



SCCAVS Newsletter

July 2009

Special points of interest:

- Speaker Meeting: Dr. Hecht of JPL on the Phoenix mission to Mars, TBA in September Issue
- Science Educator's Work Shop Winner announced
- Successful field trip to Bolthouse Farms
- New Community Q&A feature/online forum
- Opportunities for advertisers in next issue

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Field Trip to Solar Powered Bolthouse Farms

Contributed By: Richard Stamberg

Our Field Trip to the Regenesis Solar Cell System was a resounding success with over 40 people attending. We viewed one of several systems that were turned on last December to pump groundwater for irrigation at the remote high desert area and/or feed power back into the power grid during the day near Palmdale, CA. The tour included one section that was delivering maximum output of 250 KW on-line as part of the complete 1.9 Megawatt DC Solar Power System using 10,300 high-efficiency solar panels with 13 to 14 % efficiency. The panels were made by Mitsubishi in Japan from non-toxic bulk polysilicon that was etched. The photovoltaic solar arrays employ a tilted single-axis tracking system that follows the sun. It is ground-mounted on galvanized steel at an elevation of about 3000 to 3500 feet AGL on sandy soil (not clay). At night the panels are turned off and lay flat horizontally and can withstand one-inch hailstones. During the day the panels tilt at least 15 degrees so sand and dust can blow off (no wash sys-



Bolthouse Farms— April field trip to see 1.9 Megawatt Solar Power System in Palmdale, California designed and installed by Regenesis Power, LLC . SCCAVS members in attendance from Left to Right: Corinne Freeman, Jeff Lince, Richard Stamberg, Dick Madison, and Larry Oberlander.

-tem is needed). Our very knowledgeable host was Kevin Mackamul, Director of Engineering for Regenesis Power, LLC with 30 years experience. The Solar Cell System uses "combiners" to join sections and raise the voltage to about 4000 volts, 90 amps that transfer the power to "inverters" for conversion of

DC to AC that is power grid compatible (in phase). The system is rated to deliver \$2000/day from power for at least 30 years. Amorphous silicon solar cells were not used since they are only 6% efficient, although they are less affected by high operating temperatures. *A special thanks to Dick Madison for setting up the Field Trip.*

AVS Science Educator's Workshop Winner Announced

Corinne Freeman

CONGRATULATIONS to Mr. Charles Seo of Camino Nuevo High School in Los Angeles, who is this year's Southern

California Chapter winner to attend AVS National in San Jose, CA for the annual Science Educator's Workshop this November. Mr. Seo is a chemistry and global studies teacher for 11th

graders in a charter school that emphasizes project-based learning. He will receive a vacuum system for use in classroom projects after completion of the SEW this year.

SOUTHERN CALIFORNIA CHAPTER OF THE AVS

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We're on the web!
www.sccavs.org

Upcoming Events:

SemiCon West
July 14-17th
Moscone Center
South
San Francisco, CA

SPIE Optics & Photonics Show
August 2-6th
San Diego Convention Center
San Diego, CA



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Advertising Opportunities Now Available!!!

Our membership is expanding and we would like to give our readers and supporters the chance to expand their business visibility as well. Your sponsorship of the SCCAVS Newsletter directly supports Chapter activities, speaker meetings, field trips, and other great opportunities the organization provides you!

Sponsorship starts at just \$100 per quarter, and a discount rate for the entire year (4 issues) is available.

Please contact Corinne Freeman with questions.

Corinne@sccavs.org

Community Q&A: "Ask The Experts"

Ethel Poiré
The SCCAVS is excited to announce this new Q&A forum in which our members can send in questions most pertinent to their industry. We will choose which questions to post in each quarterly newsletter's "Ask The Experts" section. Answers will be posted in the following issue, sent in by you, the reader, and reviewed by

our team. Send all questions and answers to:

askssccavs@sccavs.org

Do you have a great question you feel would generate interest in the SCCAVS community? Or simply a question left without an answer? Send it in for our September issue!

Our first question is as follows:

Which suppliers can provide a reference block (ex Nickel) with a traceable certificate showing the Young's Modulus and Poisson's Ratio? Which companies can test as per ASTM C623, C1198, C1259, E1875, and E1876?

Will you be the first to send in your "expert" answer?