

NANOTECH'S IMPACT ON CLEANTECH GROWING RAPIDLY

Mundane applications likely to yield the greatest near-term rewards

New York, NY – August 16, 2007 – With the fevered search for new clean technologies, attention is turning to nanotech's potential in energy and environmental innovation. Nanotechnology's impact on cleantech is growing, and happens both through *product* and *process* innovations, with each type of impact posing its own set of challenges, according to a new report titled "Nanotech's Impact on Energy and Environmental Technologies" available exclusively to Lux Research clients.

"The rapid increase in nano-enabled cleantech patents and publications relative to overall cleantech numbers indicates that nanotechnology's impact on cleantech, though small at present, is growing at a fast clip," said the report's lead Lux Research analyst Jaideep Raje. "However, the near-term cleantech applications of nanotechnology are likely to come in more mundane forms like catalysts, coatings, and additives – not through big-ticket applications like next-generation photovoltaics."

To construct its assessment, Lux Research collected extensive data on nano-enabled cleantech on a range of metrics, including patents and publications, as well as government spending, venture capital investment, M&A and IPO activity. The research team also conducted in-depth discussions with corporate leaders, start-up executives and innovators, and regulators active across the five nano-enabled cleantech segments to gain their perspective on the challenges and opportunities in the space. Key findings from our analysis are:

- Governments across the world invested \$1.1 billion in 2006 on nano-enabled cleantech, a 16% increase over 2005 funding, but just 5% of cleantech funding overall.
- In 2006, 983 U.S. patents were issued and 7,132 scientific papers were published on nano-enabled clean technologies; both these figures have grown at over 30% annually from 2002 to 2006.
- Venture capitalists invested \$292 million into nano-enabled cleantech companies in 2006, a 91% increase over the amount invested in 2005, accounting for 15% of all cleantech VC. At the other end of the start-up pipeline, nano-enabled cleantech companies make up just 2% of cleantech M&A activity and IPO values.
- Of the roughly 1,500 start-ups focused on cleantech operating across the globe in 2006, 19% of these companies are developing nanotech approaches, with a large majority (80%) working in energy.

The report warns that concerns about environmental, health, and safety (EHS) risks could potentially prove a roadblock for some of these technologies. "As nano-enabled cleantech reaches commercialization, it is likely to frustrate anti-nanotech but pro-cleantech advocacy groups, which are just as likely to protest it as to promote it," said Raje. "Regulators need to work with industrial partners to develop a regulatory framework that can be broadly accepted, while investors should mitigate their risks by building a diverse portfolio."

The report provides detailed statistics on nano-enabled cleantech activity; provides a framework to understand nanotechnology's impact on energy and environmental technologies; and gives companies, investors and regulators guidance on how to meet the unique challenges posed by nanotech developments in this area.

The full report is available immediately to clients of Lux Research's Nanotechnology Strategies advisory service. For information on how to become a client, contact Stephen McDermott at stephen.mcdermott@luxresearchinc.com or (646) 723-0158.

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