



Science and Technology of Materials, Interfaces, and Processing Southern California Chapter

Spring 2022

Quarterly Newsletter

Special points of interest:

- Webinar March 16th
- SCCAVS Equipment Exhibition & Short Course Program 2022 Information and Exhibitor Registration
- SCCAVS Buyer's Guide

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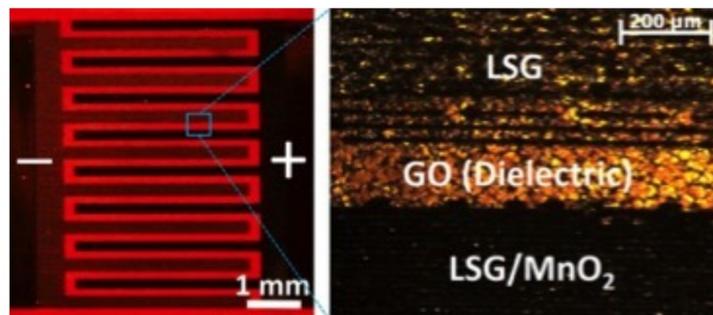
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FREE Webinar "Graphene-Based Batteries and Supercapacitors for Energy Storage" presented by UCLA's Prof. Richard Kaner

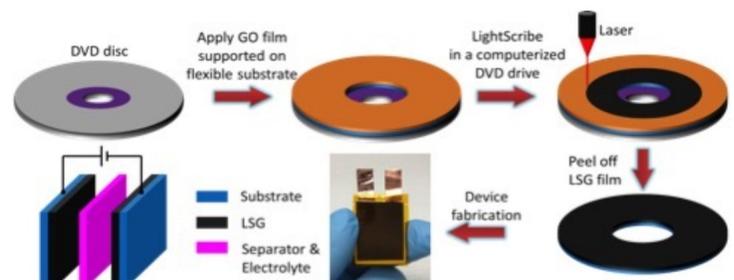
Electrochemical capacitors, also known as supercapacitors, are energy storage devices like batteries, yet they can be recharged a hundred to a thousand times faster. Because of their enabling features, supercapacitors are replacing batteries and capacitors in an increasing number of applications, including a high-intensity flash for camera phones, backup power, regenerative braking and whenever a high power is required in a short period of time. They are potentially game-changing as electronics become flexible and miniaturized, since they can be foldable and even twistable, and can be miniaturized to microscale with a large amount of charge per footprint.

On March 16, 2022 at 1pm PDT via ZOOM, Professor Kaner will talk about his group's research into graphene-based battery electrodes and supercapacitors, including fabrication by thin film deposition. He will also show how 3D high-performance hybrid supercapacitors and micro-supercapacitors based on graphene and MnO₂ can be fabricated and integrated with solar cells. There are only 100 slots available for attendees so register here: https://us02web.zoom.us/webinar/register/WN_gWAq1FrAQqeU2v0SdDWuXQ



Engineering three-dimensional hybrid micro-supercapacitors for integrated energy storage

Direct laser writing of graphene supercapacitors



(Continued on Page 2)

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Graphene-Based Batteries (continued from page 1)



Richard Kaner received a Ph.D. from the University of Pennsylvania in 1984. After postdoctoral research at Berkeley, he joined the University of California, Los Angeles (UCLA) in 1987, earned tenure in 1991, became a full professor in 1993, a Distinguished Professor in 2012 and was appointed to the Dr. Myung Ki Hong Endowed Chair in Materials Innovation in 2017. He has published over 450 papers in top peer reviewed journals and holds 62 U.S. patents. According to the most recent Clarivate Analytics/Thomson-Reuters rankings, he is among the world's most highly cited authors. Professor Kaner has received awards from the Dreyfus, Fulbright, Guggenheim, Packard and Sloan Foundations along with the Materials Research Society Medal, the Royal Society of Chemistry Centenary Prize, the Chemical Pioneer Award from the American Institute of Chemistry and the American Chemical Society's Buck-Whitney Research Award, Tolman Medal,

Award in the Chemistry of Materials and the Award in Applied Polymer Science for his work on refractory materials including new synthetic routes to ceramics, intercalation compounds, superhard metals, graphene and conducting polymers. He has been elected a Fellow of the American Association for the Advancement of Science (AAAS), the American Chemical Society (ACS), the American Physical Society (APS), the European Academy of Sciences (EurASc), the European Academy of Sciences and Arts (Euro-Acad), the Materials Research Society (MRS), the National Academy of Inventors (NAI) and the Royal Society of Chemistry (FRSC).

