

Cal ACS at the Solano Stroll – Sunday 09 September 2018

If you didn't make it to the Solano Stroll last Sunday (September 9th, 2018), you missed a perfect day to enjoy great food, discover Solano's merchants, meet with numerous civic organizations, and do some hands-on science! Cal ACS Chair Margareta Séquin arrived early to help set up our booth at the corner of Fresno Street and Solano Avenue, where we were soon joined by Charles Lee of the USDA WRRC, which loaned us a folding table and chairs. Our neighbors included the Rosie the Riveter Museum (National Park Service) and Lawrence Berkeley National Laboratory, as well as a solar power company and various local arts organizations. The afternoon was punctuated by the Emeryville Taiko, performing on Fresno Street.

Our booth gradually took shape, exhibiting the ACS - Chemistry for Life logo, a National Chemistry Week banner, and the colorful poster that we recently displayed at the Boston National Meeting, highlighting our 2017 Local Section activities. Our booth featured the 2018 National Chemistry Week theme, "Chemistry Is Out of This World," as described in the current edition of [Celebrating Chemistry](#).

Project SEED coordinator Elaine Yamaguchi joined us as the opening parade was getting under way, and soon visitors were ready to investigate UV-color changing beads that warn of excess exposure to the Sun, a significant risk to astronauts traveling outside the Earth's atmosphere. Since the color change in these beads is reversible, a bracelet made with them is useful long-term for detecting the presence of UV radiation. Interested visitors could also learn about the underlying chemistry of these color-changing beads.



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Of equal concern for astronauts on the International Space Station is their supply of oxygen to breathe. Since they have plenty of solar-generated electricity, one source of oxygen would be to decompose water using an electric current. It's easy to demonstrate water-splitting using a nine-volt battery for power, a pair of ordinary #2 pencils as electrodes, and some wires with alligator clips to connect everything. Dipping the pencil electrodes into a solution of Epsom salts caused bubbles to form immediately, with twice as many bubbles at the negative electrode (which makes hydrogen) compared to the positive electrode (which forms bubbles of oxygen). Since inexpensive nine-volt photovoltaic panels are now readily available, our booth featured a pair of them generating oxygen (and hydrogen) continuously throughout the day.



We enjoyed interacting with visitors of all ages, including a number of science teachers. We especially encouraged teachers to follow up if they would like more NCW resources. We carried out an informal poll to track the number of visitors at the booth. Our question: "What is your favorite planet?" You may be happy to know that the Earth won handily (with 30% of the votes), followed by Jupiter and Pluto (14% each), then Mars and Saturn (12% each), with the other planets in single digits (Ceres garnered 2%). Although Pluto is no longer an official planet, it retains a sympathetic following . . . We recorded a total of 110 responses, but we must have talked with two or three times that number of visitors during the day.

Promptly at noon, our weary volunteers were relieved by a lively contingent from the Sigma chapter of Alpha Chi Sigma at UC Berkeley. Outreach coordinators Felix and Lindsey were joined by Adam, Ashley, Chad, and Sanket, who welcomed visitors to the ACS throughout the afternoon. We were also joined by recent UCB graduate Emily Bloom, who is now a district councilor for AXS. They handed out hundreds of pocket Periodic Tables, explained the water-splitting activity, and assisted many young visitors who were eager to make UV-detecting bracelets.



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It was a great day for hands-on science learning and outreach to the public. Cal ACS High School Committee chair Eileen Nottoli took over supervision of the booth in the late afternoon, and Greti Séquin returned at 5 PM to carry off the displays and materials that our AXS volunteers had carefully packed up. Many thanks to everyone who helped make the day such a success! We're ready for a full fall schedule of public outreach. If your local school or other group could use some materials for NCW activities, please let us know. Julie in the Cal ACS office is ready to make sure you get what you need.

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