

# *The Innovation Engine for New Materials*



# Materials Research Laboratory

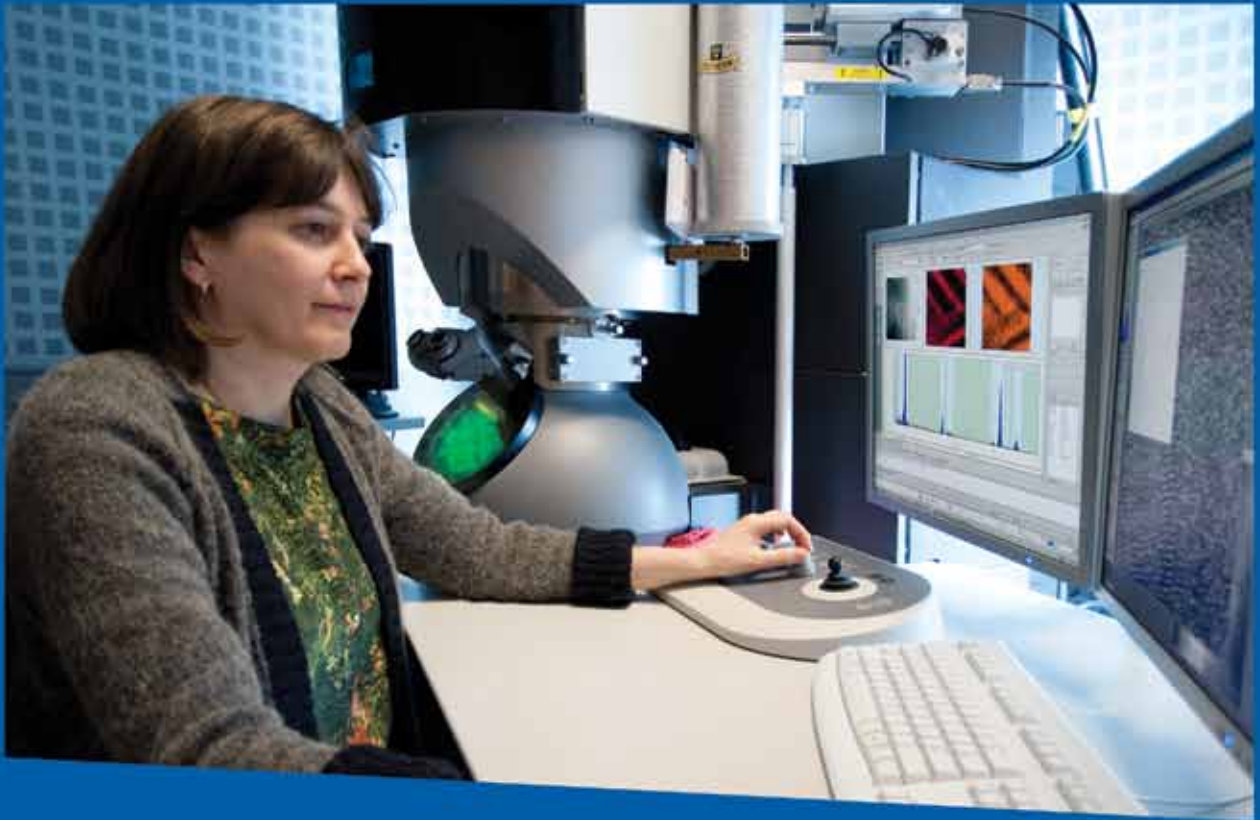


## *Our Story*

Widely recognized as one of the top five materials research facilities in the world, the MRL serves as the innovation engine for discoveries in new materials. The facility is home to a scientific and engineering community that creates new collective knowledge and fosters the next generation of scientific leaders. By enabling modern technological advances, the high-impact research conducted at the MRL and its affiliated centers has enormous societal impact, and is shaping the future of technology, the environment, and medicine.

