PR Contact: Jill Jackson
Calyx Consulting
312.231.9870

Press Release **Thursday, January 29, 2009**

Advanced Diamond Technologies Receives $4.8 Million Contract to Make Diamond Biosensors for Real-time Detection of *E. coli* and Other Water-borne Pathogens

Romeoville, IL—January 29, 2009—Advanced Diamond Technologies, Inc. (ADT) announces it has been awarded the first phase of a 3-year, $4.8 million contract from the Defense Threat Reduction Agency (DTRA) to develop diamond-based sensors for the real-time detection of water-based chemical and biological agents. The project's goal is to develop miniature devices to protect first responders during a terrorist event by detecting water-borne pathogens, bacterial agents, and toxins such as *E. coli*, *Listeria*, and *Salmonella.* Project collaborators include the University of Wisconsin-Madison (UW) and the University of Illinois at Urbana-Champaign (UIUC).

ADT's nanostructured diamond, known as UNCD®, will be used to make diamond devices that are extremely sensitive detectors of chemical and biological agents. Diamond forms a stable and exceptionally strong bond with biomolecules in water whereas other materials immediately degrade and fail. This durability, coupled with ADT's expertise in the microfabrication of UNCD, will make portable, reusable sensors a reality.

"There is an enormous need, both for military and civilian uses, to have a quick, reusable, and portable sensor to detect harmful, and occasionally weaponized, pathogens. This award-winning team of biochemists, electrochemists, materials scientists, and microsystems experts will develop bold new products to save lives," said Neil Kane, ADT's president.

The worldwide market for chemical and biological sensors is estimated by several market research firms to be greater than $10 billion. The need to protect people from environmental and deliberate threats is accelerating.

"Smooth, electrically conducting diamond film has many potential advantages for biosensors. By using MEMS (micro electrical mechanical systems) technology, we can miniaturize the devices making it economically feasible for people to carry a sensor in their wallet or as a piece of jewelry which would allow them, for example, to determine if water is safe to drink. In the case of military personnel or first responders, detectors could be integrated into uniforms or personal protective equipment," said John Carlisle, ADT's chief technical officer.

Professor Robert J. Hamers, the Irving Shain Professor of Chemistry and Chemistry Department Chair at UW will be spearheading the project's development of linker chemistry and biomolecular capture agents to selectively detect various types of bacteria. UIUC Professors William King, Kritzer Faculty Scholar, Department of Mechanical Science and Engineering, and Rashid Bashir, Bliss Professor, Department of Electrical and Computer Engineering & Bioengineering and Director of the UIUC Micro and Nanotechnology Laboratory, will design and characterize diamond MEMS structures (*i.e.*, cantilever arrays) that will integrate electrical, mechanical, and thermal functionalities together to detect the presence of bacterial threats in real-time.

PR Contact: Jill Jackson
Calyx Consulting
312.231.9870

About Advanced Diamond Technologies
ADT is the world leader in developing and applying diamond film for industrial, electronic, and medical applications. ADT is a World Economic Forum 2007 Technology Pioneer, was runner-up for the *Wall Street Journal's* 2006 Technology Innovation Award and received a 2008 EuroAsia IC Award in the Materials Enabling category from *EuroAsia Semiconductor* magazine.

For more information about ADT, visit http://www.thindiamond.com.

About the Defense Threat Reduction Agency
DTRA is tasked with a vital national security mission, safeguarding America and its allies from weapons of mass destruction by providing capabilities to reduce, eliminate, and counter the threat, and mitigate its effects.

For more information about DTRA, visit http://www.dtra.mil.

PR Contact:

Jill Jackson
Calyx Consulting
Tel: 312.231.9870
Fax: 312.264.0319
Email: jill@calyxconsulting.com
www.calyxconsulting.com

###