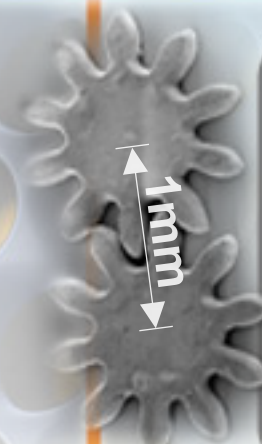




US PHOTONICS

INCORPORATED

CORE COMPETENCIES AND FACILITIES

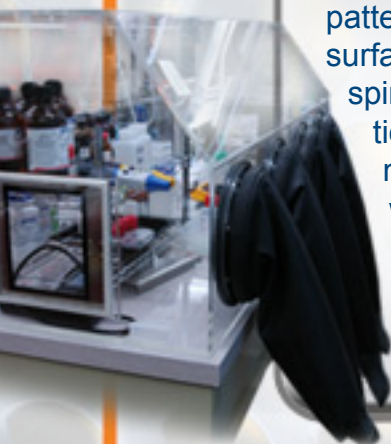


US Photonics is a world leader in creative laser macro/nano machining. Our techniques are used in combination with nano materials and coatings for the creation of new products. This unique combination allows us to create cutting edge technologies for use in the Bio-Medical, Micro-fluidics, and Defense fields. Some of the largest corporations in the world come to us when they are trying to produce something seemingly impossible or they need products developed quickly. We are an agile organization and can react immediately with creative minds to solve the most difficult products.

Laser Micromachining

Design and Invention of New Devices

We specialize in taking an idea and moving it quickly from concept to reality. We design, build, and create fiber optic sensors, apply nano coatings, and create MEMS devices. We are currently working on a nano-battery project through the NSF. We have applied for several patents involving our expertise in the fields of nano-batteries and super capacitors. We plan to be the first company in the world to build true nano-sized battery cells.



US Photonics has the ability to coat and pattern thin films and perform various surface treatments from sol-gel dip coating,

Thin Film Coatings

spin coating, electroplating, electro-polishing, anodizing, electro-phoretic deposition, micro-abrasive blasting, surface grinding, chemical etching, lithography, multi-photon polymerization, and powder coating. Through our partnership with the JVIC facility, we also have the ability to perform pulse laser deposition and have capabilities to do e-beam and thermal evaporation, sputtering, and chemical vapor deposition.

We also have the ability to do various bonding and welding techniques for MEMS applications, including glass to silicon frit bonding.

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Technical Areas of Expertise

- Laser Micromachining
- Experimental Design & Modeling
- Nano Material Coatings
Solgels, Pulse Laser Deposition,
Carbon Nano-Tube Flow/Dip/Spin
Spray Coating
- Direct Write Lithography Using
Femtosecond Laser
Precision Writing to Substrate Using Laser
- Multi Photon Polymerization
3D Rapid Modeling of Prototypes Micro/Nano Scale
- MEMS Device Design & Prototyping
- Optical Design, Electro-optics Including
Active 3D Waveguides
- Thin Film Patterning & Lithography
- Fiber Optic Sensors & Fiber
Laser Design

FACILITIES & EQUIPMENT

Inspection Equipment

- Atomic Force Microscope
- Confocal Microscope
- Hitachi SEM

- Femtosecond Laser Machining Center
- Nanosecond YAG Laser
- Diamond Saw
- Copper Vapor Laser
- Fiber Optic Polishing, Lapping,
Connectorizing and Inspection

Micro Machining Equipment

Design Software

- Solidworks 3D Modeling
- Autocad
- Inventor
- Eagle Cad for PCB Design

Federal Nomenclatures

CAGE
4F4Z6

DUNS
62186539

NAICS
332710, 332721, 332811, 332813, 333295,
333314, 333512, 334418, 334516, 334517,
334519, 335991, 336419, 541330, 541340,
541380, 541690, 541712

SIC
3599, 3699,
3764, 3769,
3826, 9661

Affiliations

Jordan Valley Innovation Center • Springfield Chamber of Commerce
Missouri Petac • UMR • Missouri State University • SPIE

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