Northrop Grumman, USC Viterbi School of Engineering Establish Research Institute to Develop Advanced Optical Materials

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LOS ANGELES, April 28, 2016 (GLOBE NEWSWIRE) -- Northrop Grumman Corporation (NYSE:NOC) and the University of Southern California (USC) Viterbi School of Engineering have teamed up to establish a new home for advanced research in optical materials and nanophotonic devices.

The new organization – the Northrop Grumman Institute of Nanophotonics and Nanomaterials (NG-ION^2) – will be based on the USC campus in Los Angeles. It will bring together research teams from the university and the aerospace industry to explore the properties of tiny structures and materials that exist only at the atomic level.

Nanophotonics is the study of the behavior of light on the nanometer scale and of the interaction of nanometer-scale objects with light. A nanometer is one billionth of a meter. A sheet of paper is about 100,000 nanometers thick.

"The collaboration between USC Viterbi and Northrop Grumman has a long, productive and impactful history," said USC Viterbi Dean Yannis C. Yortsos. "NG-ION^2 will enhance our common ties and contribute significantly to the advancement of photonics, an area of historical strength at USC, and of critical importance to technological evolution."

Under the agreement, Northrop Grumman will contribute $500,000 to NG-ION^2 in 2016. This funding will help foster interdisciplinary research by material scientists, electrical engineers, physicists and chemists to develop novel materials for optical devices.

"The creation of the institute is based on the shared recognition that technological innovation begins with fundamental science discoveries," said Tom Pieronek, vice president, basic research, Northrop Grumman Aerospace Systems. "Breakthroughs in optical materials can lead to disruptive changes in how we approach missions of global significance. We're looking forward to a sustained and productive relationship with USC."

Historically, industry has played a critical role in enabling the transition of nanomaterials from academic research into commercial devices. NG-ION^2 will support fundamental, interdisciplinary science research that will accelerate innovation as nanomaterials become increasingly complex.

NG-ION^2 will also enable regular exchanges between USC and Northrop Grumman researchers working across projects. USC Viterbi will grant Northrop Grumman scientists visiting researcher positions, a strategy that will allow them to work collaboratively on campus with their Institute counterparts to advance science in nanomaterials and integrated photonics.

Professor Andrea Armani, of USC Viterbi and Jesse Tice, senior scientist and nanomaterials group lead, Northrop Grumman Aerospace Systems, will serve as NG-ION^2's co-directors. Professor Armani leads a research group at USC focused on integrated photonics.

The Northrop Grumman/USC Viterbi team has selected a wide range of projects for initial support in 2016. These projects include theoretical and experimental studies on 2D materials, plasmonics and nonlinear optics. The team will select additional projects for support later this summer.

About USC Viterbi School of Engineering

Engineering Studies began at the University of Southern California in 1905. Nearly a century later, the school received a naming gift in 2004 from alumnus Andrew J. Viterbi, inventor of the Viterbi algorithm, now key to cell phone technology and numerous data applications. One of the school's guiding principles is engineering+, a term coined by current Dean Yannis C. Yortsos to use the power of engineering to address the world's greatest challenges. USC Viterbi is ranked among the top graduate programs in the world and enrolls more than 6,500 undergraduate and graduate students taught by 185 tenured and tenure-track faculty, with 73 endowed chairs and professorships. http://viterbi.usc.edu/.

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