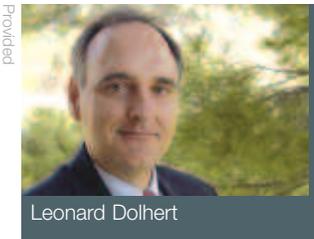


THE PROXIMITY FACTOR: A GREAT ATTRACTION

Primet Precision Materials, Inc., Partners with the Cornell and Ithaca Communities



Leonard Dolhert

Primet is an advanced materials company dedicated to creating better performance in solar cells, fuel cells, and other consumer-friendly industries. The company's processing technology enables the manufacturing of small particles, including nano-sized particles, from many

diverse materials, which include ceramics and metals. Primet's unique proprietary technology is cost-effective, scalable, and capable of producing materials of exceptionally high purity.

Soon after Primet Precision Materials, Inc., was founded in Maryland in 2002, the company's CEO, Leonard Dolhert, began evaluating locations where the company could expand and grow. Access to world-class materials science research and corresponding facilities in a collaborative, attractive setting were the key criteria for selecting a new location. Cornell University and Ithaca, New York, rose to the top of Primet's list.

Cornell's interdisciplinary collaborations, openness to working with private industry, and wide range of facilities and equipment available for industry use impressed the company. Although Primet leaders chose the Ithaca area for many reasons, the deciding factor was the opportunity to collaborate with a top research university. This would allow the company to develop and market breakthrough technology, while taking full advantage of its synergy with Cornell.

The connection between Primet's commercial interests and Cornell's research interests was cemented during Dolhert's first visit to Ithaca. This was an important development, underscoring the potential for productive collaboration and the accessibility of Cornell's resources. During the visit, Dolhert and Robert Dobbs, Primet's chief technology officer, were given a tour of Cornell, which included the Center for NanoScale Science and Technology facility and the Cornell Center for Materials Research. They met with faculty in the field of materials science, Cornell's key people in industrial relations, and members of Ithaca's economic development community.

Primet's Guide to Ithaca, a Prime Location for Start-ups

- Very low crime rate
- Low regional traffic density
- Low housing costs
- Highly educated population
- Excellent library system
- A phenomenal variety of high quality restaurants
- Many cultural events, including numerous free ones
- Many movie theatres
- Unsurpassed natural beauty
- A large, clean lake
- Vineyards
- An established resort area, with many bed-and-breakfasts, campgrounds, cabins, and other accommodations

Dolhert and Dobbs learned that more than 100 Cornell professors conduct research related to nanoparticulate materials and that several faculty were working in an area of fuel cell research with a great potential for synergy. They extended their visit in order to meet with Frank DiSalvo and Hector Abruña, Chemistry and Chemical Biology, and members of the Cornell Center for Materials Research and the Cornell Fuel Cell Institute. The discussion centered on novel nanoparticulate catalyst materials for fuel cells. A full-scale collaborative effort resulting in a license agreement between Cornell University and Primet grew out of the meeting. Primet was positioned to commercialize Cornell catalyst technology in combination with its own proprietary technology.

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Today, Primet is commercializing the sale of Cornell technology and has developed strong working partnerships with Cornell’s faculty, industrial relations staff, and technology transfer staff. For a high-tech company like Primet, the materials science and nanotechnology expertise at Cornell is invaluable, and the university’s exceptional consultants and advisors are a remarkable resource. This partnership is an exciting example of how a company can work closely with Cornell to bring new innovations from university research to market. Two years after the initial visit to Ithaca, Primet views a highly productive future for Cornell and its industrial partners: Cornell is bursting with technologies ready to be developed for commercial markets.

In addition to Cornell, Ithaca offers much for the company. Helpful resources such as Tompkins County Area Development and the Cayuga Venture Fund II, a highly educated labor pool, and an attractive community: these are important attributes to a high-technology start-up. The area abounds with appeal, with two universities and a community college offering cultural events, numerous historic homes and buildings, and outdoor recreational opportunities, with state and national parks, waterfalls, and scenic Cayuga Lake for boating, swimming, and fishing.

Primet has benefited from tapping the Ithaca area’s tremendous talent pool and its underutilized manufacturing infrastructure. For each of its job openings, Primet received many qualified candidates from the local area. Primet has hired seven people since moving to Ithaca: three from the greater Ithaca area and

three from nearby Binghamton. The company has also been pleased with the low cost of business and the availability of rental spaces, including lab and office space at the Cornell Business and Technology Park.

Transportation arteries stretch out in every direction from Ithaca. The local airport recently added a new carrier, Northwest Airlines. Ithaca is only four driving hours from New York City, Philadelphia, and a huge proportion of the U.S. population on the eastern seaboard. Primet considers these factors important for their business. Dolhert also notes that summers in Ithaca

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Primet’s core technology enables large-scale manufacturing of small particles, which cannot be made by other means, and which are useful in many applications.

Primet makes fuel cell catalyst materials, for example. Fuel cells convert fuel to electricity via catalysts: small particles of special metals. A chemical reaction takes place on the surface of the particles, enabling the electrons to be taken off and used for electrical power. The particles must be small in order to have sufficient surface area for the reaction to take place effectively. Currently, fuel cells use an expensive platinum alloy catalyst. Cornell has developed new metal catalysts, but the chemistry is complex. Primet technology was developed to solve this problem by enabling easy manufacturing of small particles from Cornell’s materials, as well as other complex materials. Primet’s catalysts will enable better fuel cell performance, allowing broad commercialization of fuel cells and tremendous energy savings.

Primet’s small particle materials are useful in many other applications, including the following:

- Semiconductors for more efficient lighting
- Ceramics, such as titanium dioxide, for solar cells
- Conversion of coal to a sulfur-free liquid fuel
- Cosmetics, pharmaceuticals, paints, plastics, and paper

Ithaca, New York:
Cities Ranked and Rated, a 2004 publication that compares the 331 metropolitan statistical areas identified by the federal government, cites Ithaca as the best “emerging” area in the United States and notes that the “town is attractive, activities are plentiful, and education attainment is high.”



are more comfortable than in other parts of the U.S. Springs and autumns are exquisite, and many residents look forward to the winter as a time for sledding, skiing, and other outdoor sports.

Primet is a shining example of the ability of Ithaca and Cornell to attract and foster a technology start-up. Primet, Cornell, and the Ithaca community are interested in making further connections with companies that would benefit from proximity to exceptional research in an open, collaborative environment. Providing opportunities for entrepreneurial companies to grow in the Ithaca area benefits Cornell, regional industry, and the Ithaca community at large.

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