

Nanotechs think big in Cities

Firms drawn to Minnesota by expertise available at U's Institute of Technology

BY JIM McCARTNEY
Pioneer Press

While it's too soon to call the Twin Cities a nanotechnology hotbed, its reputation is about to get a boost from two companies that have decided to move here.

Aveso, a recent spin-off from Dow Chemical that produces ultra-thin low-power printed electronic displays, is about to sign a lease in the northern Twin Cities suburbs. The firm's technology will be used in making "smart" credit

cards and labels that enhance security and convenience, said Emily de Rotstein, vice president of marketing for Aveso, which is relocating from Frankenmuth, Mich.

Meanwhile, Innovalight, which is developing a nanotech approach to making lightbulbs, just moved to St. Paul last month from Austin, Texas. The company is leasing space in Menlo Park, the former Bureau of Criminal Apprehension crime lab on University Avenue.

Simply defined, nanotechnology is the science of making really small things. Just how small depends on your definition: Some argue that true nanotechnology works only at the molecular level of 4 nanometers or less, while others argue that anything less than a micron (1,000 nanometers) qualifies. A nanometer is one-billionth of a meter; to put that in perspective, the head of a pin is 1 million nanometers across.

To be sure, the moves represent only a handful or two of workers — barely a blip in the state's employment numbers. That said, each firm hopes to end the year with about 15 to

20 employees. And those high-skill jobs typically bring matching wages — for instance, Innovalight is looking to hire researchers and other scientists by dangling salaries that average \$75,000 a year or so.

While both companies have their own reasons for moving, both cite nanotechnology research and expertise at the University of Minnesota's Institute of Technology.

"We have dozens of different researchers working on nanotechnology research," said Dick Sommerstad, assistant director of the office of

NANOTECH HUB, 6C

Nanotech hub

(continued)

business development at the university who played a role in luring the companies to the Twin Cities.

For instance, a key element in Innovalight's silicon nanocrystals used in its "next generation" lighting was invented by Uwe Kortshagen, a professor of mechanical engineering at the university. Meanwhile, Innovalight expects to have an easier time finding qualified workers to fill its jobs here than it did in Texas, and that's in large part because of the university.

What's more, some of Minnesota's largest companies are focusing on nanotechnology, including 3M Co., Cargill,

Medtronic, St. Jude Medical, Boston Scientific and SurModics, according to industry officials. And that could provide enhanced resources for the Twin Cities nanotechnology industry and potential partners for the small start-ups, such as Innovalight and Aveso, said Jack Uldrich, a Minneapolis-based nanotechnology consultant. Uldrich said both Aveso and Innovalight face intense competition in their fields and might need larger partners to help them bring their products to market.

This existing infrastructure of companies working in nanotechnology also was attractive to the companies. For instance, Aveso checked out a range of high-tech centers around the country, including Raleigh, N.C., Austin, Texas, and Madison, Wis., before settling on the Twin Cities area, de Rotstein of Aveso said.

"We chose the Twin Cities because it offered us the best

access to world-class printing and microelectronics contract manufacturing capacity," she said. She said she was not ready to identify the Twin Cities firms Aveso is working with and also would not identify the location of where Aveso will move.

An advantage the two companies bring with them to the Twin Cities — besides jobs and growth — are their venture capital investors, who could be interested in funding more deals in the Twin Cities.

Among Aveso's venture capital investors are ARCH Venture Partners and Frazier Technology Ventures. Innovalight also was funded by ARCH, as well as other venture capital firms such as Apex Partners, Sevin Rosen Funds, STARtech Early Ventures and Triton Ventures, according to its Web site.

Jim McCartney can be reached at 651-228-5436 or jmccartney@pioneerpress.com.