

frontline



miamisburg mound community improvement corporation

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New Mound Company Develops Breakthrough Materials Technology

What do plain tee-shirts, laundry tape, military uniforms and detergent bottles have in common? In Ibrahim Katampe's world, a lot.

As president of Iya Technologies LLC, Katampe sees these products as potential applications for his invention, a unique process that revolutionizes the way ink is transferred to any surface. There are countless possibilities, he believes, and his five-year-old company, the newest tenant at the Mound Advanced Technology Center, is positioned to discover them and pursue the markets they represent.

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Technology is in the paper

Unlike conventional ink transfer processes, Katampe's applications don't run, fade, chip or crack because the ink actually bonds to the receiving material rather than sitting atop it. The technology is in the paper upon which the image is printed, he explained. Once the sheets treated with Iya Technologies' patented coating are imprinted by way of an ink-jet or laser printer, the image can be permanently applied to a variety of surfaces through a heat-transfer process.



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Ibrahim Katampe is founder and president of Iya Technologies, the newest company to locate at Mound. A research scientist from Nigeria and holder of nine U.S. patents (and counting), he has invented a unique process that improves the way ink is transferred to any surface.



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“One of the biggest advantages is that the process allows you to customize on the fly,” said Brad Riley, vice president of operations.

Iya Technologies sells its specially treated paper for garment applications to a Fortune 500 company that has made it available in major retail stores. Iya officials are looking to develop a broad range of markets, such as the nursing home industry for marking laundry and the military, where applications could include marking uniforms for identification or even creating garments with global positioning trackers transferred to the fabric.

Research chemist turns entrepreneur

Katampe, a research chemist from Nigeria and holder of nine patents (and counting), founded Iya in 2004. The company he was

working for, Cycolor, was bought out by Kodak and he was invited to work at its Rochester, NY, location. Wanting to stay in Dayton and encouraged by his family, he launched Iya in a small space in Kettering – and quickly outgrew it.

Iya officials began making inquiries and through Montgomery County’s BusinessFirst! Program, they were introduced to the opportunities at Mound.

“With one of our areas of market focus in materials, Iya Technologies represents an ideal fit for Mound,” said MMCIC President Mike Grauwelman. “They will add a new dimension to the synergy that exists among the businesses on our campus.”

In December, Iya will begin operating at Mound with nine employees in the 24,000-square-foot building at 1390 Vanguard Boulevard.

mound’s award-winning innovators

Iya Technologies received the 2009 Soin Award for Innovation from the Dayton Area Chamber of Commerce and Soin International. This prestigious recognition, which includes a gift of \$25,000, is given annually to a company in the Dayton region that exhibits innovative spirit and makes significant contributions to the community.

The 2008 Soin Award recognized another Mound business, Mound Laser & Photonics.

“We have been impressed with the relationship we’ve developed with MMCIC and the city of Miamisburg. They don’t want to be invasive, but they’re always there to help,” said Riley. “We’re excited about the move.”

energy experts converge at mound

During the Cold War, Mound became a leading national source for energy innovation. With the nation’s priorities focused on gaining energy independence, MMCIC officials have found a way for Mound again to provide energy technology leadership while pursuing its economic development mission.

The first step was taken mid-year when Mound hosted the region’s first Energy Roundtable and Exhibition. The event provided a forum for leading experts to talk about the future of power, where it will come from and how it will be delivered.

“The idea behind the Energy Roundtable was to promote education and regional networking of businesses and organizations interested in alternative and renewable energy,” said MMCIC president Mike Grauwelman.

A capacity crowd of some 150 people attended the event, which was organized by the Dayton Development Coalition and MMCIC. It was sponsored by the Dayton

Power and Light Company, and supported by the U.S. Department of Energy.

Participants learned about federal, state and regional initiatives, renewable energy sources, job creation and greenhouse gas reduction. The event also featured 25 exhibitors of energy-related products and services.

“We were successful at connecting people of similar interests and introducing them to various market opportunities,” Grauwelman said. “It gave them a chance to see how they fit into the bigger energy picture.”

The second Energy Roundtable is scheduled for January 2010 and will focus on solar energy.



Mound was the site of the region’s first Energy Roundtable, where a capacity crowd of 150 people gathered to learn about alternative and renewable energy and network with businesses and organizations involved in the related technologies. The region’s next Energy Roundtable, focused on solar energy, will be held at Mound in January.

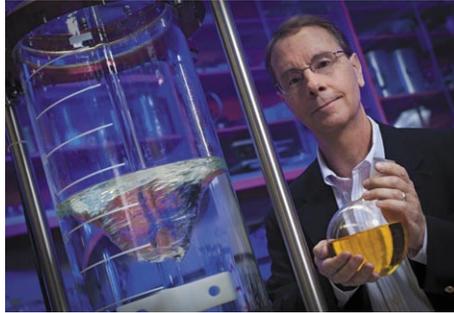


mound firm leads battery research with \$1.9 award

A Mound-based company is well on its way to developing the next generation of the lithium ion battery – a low-cost type that could be used for electric and plug-in hybrid vehicles – and the U.S. Department of Energy is investing \$1,999,447 to help make it happen.

