



TEXTULASER

Sublimating materials with lasers while preserving the properties of the substrate

Our experts are using precision short pulse lasers to sublimate materials while preserving the properties of the substrate. The laser heats the material in a carefully controlled manner to create colours from oxide generation or by creating forms that allow the light to play on the surface.

Carnot MICA Institute

Scientific / technological breakthrough

IREPA LASER's expertise ranges from the infinitely small to the submicron scale. The laser's precision and finesse can confer new properties on the material without changing its visual appearance.

For example, it can render the material ultra-hydrophobic, just like lotus leaves on which water runs off. The laser possesses the carefully-guarded formula of darkest black right in the heart of glinting metal by machining unique surface-relief patterns that will trap the light forever. Imagination is the only real limit to laser texturing! Once the material has been micro-machined with precision and perfection, it offers all manner of qualities and effects: ranges of colours, iridescent or polished effect, textures, incorporating precious materials, etc. For creators, the possibilities are infinite.



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Competitive advantage for the economic stakeholders

Our experts are using nanosecond and femtosecond short pulse lasers to ensure precision marking while preserving the properties of the substrate.

Rather than being melted, the material is sublimated. The quantity of energy deployed makes it possible to go from a solid state to a gaseous state – without passing through the liquid state – in a very short time, and to obtain a quasi-athermal interaction. From fundamental knowledge of the material to exceptional creations for the fashion and luxury goods industries, the magic unfolds in carefully controlled phases. The materials are selected and tested. The desired design effect and imperatives begin to take shape. And then the configured laser dances across the material, leaving its unique, precise and creative imprint.



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