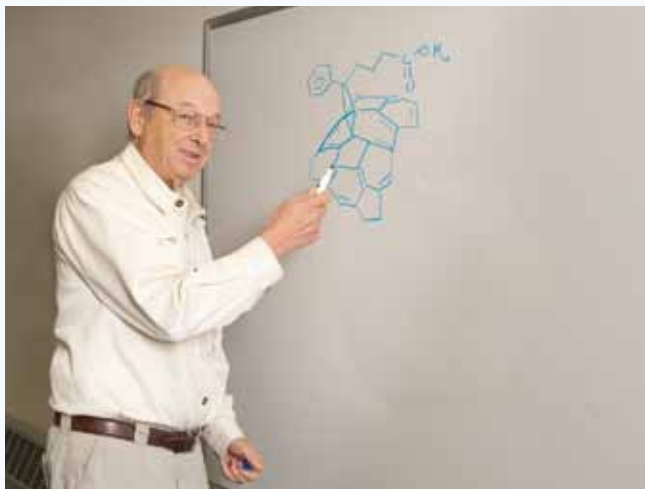




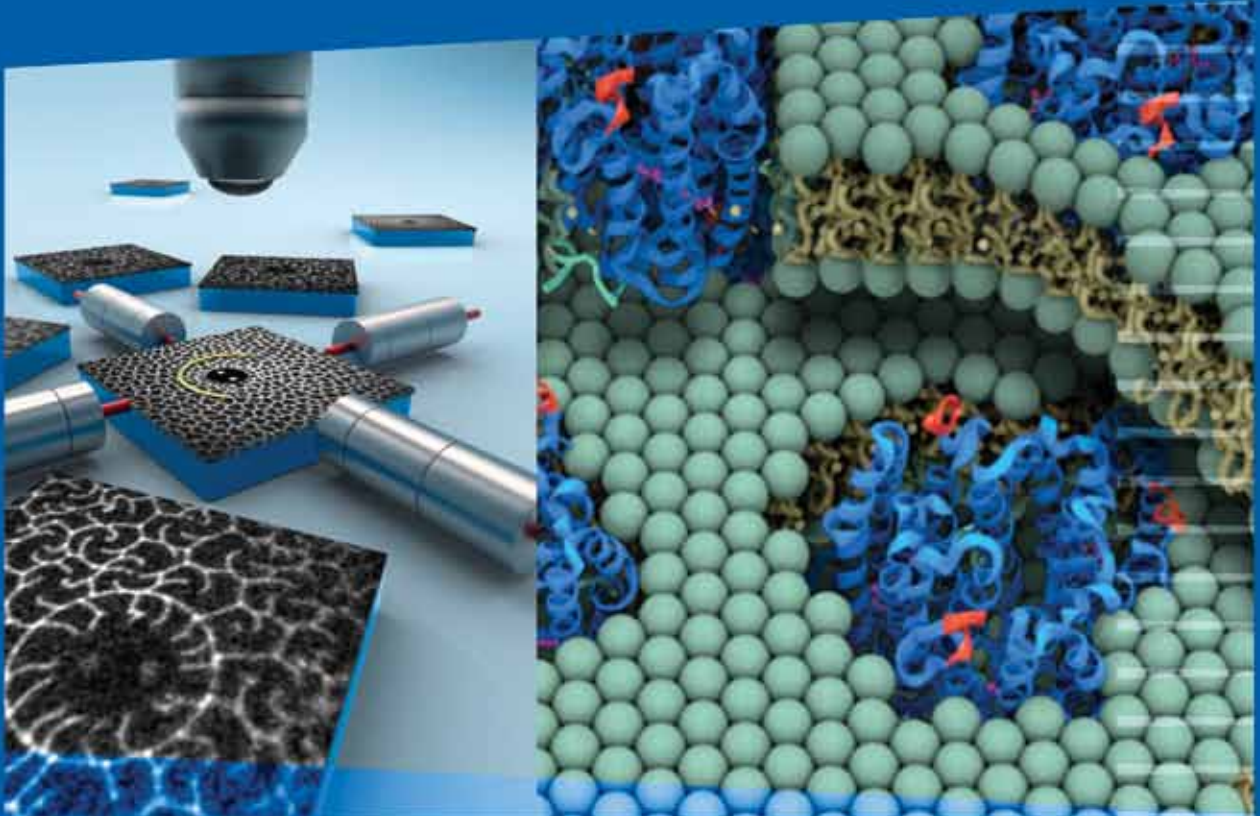


## *Proven, relevant...*

Since its inception, the MRL has been synonymous with cutting-edge research in new materials, enabled by experts working at the interface of many scientific and engineering disciplines. The sustained success of the MRL has been a key driver in reinforcing UC Santa Barbara's international standing as a premier center of excellence spanning the spectrum of materials science research. Among the successes in new materials and new material concepts where the MRL has played a key enabling role are (i) the ubiquitous porous materials that proudly bear the SBA name, (ii) bulk heterojunction photovoltaics that have made plastic solar cells a reality, and (iii) the deep understanding of the exquisite natural design principles that are enabling the unique properties and performance of marine organisms to be translated to synthetic materials.







## *Innovative*

Impacting every aspect of modern life, materials discovered at the MRL are defining the future of energy-related technologies, microelectronic systems and biomedical devices. By investing in future scientific leaders and pioneering research directions, the MRL remains an innovation engine for new materials, powering American competitiveness and igniting discovery through cross-disciplinary dialogue.

## *Efficient*

Through leveraging of administration, shared facilities and financial resources, the MRL is able to function in an efficient, highly productive manner, providing the agility to quickly respond to new initiatives and challenges.

MITSUBISHI CHEMICAL M C C A M UCSB  
MITSUBISHI CHEMICAL  
CENTER FOR  
ADVANCED MATERIALS





# Entrepreneurship.

## California's Creative Coast.

The MRL has a proud tradition of instilling and encouraging a spirit of entrepreneurship in its stakeholders. MRL faculty members, students and post doctoral scholars have been active in starting and sustaining new ventures and transforming them into success stories. The MRL takes particular pride in making available world-class laboratory and analytical facilities to start-ups in the Central Coast Region, sharing expertise, and training a world-class workforce.





