



REVOLUTIONIZING THE PLASTICS INDUSTRY WITH ADVANCED LASER MICRO AND NANOSTRUCTURING TECHNOLOGY

What We Do: Utilize laser micro and nanostructuring technology to enhance plastics by modifying surface microstructure.

Our Edge: Efficient processing of complex 3D parts and metallic moulds for injection moulding enables mass production of functionalized polymeric components.

Key Applications and Benefits

Automotive & Aerospace

- Improve plastic-to-plastic and plastic-to-metal bonding
- Enhance adhesion for coatings
- Enables production of lightweight composite materials and plastic-metal hybrid components

Medical Devices and Equipment:

- Generate antibacterial surfaces on plastic medical tools
- Enables improved prosthetic integration
- Enhance biocompatibility and guides cell growth

Packaging Industry:

- Create unique textures and patterns on plastic packaging
- Enhance seal strength on plastic films and containers
- Incorporate anti-counterfeit features into packaging
- Enables anti-bacterial packaging

Food and Beverage Industry:

- Improve food safety with micro and nanostructured surfaces
- Improve usability with enhanced grip on plastic utensils
- Boost aesthetic appeal with laser-etched branding or decorative patterns on reusable plastic containers

Adhesion Details

- ✓ **Paint durability**
Increase resistance to abrasion, scratching, and corrosion with laser-structured surfaces
- ✓ **Surface bonding**
Achieve optimal adhesion between different materials for enhanced durability and strength
- ✓ **Coatings and composite materials**
Improve interactions between coatings and the

Areas of Application



AEROSPACE



AUTOMOTIVE



TOOLING



POWER AND ENERGY



FLAT PANEL DISPLAY



FOOD AND PHARMACEUTICAL



BIOMEDICAL

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