

Exceptional service in the national interest



Sandia News Tips

Sandia National Laboratories is a multi-program laboratory with more than 8,000 employees operated by Sandia Corporation, a wholly owned subsidiary of Lockheed Martin Corp., for the U.S. Department of Energy's National Nuclear Security Administration. With main facilities in Albuquerque, N.M., and Livermore, Calif., Sandia has major research and development responsibilities in national security, energy and environmental technologies and economic competitiveness.

News Media Help Line
(505) 844-8066

Media Relations Team
In New Mexico:
Heather Clark
(505) 844-3511
hclark@sandia.gov

Stephanie Hobby
(505) 844-0948
shobby@sandia.gov

Sue Holmes
(505) 844-6362
sholmes@sandia.gov

Stephanie Holinka
(505) 284-9227
slholin@sandia.gov

Nancy Salem
(505) 844-2739
mnsalem@sandia.gov

Neal Singer
(505) 845-7078
nsinger@sandia.gov

In California:
Mike Janes
(925) 294-2447
mjan@sandia.gov



Innovative solutions

Sandia's wide-ranging expertise and knowledge has been instrumental to solutions such as the "Sandia cooler," which efficiently cools electronics, and solar glitter, which are tiny photovoltaic power cells that are cheaper to manufacture and have a variety of applications. Trapped miners will soon find help from Sandia's Gemini-Scout Mine Rescue Robot, which is equipped with sensors to alert rescuers to potential dangers while navigating flooded tunnels, rubble piles and explosive vapors to safely provide miners with communication equipment, food, medicine and air packs.

Developing tomorrow's cures

Sandia's research and development efforts have important applications to healthcare. To better understand traumatic brain injuries suffered by more than 160,000 soldiers, Sandia researchers are linking computer simulation with clinical studies. This research is expected to lead to improved military helmet designs. Sandia engineers are also improving amputees' control over prosthetics, using the amputee's own nervous system and off-the-shelf chemistry lab equipment to create new ways for nerve bundles to interact with mechanical devices. Biosensors developed at Sandia could lead to faster diagnosis and better treatment of diseases. Imaging techniques discovered and perfected at Sandia have led to greater understanding of the plague and other diseases.

Green energy

Since the 1970s, Sandia has researched solar, wind and geothermal energy technologies, and continues to develop safe, reliable, sustainable and cost-effective solutions for the nation's growing energy needs. Sandia is finding new ways to power the nation's vehicles, with biofuels, hydrogen, batteries and Sandia's novel Sunshine to Petrol program, which generates liquid fuel from sunlight. Sandia scientists are leading research for the emerging concentrating solar power industry at the National Solar Thermal Test Facility, the only facility of its kind, and continue to make strides with photovoltaic solar power and wind energy.

Sandia News Tips

Building a better, smarter electric grid

The nation's electric grid is aging, fragile and fossil-fuel dependent. If it fails, consequences to hospitals, security and the military could be disastrous. Sandia's Energy Surety Microgrid (ESM) focuses on energy surety – a combination of safety, security, reliability, sustainability and cost-effectiveness – to supply critical power needs. A microgrid is a local electric distribution area, tied to the main grid to better use and augment its power supply. In an emergency, it operates independently, distributing power according to needs. Sandia's microgrid design also incorporates distributed energy resources such as batteries and generators, local PV systems and wind turbines. This decentralized approach enables intelligent, efficient and reliable management of energy resources.

Technology transfer: Where science and business meet

Sandia's technology transfer experts are responsible for moving technology from research and development stages into the marketplace, creating jobs and advancing technologies. Industrial partnerships with companies like Intel, Boeing and General Motors help boost the nation's competitiveness. This year, Sandia engineers produced a method to clean up radioactive waste, designed more efficient and cost-effective materials for LEDs and high-powered transistors, and developed a decontamination foam with applications to methamphetamine labs and other hazardous clean-up sites. The Sandia-licensed CANARY Event Detection Software alerts municipal authorities of water supply contamination within minutes, and Sandia engineers recently announced the development of a laser-guided bullet whose fins correct its flight to hit a target more than a mile away.

Challenging basic scientific assumptions

Basic science is a key part of Sandia's work, and challenging scientific assumptions has enabled the nation to push the boundaries of scientific possibilities. For example, Sandia researchers discovered an unexpected voltage increase of up to 25 percent in two barely separated nanowires, and designers of next-generation devices using nanowires to deliver electric currents — including telephones, handheld computers, batteries and certain solar arrays — will need to make allowances for such surprise boosts. Other research revealed that diode lasers, which produce more light than LEDs, are comfortable enough for the human eye to eventually become the norm, contradicting skeptics who thought such light would be unacceptably harsh.

Supporting space exploration

Experiments conducted by Sandia at the International Space Station are providing information that could lead to solutions for a logjam of information coming from increasingly powerful sensors on space satellites. The Single Event Upset Xilinx-Sandia (SEUXSE) is testing flexible computing chips designed by Sandia and the San Jose, Calif.-based Xilinx Inc. in space. In 2006, the Department of Energy selected Sandia to conduct the safety analysis for all nuclear-powered missions, including the Mars Science Laboratory. Every space shuttle mission since 2005 used Sandia's laser dynamic range imager orbiter inspection system, which generates 3-D images from two-dimensional video to scan the orbiter's thermal protection system.

