

ADVANCED DIAMOND TECHNOLOGIES (ADT)

Champaign, IL

DIAMOND TECHNOLOGY REVOLUTIONIZES BROADBAND COMMUNICATIONS

Champaign, Illinois—(Business Wire)—August 8, 2006—Advanced Diamond Technologies, Inc. (ADT), and its collaborators received a \$1.4-million Phase II program award from the Defense Advanced Research Projects Agency (DARPA) to advance next-generation broadband communication devices based on ADT's Ultrananocrystalline Diamond™ (UNCD™). The unique properties of UNCD enable microelectromechanical systems (MEMS) to directly integrate with silicon microchips, resulting in faster, more reliable wireless communications systems.

“DARPA's funding is key to developing next-generation MEMS technology based on our UNCD material,” said ADT president Neil Kane. “We are honored to have a second round of funding from the organization that provided the initial support for such forward-thinking initiatives as the Internet and stealth technologies.”

This research pushes the limits of telecommunication technology and could have far-reaching impact on other sectors, including the defense, industrial, and medical industries. The market for UNCD MEMS in the telecommunications market is staggering and has the potential to change the way we live and work.

According to the Insight Research Corporation (January 2006), there were 1.8 billion mobile wireless subscribers in 2005, and that number is expected to grow by 67 percent to 3 billion in 2010. The \$1.6-trillion telecommunication services and equipment market in 2005 is expected to grow by 21 percent to \$1.93 trillion by 2010. “Given the rate of projected industry growth both in the telecommunications and nanotechnology sectors, the potential for UNCD MEMS is sizeable,” Kane said.

“During Phase I of this project, we discovered that UNCD exhibits the highest known acoustic velocity of any material, which directly translates to higher resonator frequencies and thus device performance,” said ADT's chief technology officer, John Carlisle. Key to the next-generation MEMS devices, and a critical success factor for defense initiatives, is the ability of UNCD to integrate directly with microchips and resonate at high frequencies. UNCD can achieve this while remaining unaffected by environmental exposure, a requirement for more robust and reliable broadband technologies.

ADT is proud to partner in this work with three other leading organizations. Argonne National Laboratory (Argonne) (www.anl.gov), the nation's first national laboratory, will provide fundamental and applied research on the UNCD technology developed there over the past 14 years. Innovative Micro Technology (www.imtmems.com), an industry leader in MEMS fabrication, will produce the UNCD MEMS devices. The Prof. R. W. Carpick group at the

University of Wisconsin-Madison will apply advanced atomic force microscopy techniques to characterize the performance of UNCD-based MEMS devices (http://mandm.engr.wisc.edu/faculty_pages/carpick/main.htm).

About Ultrananocrystalline Diamond

UNCD, synthesized in thin-film form using a patented growth process originally developed at Argonne, is known for its ability to seamlessly integrate with other materials. Comprised of diamond grains that are 3-5 nm in diameter—a billion-fold smaller than in traditional diamond films—UNCD has many of the desirable characteristics associated with diamond, such as hardness, conductivity and inertness, as well as several distinctive properties, including mirror smoothness and low-temperature synthesis that is compatible with traditional semiconductor manufacturing processes.

About Advanced Diamond Technologies, Inc. (www.thindiamond.com)

ADT is the world leader in developing and applying diamond films for industrial, electronic, mechanical, and medical applications. Formed in December 2003 to commercialize the UNCD technology developed at Argonne, ADT is the licensee to the Argonne portfolio of application and process patents for synthesizing and using UNCD films. ADT is also a 2006 winner of the Nanotech Briefs' Nano 50™ Awards, which recognize the top innovators to impact the state of the art in nanotechnology.

This press release contains forward-looking statements about Advanced Diamond Technologies, Inc. that involve risks and uncertainties. These statements are developed by combining currently available information with ADT's beliefs and assumptions. Forward-looking statements do not guarantee future performance. Because ADT cannot predict all of the risks and uncertainties that may affect it, nor control the ones it does predict, ADT's actual results may be materially different from the results expressed in its forward-looking statements.

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