

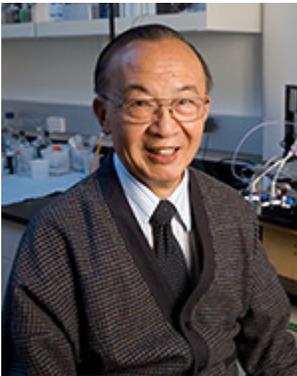
December 15, 2015 | By Susan Brown and Liezel Labios

UC San Diego Professors Elected Fellows of National Academy of Inventors

Two researchers at the University of California, San Diego, have been named fellows of the National Academy of Inventors.

Shu Chien, Distinguished Professor of Bioengineering and Medicine, and Michael Sailor, Distinguished Professor of Chemistry and Biochemistry, were among 168 new fellows announced by the academy today.

The distinction honors innovative academic inventors whose work has made a tangible impact on the quality of life, economic development, and the welfare of society. Fellows must be named inventors on U.S. patents and are nominated by their peers.



Shu Chien

Shu Chien, the founding chair of the Department of Bioengineering and director of the Institute of Engineering in Medicine at UC San Diego, is a world leader in the study of how blood flow and pressure affect blood vessels. His research has led to new understanding about the medical and biological mechanisms of atherosclerosis and hypertension, and to the development of better diagnostic tests and treatments for cardiovascular disease.

Chien is a named inventor on more than 6 U.S. patent applications and has been awarded two granted patents for inventions. His inventions include an in vitro live-cell artificial vessel and imaging system to test vascular devices such as stents, devices for thrombectomy, angioplasty and endovascular imaging; a more efficient and less costly method to screen the possible adverse effects of small molecule drugs on patients' cells; and small molecules that inhibit an enzyme known to contribute to the progression of cancer and Alzheimer's disease.

This year, Chien received the prestigious Franklin Institute Award and was named a Fellow of the American Association for the Advancement of Science. He was awarded the National Medal of Science in 2011 and is one of 11 scholars in the United States who are members of all

three national institutes and academies: the National Academy of Sciences, National Academy of Engineering and the Institute of Medicine. He is also a member of the American Academy of Arts and Sciences and has served in leadership positions in the Federation of American Societies for Experimental Biology, the American Institute for Medical and Biological Engineering and other professional societies.



*Michael Sailor. Photo Credit:
Erika Kyte*

Michael Sailor is a leader in silicon nanotechnology who holds 26 U.S. patents. His inventions carefully structure porous silicon on a nanometer scale to address such divergent goals as the safer, targeted delivery of powerful therapeutics to rechargeable batteries with higher capacity and longer life.

Among his inventions are “smart dust,” microscopic particles that can be used to escort tiny amounts of substances such as drugs to selected targets in the body; non-toxic spectrally barcoded micro-particles that are currently used as secure anti-counterfeiting tags for products such as pharmaceuticals and food; and sensors that indicate when filters on safety breathing apparatus should be changed.

Participants from across the world as well as San Diego attend workshops Sailor holds each summer to train young scientists from high-school age to post-doctoral fellows in the design and fabrication of porous silicon nano structures ([more information](#)). Sailor also maintains several long-term collaborations with colleagues at other institutions from Korea to France.

Sailor is a Fellow of the American Association for the Advancement of Science. Many of his current projects are focused on the use of nanotechnology to improve the performance of drugs and reduce their side effects in treatment of visual disorders, brain injuries, Alzheimer’s disease, cancer, and bacterial infections. Funding for the work has come from the National Institutes of Health, the National Science Foundation, DARPA, and the U.S. Food and Drug Administration.

Sailor has founded four companies, including Spinnaker Biosciences, and serves on the scientific advisory boards of six others.

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