for Today's World

By: Cindy Pham

"Your chemical connection to today's world"

Organocatalyst for hydrogen energy

An organocatalyst has been found to have the ability to efficiently split water. This organocatalyst is a type of flavin-based enzyme that can oxidize water. For more information on this organocatalyst read the link below:
<http://cen.acs.org/articles/90/i35/Organocatalyst-Splits-Water.html>

Using DNA as flash drives may be the future

Dr. George Church from Harvard University created a DNA archive using just an inkjet printer. Using data from a recent book publication he was able to store all that information on less than a picogram of DNA. For more information read the link below:

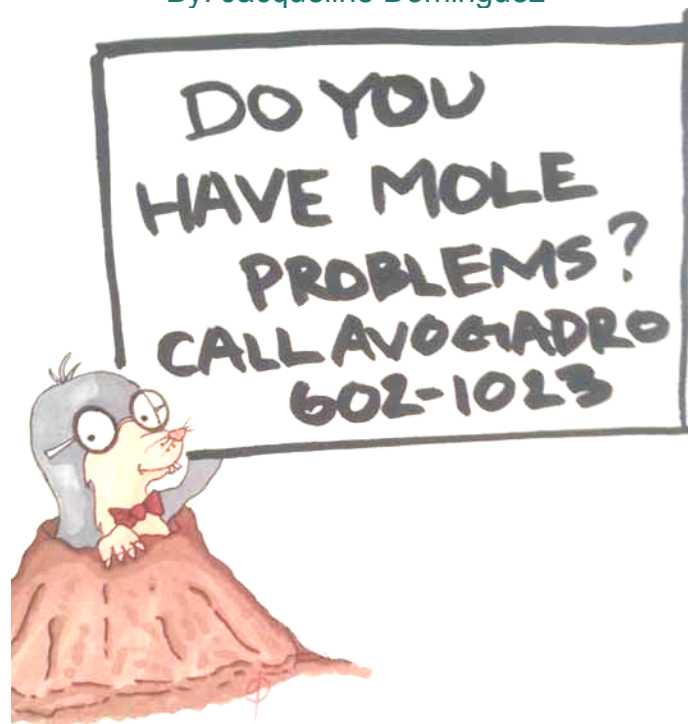
<http://news.sciencemag.org/sciencenow/2012/08/written-in-dna-code.html>



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Chem-tertainment

By: Jacqueline Dominguez



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