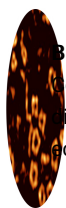


News

The Division of Physical Sciences is committed to sharing information about its administration, academics, outreach and research—from people to their changemaking activities—with a full-service news and multimedia team. From writing stories and media training, to coordinating press interviews and posting social media news, we cover the physical sciences around the clock, year-round.

For a complete list of news items, see our News Archive below.

Recent



Biochemists make 'Elbow Room' for Nanostructures with new Toolkit

Combining the biomolecules of DNA and RNA, Professor Thomas Hermann and graduate students from the Department of Chemistry and Biochemistry discovered a way to facilitate the self-assembly of polygonal nanoshapes. This could lead to new methods for making nanoscale devices and more economically efficient, medical, point-of-care diagnostics for rapid bedside testing.



Researchers Limit Experimental Free Will to Fake Quantum Entanglement

CASS Researcher Andrew Friedman's study exploring the fundamental nature of reality could inform future quantum encryption protocols.



Sticky Science

Distinguished Professor of Chemistry & Biochemistry Vicki Grassian and a team of researchers worked to unstick the role of surfaces in indoor environments to create air quality models. The researchers experimented with glass and limonene, a chemical found in citrus and household cleaners. Their work is published in "Chemical Science" and chosen as a "ChemSci Pick of the Week."



Thinking on Egg Shells

After more than a decade, the Young Physicists Program (YPP) still brings together middle school and high school students from the greater San Diego area who work with university physics students and professors for three hours on a Saturday morning each month.



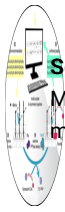
Neal Devaraj Wins Eli Lilly Award in Biological Chemistry

The American Chemical Society (ACS) recently announced Neal Devaraj as the winner of the 2019 Eli Lilly Award in Biological Chemistry. According to the ACS Devaraj was recognized for his "outstanding research in biological chemistry of unusual merit and independence of thought and originality." Previous recipients with connections to UC San Diego include David Bonner (1952), Nathan Kaplan (1953), and alumnus and biotech pioneer David Goeddel (1984).



Phat' on potential, Lipidomics is gaining Weight

A new generation of chemists & biochemists is pounding out research to further understand the complex nature of lipids using a database established by the division's Ed Dennis and other UC San Diego researchers.



Scientists Surf Peptides with New POOL

Michael Burkart and student researchers Lorillee Tallorin and Woojoo Eunice Kim recently published a paper in Nature Communications describing their methodology for creating peptides that could produce biomaterials, like nanostructures and microstructures, to modify proteins.



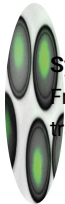
UC San Diego Strikes New NSF Funding with Laser Speed

Chemist Wei Xiong receives nearly \$600K to investigate hybrid particles with ultrafast lasers while diversifying science.



New Study Might Help Unlock Secrets of the Flu

Every year, millions of people around the world suffer from severe illness caused by influenza. Now a new study, led by Rommie Amaro in chemistry & Biochemistry, suggests a new approach for combatting the sometimes deadly virus.



Synthetic Cells Command New Powers of Communication

From kryptonite for Superman to plant toxins for Poison Ivy, chemical reactions within the body's cells can be transformative. And, when it comes to transmuting cells, University of California San Diego researchers are becoming superhero-like copy cats.



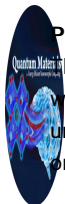
Division Scientists Earn Spots on List of Highly Cited Researchers

UC San Diego chemists and physicists are among an elite list of highly cited researchers. According to the Clarivate Analytics Web of Science, these faculty members are among the top 1% of researchers by citations for their field.



Chemist Stands Boldly Among New AAAS Fellows

Department of Chemistry and Biochemistry's Robert Continetti was recently named, along with six other UC San Diego faculty members, as an AAAS Fellow. The senior associate vice chancellor for academic affairs and distinguished professor is renowned for his novel studies of energetics and dissociation dynamics of transient species.



Physicists Brainstorm World's 21st-Century Energy Challenges

The Department of Energy (DOE) entrusted nearly \$10 million to UC San Diego's award-winning, Distinguished Professor of Physics Ivan Schuller, who is working with his condensed matter physicist colleagues Alex Frano and Oleg Shpyrko, to establish the Energy Frontier Research Center (EFRC) at the university. With a mission to conduct basic research to create a new, energy-efficient platform for neuromorphic computing using quantum materials, the EFR on campus is part of a network of 40 centers nationwide.



Chemists Suited to Break Rule, Devise New Chemical Tool

An organic chemist who specializes in synthesis, catalysis and developing experimental methods, Valerie Schmidt, an assistant professor of chemistry and Biochemistry at UC San Diego, recently published an article in the Journal of the American Chemical Society outlining her team's work on developing a new, low-cost method for chemical syntheses involving the use of ammonia.



NIH Awards \$15 million to Research Team led by Physics Professor

David Kleinfeld will lead a team of scientists to conduct research exploring how mammals sniff, nod, and move their faces and mouths—backwards. The five-year study is part of the NIH Brain Research through Advancing Innovative Neurotechnologies® (BRAIN) Initiative.



