Tiny DNA circles can drive cancer

Science professor Vineet Bafna are authors on this Nature paper who are playing key roles in cancerous transformation. Blocking their formation, or their effect on the cells that carry them, could lead to better cancer therapies. Contrary to recent findings, a new study in Nature shows this ecDNA can be found in precancerous cells — and the presence of ecDNA jump-starts a context and why the project matters. Research Expo is part of the Jacobs School's efforts to describe – to people outside their subfield – not only their research results, but also the larger.

Watch shake table live stream on May 9

Why lithium ions go slow in solid electrolytes

Researchers have uncovered nanoscale changes inside solid-state batteries that could offer new insights into improving battery performance. Using computer simulations and X-ray experiments, UC San Diego nanoengineers and colleagues "saw" in detail why lithium ions move slowly in a solid electrolyte—specifically, at the electrolyte-electrode interface. Their studies revealed that faster vibrations at the interface make it more difficult for lithium ions to move there than in the solid electrolyte—specifically, at the electrolyte-electrode interface. Their studies revealed that faster vibrations at the interface make it more difficult for lithium ions to move there than in the solid electrolyte—specifically, at the electrolyte-electrode interface.

Commercial-scale biomanufactured melatonin is here

For the first time, large amounts of melatonin are being made by bacteria. In industrial sized fermentation vats, harmless strains of engineered E. coli bacteria are feeding on glucose and churning out melatonin. This is a recent example of how the biomanufacturing industry is

Moving perovskite solar cells to manufacturing

Institute.

Researchers across a range of fields at UC San Diego are working together to develop and support the creation of perovskite-silicon tandem solar modules. These are solar cells made of stacked materials—silicon paired with perovskites—that together absorb more of the solar.

AlertCalifornia: Essential tools for natural disasters

In the recently expanded state-focused program, formerly part of the ALERTWildfire camera network, manages prepare for, respond to, and recover from wildfires and other natural hazards. The recently expanded state-focused program, formerly part of the ALERTWildfire camera network, manages prepare for, respond to, and recover from wildfires and other natural hazards. The recently expanded state-focused program, formerly part of the ALERTWildfire camera network, manages prepare for, respond to, and recover from wildfires and other natural hazards. The recently expanded state-focused program, formerly part of the ALERTWildfire camera network, manages prepare for, respond to, and recover from wildfires and other natural hazards.

The newly upgraded UC San Diego NHERI shake table is running an unprecedented series of how this kind of high rise would withstand different kinds of earthquakes, as U.S. building codes being put through a wide range of tests, each more powerful than the last. The goal is to assess

Read my entire Dean's column here.