

# NSF Grants Nanotechnology Project: Molecular Photosensor to be Developed

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Florida Tech researchers have earned a \$100,000 National Science Foundation grant for a nanotechnology project, to develop a molecular photosensor. The photosensor will be based on compounds, such as Vitamin A, found in mammalian retinæ.

Dr. Joel Olson and Dr. Nasri Nesnas, assistant professors of chemistry, earned the grant to develop the technology, which can be useful in the **fabrication of miniscule cameras--the size of a grain of sand--requiring very little power.**

Such a camera could be put to medical, military and national security uses. It could be the "eyes" of a nanorobot sent into an artery to remove plaque, for example. Many such tiny cameras might "dust" an area as an army advances, for reconnaissance. "These are far-reaching but conceivable ideas," said Olson.

Also collaborating on this multidisciplinary project are Dr. James Mantovani, assistant professor of physics and Dr. Syed Murshid, assistant professor of electrical engineering. They also are Florida Tech faculty members.

Olson and Nesnas received an additional \$25,000 grant from the Florida Solar Energy Center to expand this work. They will extend their research into the study of porphyrin molecules, which partly compose the chlorophyll molecule, a photoreceptor present in green plants.

Nanotechnology involves complex devices built to atomic precision

using molecular machine systems. This powerful technology is expected to have profound impacts on fields from medicine and the environment to space transportation and homeland security.

Source: [Florida Institute of Technology](#)

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