## NORTHROP GRUMMAN

## Northrop Grumman Completes Selection of 2016 Research Projects with USC Viterbi School of Engineering

August 9, 2016

REDONDO BEACH, Calif., Aug. 9, 2016 (GLOBE NEWSWIRE) -- Northrop Grumman Corporation (NYSE:NOC) has taken the next step in creating the <u>Northrop Grumman Institute of Nanophotonics and Nanomaterials (NG-ION<sup>2</sup>)</u> at the University of Southern California (USC) by selecting seven research <u>projects</u> to fund in 2016 with USC's Viterbi School of Engineering. The company has committed \$500,000 to fund those projects.

A photo accompanying this release is available at: <u>http://media.globenewswire.com</u> /noc/mediagallery.html?pkgid=41046

Northrop Grumman founded the Institute in March on USC's campus in Los Angeles to motivate joint research projects between the university and the aerospace industry into advanced optical materials and nanophotonic devices.

"Northrop Grumman's investments in USC and NG-ION<sup>2</sup> are part of the company's commitment to basic research with leading universities to pursue solutions to the nation's hardest scientific and global security problems," said Tom Pieronek, vice president, basic research, Northrop Grumman Aerospace Systems. "Through collaboration with academia, we're seeking disruptive change in the way we think about significant science and technology challenges."

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.

According to Jesse Tice, senior scientist and nanomaterials group lead, Northrop Grumman Aerospace Systems and a co-director of NG-ION<sup>2</sup>, Institute projects involve scientists and engineers from Northrop Grumman and USC. Research activities take place both at USC and on Northrop Grumman's Space Park campus in Redondo Beach.

"We're investigating new types of materials at the atomic scale and how the properties of these materials change as a function of thickness," explains Tice. "The things we learn will help advance our knowledge of critical engineering disciplines such as thermal control."

Northrop Grumman is a leading global security company providing innovative systems, products and solutions in autonomous systems, cyber, C4ISR, strike, and logistics and modernization to customers worldwide. Please visit <u>www.northropgrumman.com</u> for more information.

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Northrop Grumman and USC are studying lightmatter interactions of nanomaterials as part of their NG-ION2 partnership.