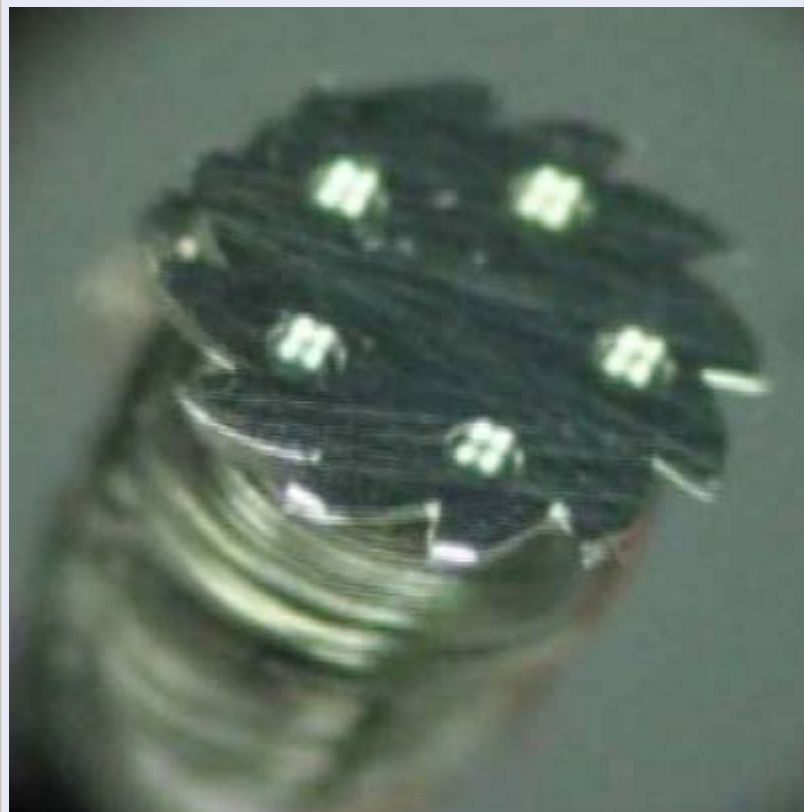


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12-19-2007, 09:16 AM

#1

**spaethd**
Electronic Media EditorJoin Date: Jun 2007
Posts: 197**EFAB technology debut at MD&M**

This 1mm turbine can be water- or air-actuated and rotates at speeds up to 120,000 rpm.

Van Nuys, Calif.—Microfabrica Inc. will introduce miniaturized building blocks for the minimally-invasive medical device market during the Medical Design & Manufacturing West meeting in January, according to a news release issued by the company Dec. 18.

Water-powered turbines just over 1mm in diameter that spin at 120,000 rpm, millimeter-scale car jack-like expanders, ultra-flexible micro-chainmail metal fabric, microneedles, miniature ratchets, hinges, slides, springs, and multi-lumen metal shapes are among the building blocks to be featured by **Microfabrica**.

Of course, the company's EFAB technology made the production of these building blocks possible, the company noted in its news release.

Vacit Arat, **Microfabrica** chief executive officer, said the company's EFAB technology "has already been used successfully in a variety of non-medical applications, and the technology's reliability and design flexibility have been put to test. Leveraging that experience, **Microfabrica** introduced the technology to select medical device companies in the last 12 months, and the response has been overwhelming. Several major players have already taken advantage of the technology to enable next-generation devices and dramatically cut cost."

Beginning with MD&M, **Microfabrica** will make its technology broadly available to medical device manufacturers. The company's building blocks are meant to demonstrate what is possible and give engineers a head start on leveraging EFAB in their designs.

EFAB technology differs from conventional manufacturing processes in several ways, the news release noted. By applying to mechanical device fabrication the techniques used to make computer chips, EFAB provides an accuracy and repeatability on the order of 0.001 mm, as well as direct scalability from prototype to volume production. The technology also offers an unprecedented new capability: it can directly produce assemblies such as mechanisms with dozens of moving parts, without the need for assembly.

Compared with machining, metal injection molding and electrical discharge machining, EFAB offers greater complexity, smaller features and often greater accuracy and lower cost. Compared with laser or photochemical machining and stamping, EFAB offers greater accuracy, smaller features and freedom from artifacts.

"The micro-turbine—probably the world's smallest—might be used as a high-speed distal actuator in thrombectomy, atherectomy and intravascular ultrasound catheters, eliminating the need for a drive cable," noted Adam Cohen, chief technology officer of **Microfabrica**. "The expander can anchor and manipulate a catheter or retract tissue, while chainmail-based fabric is well-suited for distal protection or retrieval, especially in tortuous vessels, due to its unusual

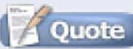
flexibility. Meanwhile, robust, hollow microneedles can enable intradermal and precision drug delivery systems."

For more about [Microfabrica](#), visit the [company's Web site](#).

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Last edited by spaethd : 02-07-2008 at 04:13 PM.



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