

Carpe Diem Technologies Receives Grant for Nanoimprinted Lithography (NIL) Next-generation Tech

BOSTON, Mass., Aug. 1, 2018 (SEND2PRESS NEWSWIRE) – Carpe Diem Technologies, Inc. (Carpe Diem) is the recipient of \$2.1 of \$7 million in new Advanced Manufacturing Awards (M2I2) announced by Massachusetts Governor Charles Baker on July 12, 2018.



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The company received the award to help establish it as the hub of a Massachusetts-based national ecosystem for the development and mass production of nanoimprinted microstructures for flexible hybrid electronic and large area high volume applications.

These microstructures can:

- cause materials to repel water, bacteria and/or dirt,
- help capture or guide photons for optics, sensors or solar cells,
- enhance the performance of batteries (including high performance lithium ion),

- and finally, can define the electrical circuits and electronics on low-cost flexible substrates such as foil, paper and plastic.

Key Massachusetts members of the ecosystem include:

1. Carpe Diem Technologies, Inc. – Franklin, MA; New Bedford, MA
2. Rothtec – New Bedford, MA
3. Flexcon – Spencer, MA
4. Mack Technologies – Westford, MA
5. Xenon Corp – Wilmington, MA

The Massachusetts Manufacturing Innovation Initiative (M2I2) is a state program that invests in emerging manufacturing projects.

The Carpe Diem grant provides capital for the manufacturing expansion required to support microstructure-enabled commercialization. Key is the expansion of Carpe Diem’s nano seamless mastering capacity to higher volume for roll masters ranging from 6 inches to 1.6 meters wide.

In addition, this grant will provide Carpe Diem, Rothtec and Flexcon enhanced facilities and equipment, including a common metrology platform for working through the challenging nanometer dimensions.

The consortium of companies is active in several high-volume opportunities, and, as John S. Berg, CEO of Carpe Diem Tech, explained: “We are fortunate to have capable partners in a state where leadership has the vision to invest – together with America’s Manufacturing Institutes – to make the critical difference in local and domestic manufacturing.”

The efforts at Carpe Diem, Rothtec, Flexcon, and Mack Technologies are expected to create dozens of high-value manufacturing jobs.

“We’ve refined our nano-imprint capabilities for nearly a decade through our partnership with UMass Amherst Center for Hierarchical Manufacturing and Advanced Roll-to-Roll Facility,” explains Berg. “This grant will allow us to complement that work with production capacity.”

NextFlex (America’s Flexible Hybrid Electronics Manufacturing Institute), a San Jose-based organization formed in 2015 by the Department of Defense and the Flextech Alliance industrial trade group, supported Carpe Diem’s proposal of a manufacturing ecosystem of NIL for flexible hybrid electronics, which they deemed strategically critical to America’s future commercial and defense needs.

About Carpe Diem Technologies, Inc.:

Carpe Diem and its clients bring nano-enabled products to market with high-precision, high-volume manufacturing solutions.

The company works in the world of nanometers to microns, frequently on low-

cost flexible substrates such as paper, plastic, and metal foils or web.

Carpe Diem's modular roll-to-roll system facilitates the development and production of nano-enabled printed electronics, microfluidics, meta materials and optical devices—utilizing the most advanced processes. The manufacturing system has the flexibility to change with customers' needs and as technology evolves.

From NIL with NIL mastering capability, to Spatial ALD. From printing to photolithography, with interferometric alignment and inspection. Carpe Diem's team, solutions, and approach power the new era of products and devices.

Learn more at: <https://carpediemtech.com/>.

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