



## **Nano- and Microtechnology Development for Advanced Scientific Measurements throughout the Solar System**

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As spaceflight missions travel to increasingly diverse and remote planetary targets throughout the Solar System, scientific instruments featuring low power consumption and small footprint become crucial to a successful mission. Micro- and nanotechnology can play a significant role in upcoming landed missions to Mars, Europa, Titan, and icy bodies, such as comets and asteroids, not only to make current capabilities more resource efficient, but also to enable new capabilities that are presently only available in the laboratory setting. I will discuss active technology development efforts at Goddard Space Flight Center that promise to contribute to future instrumentation for atmospheric, soil, and liquid analysis on other planets and moons.

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Dr. Stephanie Getty is a Spectrometer Instrumentation Engineer at NASA Goddard Space Flight Center, where she leads an effort to employ nanoelectronic materials in the development of advanced scientific instruments for space. She received her Ph.D. in Physics from the University of Florida in 2001, and she was a DCI (Director of Central Intelligence) Postdoctoral Fellow in the Physics Department at the University of Maryland, College Park, prior to joining Goddard in 2004. Dr. Getty has recently received the Goddard Space Flight Center AETD Science and Technology Advancement Award in 2007 and the James Kerley Award for innovative partnerships in 2008.

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