



UMass Acquires UV Laser System

Thursday, April 7, 2005

FALL RIVER, Mass., April 7 -- The Advanced Technology and Manufacturing Center (ATMC) of the University of Massachusetts, Dartmouth, recently acquired an IX-300 UV laser micromachining system from JP Sercel Associates Inc. (JPSA), a Hollis, N.H., provider of ultraviolet (UV) laser technology, in a new partnership designed to promote economic development in southwestern Massachusetts.



Lamar Bullock, photonic laboratory manager, operates the ATMC's new IX-300 excimer UV laser micromachining system.

The UV laser system, a 193-nm wavelength industrial-grade excimer micromachining unit, was acquired through the Commonwealth of Massachusetts and will be used to help ATMC's industrial clients develop micromachining processes and conduct applications engineering for use in industries including biomedicine and microelectronics. JPSA's laser technicians and engineers will maintain the system.

JPSA said the system can be used to create micron-scale features with submicron tolerances for a variety of medical device manufacturing applications. These include: micro-fluidics, sensors, nozzles, microscreens, particle traps, MEMS, MOEMS, microdicing, biosensors (lab-on-a-chip), micro-vias, photo ablation, photo machining, micromachining of plastics, ceramics, hard dielectrics, glass and metals, nondestructive high-resolution marking, micro-lithography to 1 micron resolution, high-speed drilling, selective material ablation, doping, annealing and more. Materials processed include polymers and plastics, ceramics, glass materials, metals, semiconductor materials, diamond and precious metals and others.

Recently, JPSA worked with the Massachusetts Institute of Technology to develop its "Liver Chip" bioreactor, a device designed to mimic the human liver comprised of 3-D structures of a functioning liver with tiny channels that provide simulated blood flow.

Lamar Bullock has joined ATMC as photonic laboratory manager and will operate the new IX-300. Bullock was formerly president of Boston Laser

Technology, where he developed a unique excimer laser-based manufacturing process. He also designed and built laser imaging equipment to apply this process to volume manufacturing of a medical device.

"The addition of the JPSA excimer laser system is an important asset to our technological resource base," Bullock said. "Right now, for example, we're seeing a lot of activity in the area of microfluidics. This technology has a wide range of applications, many of immediate local interest -- such as water quality, marine and environmental applications -- in addition to the recognized biomedical uses."

For more information, visit: www.atmc.umassd.edu

Return to [previous page](#)

[Search Our Site](#)

[Photonics Web Search](#)
[Click Here](#)

[▲ top of page](#)

Photonics.com: Optical, Laser and Fiber Optics Resource
[[Home](#) | [Reference Library](#) | [Print Publications](#) | [Employment Center](#) | [Tech Focus](#) | [News & Analysis](#)]
[[Innovative Products](#) | [Calendar](#) | [Advertising](#) | [About Laurin](#) | [Site Map](#)]



© 1996-2005 Laurin Publishing. All rights reserved.
Photonics.Com is Registered with the U.S. Patent & Trademark Office.
[Privacy Policy](#) | [Terms and Conditions of Use](#)
Reproduction in whole or in part without permission is prohibited.

webmaster@laurin.com

Other Areas and Laurin Web Sites