

Cerion plans big-scale growth

Firm founded by Kodak veterans expects to add up to 80 jobs at business park



Photo courtesy of Cerion LLC

Members of the Cerion manufacturing team work on a 2,000-liter batch of nanoparticle dispersions.

By **KERRY FELTNER**

Cerion LLC plans to add 60 to 80 jobs over the next two years to Eastman Business Park. The growth reflects an effort to support the growing firm and to revitalize the park as a hub for advanced materials manufacturing.

Cerion, founded by a group of former Eastman Kodak Co. veteran engineers and scientists, specializes in the development, commercialization and industrial scale manufacturing of transformational, high-performance nanomaterials.

The firm currently has 40 employees and expects 500 to 800 percent revenue growth over the next five to seven years.

“We’re mostly focused in the chemical industries within (catalysts), antimicrobials and coatings,” said CEO Landon Mertz. “What really sets us apart from the whole competitive landscape is the way that we design these particles for manufacturing. We have unparalleled control over both the size of the particle and a whole variety of non-size related attributes.”

Cerion was founded in 2007, incubated out of the Rochester Institute of Technol-

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ogy. It has three facilities across Rochester: a research and development laboratory on Lake Avenue, a corporate office on Blossom Road and a 20,000-square-foot manufacturing facility at Eastman Business Park. The company’s client base is mostly national and international with 10 percent based in New York.

“We did not have an appreciation for the strength of our expertise very early on,” Mertz said. “The things that we were doing obviously enabled technological breakthroughs, but we didn’t have a strong understanding of how broad we could go.”

Three years ago it was clear to company officials that there was a high industry demand for the company’s specific expertise.

That recognition led to an evolution from focusing on commercializing products in niche verticals to working with multinational companies as an enabling technology to co-develop end-use products across the catalyst, coating, antimicrobial and ink spaces.

“That’s been a challenge for our company because there is a tremendous amount of application areas for our technology,” said Matthew Winslow, executive vice president of business development. “It’s really been an exercise in focus and self-discipline, and really understanding the businesses where our products could thrive.”

Cerion’s team partners with the Critical Materials Institute—funded by the De-

partment of Energy—which was formed by the national government to find more expansive uses for rare earth materials in order to keep those uses in the country. The company’s core material is cerium, which is used both in environmental and chemical catalysis as a chemical and mechanical polish and in a variety of coatings. It also has biological applications, officials said.

Disruptive technology

Scale is a major aspect of its work. The diameter of the tip of a hair is some 50,000 nanometers, while the diameter of a red blood cell is roughly 9,000 nanometers. The material that the firm creates is 2.5 nanometers—or roughly five times larger

than a single atom of carbon.

“Nanotechnology is really an enabling technology so it has this potential to disrupt markets, create new markets and change the landscape of existing industries,” Mertz said.

An example of how the firm’s work applies to the consumer is self-cleaning windows. Cerion can manufacture coatings containing nanomaterials that activate through sunlight to decompose layers of residue on windows. Another example is energy-saving coatings for buildings that keep in the warm or cool temperatures to significantly reduce energy costs.

“Because our materials are so active as catalysts for different reactions in an energy storage, we are going to be key in unlocking a lot of next generation energy solutions, particularly potentially lithium ion batteries fuel cells,” Winslow said. “You’re really talking about enabling technology that is going to touch virtually every part of your life.”

The company aims to transform Eastman Business Park into a global hub for advanced materials manufacturing. Bringing jobs and focus to the region is a natural byproduct of the company’s offering, officials said.

“Because there’s such a demand and a need for nanomaterials manufacturing on a global scale, we see a tremendous opportunity—specifically at Eastman Business Park—to really be a global center or a hub for nanomaterials manufacturing,” Winslow said.

The company has the capacity to manufacture 150 metric tons annually, which is roughly five times greater than its closest competitor in the United States, officials said.

“People don’t realize that right here in Rochester a little company like Cerion, which has 40 employees, could blossom to be a world-changing, very powerful business,” said Richard Sands, chairman of Cerion and chairman of Constellation Brands Inc.

Collaborating with industry is a major goal for the company in the next few years. Bringing technology from the lab to products in the marketplace can be a challenge, Winslow said.

“The challenge at the national level to stay relevant in nanotechnology is that over the past 20 to 25 years the national government and primarily the (Department of Energy), the (National Science Foundation), and the (Department of Defense) (have) invested billions of dollars every year to the development of innovative nanomaterials for a lot of the industries,” he said.



Photo courtesy of Cerion LLC

Founded in 2007 by a group of former Eastman Kodak Co. engineers and scientists, Cerion is led by CEO Landon Mertz, left, and Matthew Winslow, executive vice president of business development.

In addition, the company is partnering with the Energy Department and the Defense Department for energy-specific and defense-specific education through commercialization.

“The problem is this is applied and basic research that is being done on the bench—as we call it in the industry—and there isn’t the manufacturing expertise and technologies to be able to take those materials out of the lab and take them into industry as real products,” he added.

The United States is a leader in basic and applied nanotech research but has been outpaced abroad in delivering products that use the technology, officials said. Countries such as China, Germany and India are much more aggressive from a research and capital standpoint in getting nano-based products to the market, officials say.

Size is a major obstacle in nanotech applications.

“You’re seeing a dramatic increase in focus on the United States, which is still seen as a leader in nanotech R&D, but there is a tremendous effort overseas to solve the nano-manufacturing conundrum,” Winslow said. “Because when you’re talking about a material that is the size of a cell wall, it’s not easy to manufacture that in tons. We come in as really a conduit between the national government and industry. And there are some very exciting things happening on that front.”

Kodak legacy

Rochester’s history does not define its future, Winslow said. Many of those who helped the companies of the past succeed still remain in the region. Cerion’s staff

was responsible for 200 out of some 900 nanotech-related patents at Kodak over 20 years.

“There’s such a high regard for technical folks and manufacturing folks that have been in this material science arena for years,” he said. “I think being insular in Rochester, we’re all a little bit jaded about what’s happened with some of the stalwart companies but when you look at the talent of the people that spent years at those companies—we’re now applying that talent to new industries.”

Cerion plans to be one of many companies that change the history of Rochester.

“I look at it a little differently than a

normal little startup company that is trying to attack a billion dollar market,” said Sands, who served as CEO at Constellation Brands. “That’s all about return on investment and getting people to invest and telling them how you’re going to capture your share of this market—this is revolutionary technology this is game changing and the implications go well beyond how much money everyone can make.”

The future of nanotechnology in Rochester is full of potential, officials said.

“If making photographic film was easy there’d be more than just Fuji and Kodak doing it in its heyday,” Winslow said. “Just because our scientists and our manufac-

turing engineers are not producing photographic film doesn’t mean they’re not the top scientists and engineers in the world, and that’s being validated by the biggest chemical and energy companies in the world.”

He added: “I think there’s an incredible talent level and an incredible thirst for innovation, so just because someone spent 25 years at Kodak doesn’t mean they’re resting on their laurels. There is a desire and a hunger to put Rochester back on the map as a leader in chemicals and materials in the world, and we like to think we’re on the path to do so.”

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