

Laser Assisted Micro Machining

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Categories:

- Micro & Nanotechnologies

Keywords:

- Lasers
- Materials and Manufacturing
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Traditionally, methods used to make micro- and mesoscale parts from hard materials, such as ceramics, are slow and costly. These methods require micro EDM, ultrasonic machining, or short-pulse laser machining, which all include the potential for a recast layer or subsurface damage.

Researchers at Purdue University have developed a method for laser-assisted micromachining that prevents any subsurface damage. This process works on both conductive and non-conductive materials. This technology allows for cutting very hard materials at relatively high speeds with attainable feature sizes from 25 microns to 1000 microns (1mm).

Advantages:

- No subsurface damage in production of micro- and mesoscale parts
- Works on conductive and non-conductive hard materials
- Allows machining of materials at higher speeds relative to most existing methods
- Feature sizes from 25 microns to 1000 microns (1mm) are attainable

Potential Applications:

- Materials
- Manufacturing

People:

- Shin, Yung C (Project leader)

Intellectual Property:

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Contact OTC:

Purdue Office of Technology Commercialization

The Convergence Center

101 Foundry Drive, Suite 2500

West Lafayette, IN 47906

Phone: (765) 588-3475

Fax: (765) 463-3486

Email: otcip@prf.org