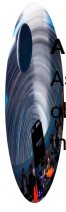
Scientists Extend Mechanism for Cracking Biochemical Code

After eight years of study, a team of researchers from the University of California San Diego and Johns Hopkins University published new findings about how the body's histone code in the Nov. 7 issue of Science Advances. The findings answer a key question in the dynamic research area of epigenetics—adding chemical tags to DNA and histone proteins to alter cell functions without changing DNA sequence.



The Amazon Science Book of the Year Goes to...

Brian Keating's "Losing the Nobel Prize: A Story of Cosmology, Ambition, and the Perils of Science's Highest Honor" was named one of Amazon's 2018 Best Science Books of the Year." The distinction puts him on the same list as noted writers like Stephen Pinker, Stephen Hawking and Carl Zimmer. Coincidentally, the fact that only two women in history—including UC San Diego's Maria Goeppert Mayer (1963)—won the Nobel Prize in Physics changed this year when Donna Strickland became the third female physicist to win it.



Astrophysicist Enlightens Campus, Community with Portable Planetarium

Astrophysicist Shelley Wright noticed an important gap in space—right on the grounds of campus. A proponent of teaching and training students through the observation of the night sky, Wright realized that it was time the university featured its own portable planetarium. Her vision materialized recently when she introduced UC San Diego's first portable planetarium to 100 members of the public.



UC San Diego Hosts First Cal-Bridge Professional Development Workshop

UC San Diego is part of a consortium of UC and CSU campuses that received a five-year, \$5 million grant from the National Science Foundation to dramatically increase diversity in physics and astronomy through the Cal-Bridge program. Adam Burgasser recently hosted the program's first professional development workshop. Quinn Konopacky and Karin Sandstrom participate in the program as faculty mentors.



Four UC San Diegans Named 2018 APS Fellows

The American Physical Society (APS) recently announced its 2018 fellowship class with a 77 percent increase in the number of women compared to last year's class. This is the most women elected as fellows since tracking the number of females nominated and elected began in 2015. Professor Vicki Grassian was among this year's class of fellows.



High School Journalists 'Space Out' with UC San Diego Astrophysicist

Professor Alison Coil met with students from Etiwanda High School (Rancho Cucamonga, CA) to discuss issues around what's being called the current space race. The student-produced video segment titled, "A New Race for Space," is part of the PBS NewsHour's Student Reporting Labs program.



Physical Sciences to Honor Late Founding Faculty Member George Feher

UC San Diego's Office of the Dean of Physical Sciences, the Department of Physics and the International Society of Photosynthesis Research is hosting a memorial symposium in honor of George Feher, one of UC San Diego's founding faculty members, who died last fall at age 93. Called "George Feher: Commemorating a Life in Biophysics," the symposium will take place in the Fred Kavli Auditorium in Tata Hall, Friday, Oct. 5, from 9:00 a.m. to 4:00 p.m. The event is free/open to the public.

Professor Honored as Chemistry Laureate

Chemistry & Biochemistry's Neal Devaraj (pictured at far right) was recently celebrated as one of three 2018 Blavatnik National Laureates at the American



Museum of Natural History in New York City. Devaraj was recognized as the national laureate in chemistry for his transformative work on the synthesis of artificial cells and membranes. Also pictured (left to right) is Sergei Kalinin, laureate in physical sciences & engineering (Oak Ridge Laboratory); Len Blavatnik, founder and chairman Access Industries and Blavatnik Family Foundation and Janelle Ayres, laureate in life sciences (Salk Institute for Biological Studies).



Physicists 'Condense' Diversity, Outreach, Blue Jeans' Dye in NSF Research

The National Science Foundation (NSF) awarded the UC San Diego Schuller Lab and The University of Texas at San Antonio over \$500k to explore the electronic and magnetic behavior of one-dimensional (1D) metallic chains. The findings could lead to the development of new, smaller and faster electronic devices that can be used in computer memory, as well as to promising careers for future scientists.



Physicists Train Robotic Gliders to Soar like Birds

Physics Professor Massimo Vergassola, PhD candidate Gautam Reddy and Salk Institute's Terry Sejnowski's findings provide a navigational strategy that is directly applicable to the development of autonomous soaring vehicles. Their research results of how birds find and navigate thermal plumes have been published in "Nature."



Nobel Prize-winning Chemist Opines about California Climate Summit

Distinguished Professor of Chemistry and Biochemistry and Nobel laureate Mario Molina teams with fellow UC colleagues Veerabhadran Ramanathan and Purwood Zaelke to share their views on why Gov. Jerry Brown's climate summit may be his last chance to alter the course leading to climate devastation. The professors refer to this course as the "disaster" trajectory since in their view that's where the planet is headed, faster than most realize.



New National Training Program Aims to Mainstream Glycosciences

Kamil Godula, assistant professor in the Department of Chemistry and Biochemistry, is part of a research consortium that received \$20 million in funding from the National Institutes of Health (NIH) for a study of glycans. Mounting evidence suggests that glycans play important roles in human development, health and disease, and should be considered when designing and testing new therapeutics.

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