

ARPA-E ENERGY LEADER TO MEET WITH NANOMECH

NanoMech lubricants provide manufacturing competitiveness and decrease America's dependency on foreign oil

FAYETTEVILLE, Ark., Jun 07, 2011 (BUSINESS WIRE) -- Arkansas-based NanoMech, Inc. will host Dr. Arun Majumdar, founding Director of the Department of Energy's Advanced Research Projects Agency (ARPA-E), at the company's Springdale manufacturing plant and laboratory at 10 a.m. Tuesday, June 7. Majumdar's visit was arranged by U.S. Rep. Steve Womack of Rogers after the Congressman visited NanoMech with U.S. Secretary of the Treasury, Mr. Timothy Geithner.

ARPA-E is the country's only agency devoted to transformational energy research and development, and Majumdar is the agency's first director. He also serves as Senior Advisor to U.S. Secretary of Energy Dr. Steven Chu, a Nobel Prize winner.

Dr. Majumdar is a distinguished member of the National Academy of Engineering (NAE). Majumdar will be accompanied on his trip by Peder Maarbjerg, Assistant Director for External Coordination at ARPA-E, and Nick Cizek, an ARPA-E fellow.

During Majumdar's visit, NanoMech will reveal and share a new lubricant additive invention produced under its revolutionary NanoGlide(R) technology platform.

NanoGlide has been described as the world's first multi-component nanomanufactured lubricant. This radical innovation virtually eliminates friction and wear at "energy hungry" mating surfaces under the harshest frictional conditions, called boundary lubrication. This scientific and product innovation breakthrough originated from partial support by the Department of Energy (DOE), the Department of Defense (DOD) and the National Science Foundation (NSF) and will greatly reduce friction and wear for critical energy sectors using machinery in extreme pressure conditions. NanoGlide delivers a drop-in advanced material solution ready to plug into the \$50 billion global grease and oil lubricant market. Near future developments for NanoGlide are in form factors such as oil additives which extend life of oil by 10-30 percent.

NanoMech Chief Executive Officer Jim Phillips said NanoMech plays a vital role in creating next generation energy-conserving solutions and performance advancements for a country dependent on foreign oil. By increasing the reliability and energy efficiency of vehicles, locomotives, wind turbines, diesel-powered trucks and other vital transport and machines, NanoMech directly solves the most critical challenges facing our country by dramatically increasing the use of renewable energy sources, reducing dependence on foreign energy sources and increasing productivity of U.S. industries.

As the Director of ARPA-E, Majumdar is responsible for finding and funding innovative energy technologies such as NanoGlide.

The breakthrough invention of NanoGlide was partially the result of a \$1 million plus grant for innovation research from the Department of Energy through stimulus funding.

"DOE provided the funding, and we delivered results and simulated knowledge based job growth. And we did it in half the time expected for launch Gen 1.0 grease product," said Dr. Ajay P. Malshe, NanoMech founder and Chief Technology Officer. Many other energy solutions are in various stages of development in NanoMech labs that would qualify for DOE grants.

"This radical improvement in technology is something we can do now. It can be dropped into existing products around the world for sustainable future," said Malshe. He estimates NanoGlide can extend the life of oil by up to 30 percent.

Terry Noland, Vice President and General Manager for NanoMech's fast-growing NanoGlide division, described its impact on the lubrication industry: "A reduction in friction and wear of 5 percent is considered a paradigm shift. What we're introducing is a 25-percent reduction. We didn't create grease, we just made it better," he said.

The technology will be premiered at the 78th National Association of Lubricating Grease Manufacturers' (NLGI) Annual Meeting in California.



Congressman Steve Womack, ARPA-E Director Dr. Arun Majumdar, Dr. Malshe & Mr. Phillips are briefed by NanoMech scientists on rare earth lithium nanopowder ElementX production.

"NanoMech's development of this breakthrough technology and product marks a significant improvement in performance by an environmentally sustainable additive that can save energy," said Neil Canter, a lubricant industry expert and Contributing Editor to the industry's widely read Tribology and Lubrication Technology Magazine. "The combination of solid lubricant nanoparticles with environmentally friendly organic additives provides a unique set of properties that are not matched by any lubricant commercially available today." Dr. Majumdar is planning to meet privately with the NanoMech leadership team and scientists, as well as tour the company's headquarters in the Arkansas Research & Technology Park in Fayetteville and the facility and labs in Springdale.

About NanoMech: NanoMech Inc., an Arkansas-based technology company, develops designs and manufactures patented and proprietary application-specific nanoparticle additives, nanoparticle-based coatings and coating deposition systems. The company was recently recognized for "Excellence in Innovation" by the U.S. Department of Commerce. NanoMech is headquartered in the Enterprise Center inside the Arkansas Research & Technology Park in Fayetteville. Its laboratory and manufacturing factory is located in the Technology Park in neighboring Springdale.