Dr. David Firsich, president of Inorganic Specialists Inc., has spent the past six years researching, developing and perfecting a conductive carbon nanofiber paper that can enhance the performance of energy-storage devices such as fuel cells and lithium ion batteries. In 2008, he received \$250,000 from the Ohio Department of Development for research to advance his nanofiber paper technology.

The DOE-sponsored project will build on Firsich's earlier work and seek to determine the utility of silicon-coated nanofiber paper as the electrode through which electric current could flow into a device.



Dr. David Firsich, president of Inorganic Specialists, recently learned that his Mound-based company has been selected for a \$1.9 million award from the U.S. Department of Energy to conduct research leading to the next generation of the lithium ion battery.

MMCIC has committed in-kind support to assist Inorganic Specialists with the required match for the DOE grant.

"This is very exciting for us," said Firsich, who worked as a Mound scientist for 15 years before starting his company when the site's closure was announced. "It could make the operation of alternative-fuel vehicles much more affordable."

cleanup investment: 'great news for Ohio'

Thanks to the efforts of U.S. Senator Sherrod Brown and Representative Mike Turner, Mound's cleanup is heading toward completion. Less than one acre still contains contamination, and cleanup work at this location is ahead of schedule, according to MMCIC Operations Manager Frank Bullock. Completion is anticipated in the summer of 2010.

The final stages of the work are possible because of funding in the amounts of \$4.75 million in the 2009 federal budget and \$20 million from the federal stimulus package.

"The funds will finish the cleanup, but more importantly, they will complete Mound's transition to a world-class business park," Brown said about the stimulus funding. "This park can now compete to bring the most innovative and technologically advanced businesses to the Miami Valley. This cleanup investment is great news for Ohio."

success breeds success for mound company

Mound Technical Solutions has made a name for itself with its breakthrough advances in fuel-cell testing equipment. With \$1.1 in grants from Ohio's high-profile Third Frontier program, as well as important R&D contracts, the Mound-based company is receiving widespread recognition for its expertise in alternative energy technologies.

With this reputation, the company is now in demand. In one of its successful projects, MoundTech was invited to team with the University of Dayton Research Institute and UltraCell Corp., a California company with manufacturing facilities in Dayton. The team was assembled to improve the manufacturability and perform durability testing of UltraCell's

advanced methanol-based micro fuel cell technology invented at the U. S. Department of Energy's Lawrence Livermore National Laboratory.

According to MoundTech president Doug McClelland, the portable fuel cell unit and fuel cartridge system that has resulted uses safe, high-density fuel. Its greatest advantage is its light weight compared to batteries for long-usage applications.

The system can power mobile electronic devices such as satellite communication terminals, rugged computers and radios used on remote missions.

"The military and public safety personnel have been early adopters," said McClelland.



Mound Technical Solutions is involved in numerous high-profile research projects, including one with the University of Dayton and a California company aimed at advancing a micro fuel cell technology.

The UltraCell product is being manufactured in the Dayton area.



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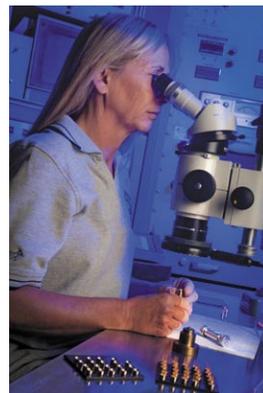
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growth mode: company maximizes local talent

While economic woes have brought some industries to a grinding halt, Mound-based PerkinElmer Miamisburg has grown its employment by 25 percent in just the past 18 months. A developer and manufacturer of energetic safety devices for the defense and aerospace industries, the company



began in 1994 with eight employees. Today that number stands at 66.

Even with specialized needs for positions such as engineers,

technicians and assemblers, finding qualified workers has not been a problem for the company.

“We’ve found that the folks who worked at Delphi have a nice base of understanding of our technology from their work with air bags,” said Doug Benner, a former Mound employee who now serves as vice president and general manager of defense operations for five locations of PerkinElmer. “Of our 66 employees, 22 came from Mound, and the rest from other industries. That diversity of backgrounds is what makes our group successful.”

To accommodate its growth, the company doubled its facilities a few years ago, moving to a 45,000-square-foot space that combines office, lab and production areas. Benner believes another expansion – at Mound – will be necessary soon.

“We have no plans to leave this site,” said Benner. “We plan to be here for a long time.”

