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Alex Mejiritski at Spectra Group holds a fake limb with synthetic blood used in military training

## Spectra puts research to use

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MILLBURY — Science marches on, and so has Spectra Group Limited.

The company, celebrating 22 years in business this year, began by creating products for others. Now it harnesses its scientific expertise on its own.

"Spectra is a high-tech specialty company specializing in photoscience-related technology," explained Alex Mejiritski, Spectra's president, who has been with the company since 1997. The company focuses on such areas as photopolymerization (the process of changing a liquid to a solid using light), light-based color change, and organic and synthetic chemistry.

Begun in 1991 by Chairman and CEO Douglas Neckers, Spectra started out doing consulting work and research and development for other businesses, generating intellectual property for their use. Approximately 90 percent of their business came from such efforts.

"That is sort of an uneven business," said Mejiritski. Since then, Spectra has shifted in another direction — performing research and development to create items they can then market as products on their own.

"That constitutes the major, major shift," in their business, Mejiritski explained. Now, 90 percent of Spectra's work is spent on their own projects.

"Research now feeds manufacturing," he said.



Synthetic hand and blood

"We have developed things that we are making."

A recent coup for the company was the awarding last year of a nearly \$1 million contract from the United States Army to develop artificial blood to train soldiers in first aid techniques.

The challenge was to create fake blood that had the consistency, smell, and clotting characteristics of that bodily fluid, while still being artificial and washable.

"With the fluid, we are almost there," said Mejiritski. They are currently working on a special material used to stop the bleeding, in partnership with a firm in Dunbridge.

A new product Spectra is working on is a light-sensitive coating used in refurbishing flooring. Currently, restoring a floor is a lengthy and complex process.

However, using a chemical Spectra has developed, the material is spread on a flood and a special UV roller device is run over it, drying and setting it instantly.

The substance even has a special photoreactive dye in it which disappears when it is dry, letting a worker know what areas they've already gone over.

The process, he said, is quick and environmentally-friendly, and cuts down on noxious fumes and emissions usually associated with the sealing process.

Spectra's customer base, Mejiritski said, continues to evolve, with many of the customers for their photopolymerization products — largely concerning coatings, adhesives, and model creation — coming from the United States.

Their organic chemistry developments draw world-

wide attention from buyers in Europe, China, and India.

"We are actually selling to the Indians, other than the other was around," he quipped.

Spectra is continuing to evolve, with plans to hire about one or two staff members to assist with packaging and distribution of their products.

The company now employs about 10 people. Each of the workers has had some association with Bowling Green State University, many of them receiving degrees there or doing post-doctoral work.

They are also interested in increasing their marketing outreach. Spectra recently revamped its website, at [www.sglinc.com](http://www.sglinc.com), and is hoping to get the word about themselves out to a broader audience.