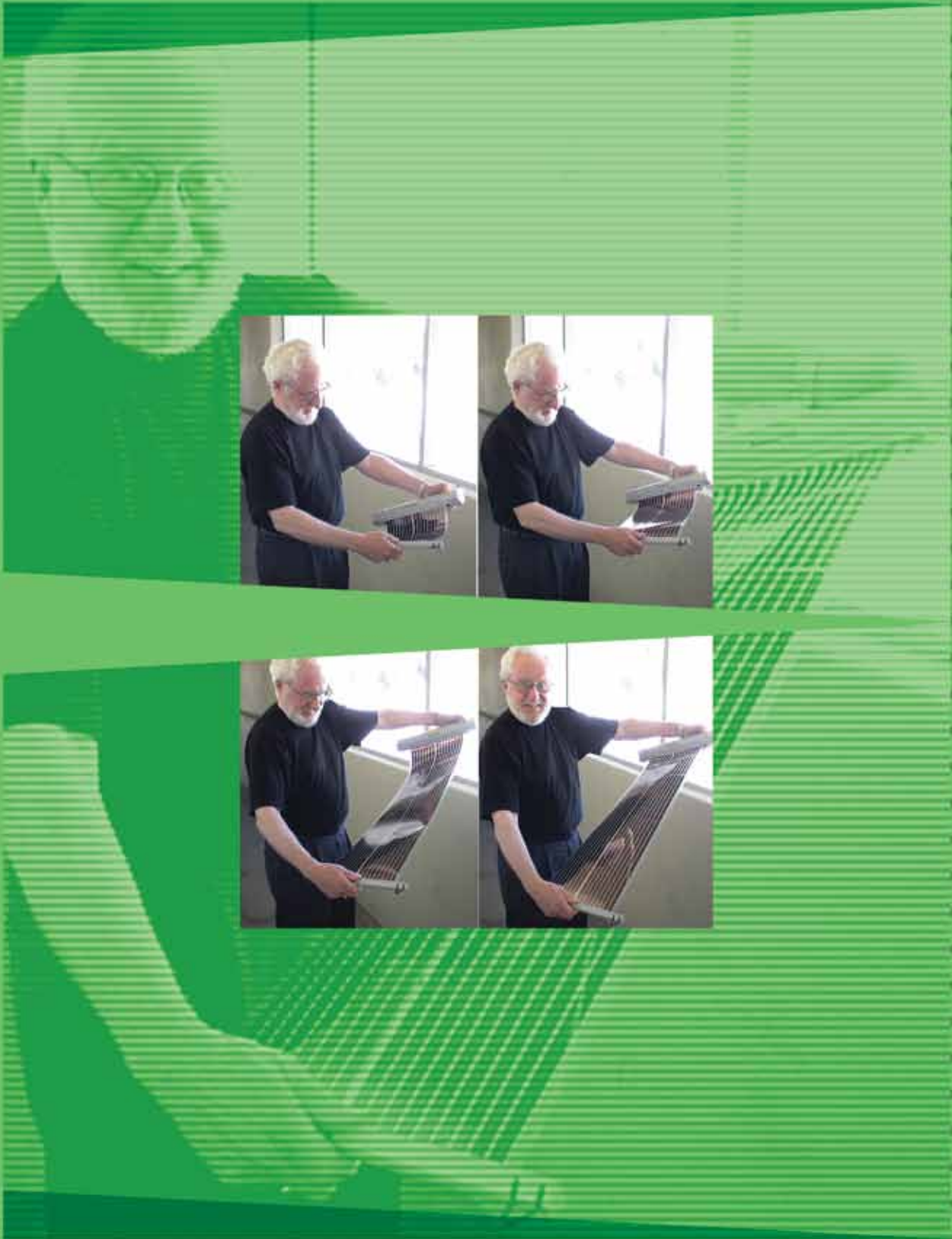
## Shared Resources and Facilities

World-class facilities are a cornerstone of the MRL and an enabler of the core research, mentoring and educational mission. With dedicated staff, substantial annual investment and open access, the MRL facilities critically impact the academic and industrial research communities in California and beyond.

*“The development of new research tools is an important by-product of the research process. Successful innovation requires the invention of new tools that allow for more precise measurements, the production of purer or better materials, and more effective manipulation of data.”*

— NATIONAL ACADEMIES REPORT





## *Engaging with Industry*

Interdisciplinary, collaborative and innovative, the MRL is one of the most productive research centers in the world. The MRL operates as an “open” laboratory with shared resources and spaces creating an environment where dialogue can lead to discovery. By actively engaging in productive partnerships with industry, the MRL has proven to be an economic engine here and around the world. The MRL community is dedicated to inspiring a new age of scientific achievement in the United States through collaborative research and outreach to industry, thereby serving as a catalyst to transform people’s lives.







## Outreach

The MRL's foundation is built upon a strong sense of scientific community, encompassing grade school students to senior University faculty. The MRL is committed to providing an integrated educational experience by offering a portfolio of opportunities that bring research out of the lab and into the community. Our goal is to ignite curiosity through hands-on experience, fostering the next generation of scientists and engineers.



*“The Materials Research Lab is always a highlight at our event; the activities are so fun and the UC Santa Barbara students are so engaging that our students and their families tend to spend a long time in that room and continue to talk about it for a long time after Science Night!”*

— MONTE VISTA ELEMENTARY SCHOOL TEACHER



## *An Investment in Our Collective Future*

Materials are becoming increasingly important in every aspect of our lives. The MRL is a world-renowned center for materials research and education. We invite you to join us in this voyage of discovery. The MRL has a history of leveraging funding so that your contribution will have the maximum impact possible.









John L. Wiley (c)2010 flickr.com/jw4pix



Materials Research Laboratory, MC 5121

University of California

Santa Barbara, CA 93106-5121

(805) 893-7233

[mrl.ucsb.edu](http://mrl.ucsb.edu)



*Support for this program is provided by the National Science Foundation, Division of Materials Research*

Branding and design by:

 **idea** ENGINEERING  
[www.ideaengineering.com](http://www.ideaengineering.com)

Printed with soy based inks on Topkote paper certified by the Forestry Stewardship Council (FSC).