For additional information, please contact chair@sccavs.org



SOUTHERN CALIFORNIA
CHAPTER OF THE AVS :
THE SCIENCE &
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MATERIALS,
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PROCESSING

Mailing Address:
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Upcoming Events

65th Annual SVC
TechCon

May 2-5, 2022
Long Beach, CA



ICMCTF 22 International
Conference on Metal-
lurgical Coatings and
Thin Films

May 22-27, 2022
San Diego, CA



SCCAVS Events

Exhibitor Registration Open: SCCAVS Equipment Exhibition & Short Course Program 2022

A (LIVE!) Equipment Exhibition will be given by the Southern California Chapter of AVS (SCCAVS) on Tuesday, October 11, 2022 at the Holiday Inn in Buena Park (7000 Beach Boulevard, Buena Park, CA 90620). In conjunction with the Exhibit is a Student Poster Session, and an AVS Chapter Short Course program. The Exhibit will be open from 12:00 noon to 6:00pm.

Refreshments and Raffle: Refreshments will be provided in the exhibit hall area. In addition, a raffle drawing will be held between 5:00 – 6:00pm in the Exhibit Hall, during which time we will be giving away a Hi-Tech item. All attendees will be eligible to register for the drawing.

Presentations: We are introducing oral presentations on the show floor by respected members of the Southern California technical community

Format and Rules: Exhibit registration includes 6-foot skirted table top with two chairs and electrical power, buffet lunch, afternoon refreshments/open bar on the exhibit floor in the afternoon, and post attendee list (if you need additional outlets, bring your own power strip). Hanging over onto your neighbors' tables or in the aisle is not allowed. No one is to use the walls of the exhibit hall as a part of the backdrop or support for the exhibit. Your exhibit must be self-supporting. We strongly recommend bringing your own table top backdrop. Space is limited to 40 tables which will be reserved on a first-come, first-serve basis. The tables will be assigned based on the date your registration form/payment is received. We will also take potential conflicts into account and will attempt to adjust the assignments accordingly.

Sponsorships available at the \$500 and \$1000 levels

Registration: The 2021 Exhibit table registration fee is \$600 (1 table) and \$1,100 (2 tables). You may pay by credit card (VISA, MasterCard or AMEX) or by check. Sponsorship is also available; see exhibit registration form for details.

To Register On-Line: [Click Here](#)

Complete the online registration form (including payment information). When processed, we will send a confirmation e-mail including the hotel and shipping information.

Continued on Page 4



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Email: sales@gnbvac.com

(Continued from page 3)

NEW SCCAVS Buyer's Guide

All paid exhibitors and advertisers in 2022 will automatically be listed in the NEW SCCAVS BUYER'S GUIDE. The Buyer's Guide will be featured on our webpage as well as published quarterly in our e-newsletter. This is a value-added service that is INCLUDED in your exhibitor registration or advertising fee. The period is for one year starting in January 2023, and renewed annually.

Your Company name and website will automatically be listed. Please submit a company description OF 20 WORDS OR LESS to be published alongside the listing. Our recommendation is to use easily searchable terms and/or a list of products.

The current Buyer's Guide is INCLUDED in this issue of the eNewsletter! See Pages 9-10. Also check out the online version at: <https://www.sccavs.org/Buyers%20Guide.html>.

Contact Information: If you have any questions, please contact Corinne Freeman-D'Ambrosio, SCCAVS Chair at 213-272-3864, or by email at chair@sccavs.org.

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(Continued from page 6)

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SAVE THE DATE

October 10-12, 2022

Holiday Inn Buena Park, CA

Equipment Exhibition & Short Course Program



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Leadership Opportunities

⇒ Professors/Assistant Professors/Research Professors

The SCCAVS is seeking a Student Poster Session Chair for the upcoming 2022 Exhibition in Buena Park. Responsibilities would include promoting the event and student participation, organization of the oral poster session, and judging. Please reply to jeff@sccavs.org if interested in finding out more!

⇒ Keynote Speakers/Webinar Instructors

The SCCAVS holds quarterly webinars on topics of interest to the greater Southern California technical community, with average attendance between 20-40 people. We are looking for presenters for Summer and Fall 2022. Please reply to jim@sccavs.org for more information.

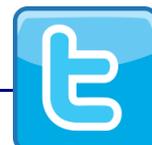
Keynote speakers at the 2021 Equipment Exhibition included Timothy Gessert (AVS President) and Dr. Alan Van Drie of TAE. Are you or someone you know interested in following their footsteps and presenting at the 2022 Exhibition in Buena Park? Please reach out to corinne@sccavs.org to apply.

March/April 2022

| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
|--|-----|-----|---------------------|-----------------------------|-----------------------|-----|
| | | 1 | 2 ● <i>New Moon</i> | 3 | 4 | 5 |
| 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 13 | 14 | 15 | 16 | 17 <i>St. Patrick's Day</i> | 18 ○ <i>Full Moon</i> | 19 |
| <i>FIRST DAY OF Spring</i> MARCH 20 | 21 | 22 | 23 | 24 | 25 | 26 |
| 27 | 28 | 29 | 30 | 31 | 1 ● <i>New Moon</i> | 2 |
| 3 | 4 | 5 | 12 | 7 | 8 | 9 |



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Southern California Chapter



SCCAVS Buyer's Guide

The [Buyer's Guide on the National AVS webpage](#) is also a useful resource.

| Company | Scope of Business | Contact |
|---|---|------------------------|
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