



Engineered Functional Surfaces by Laser Micro Processing

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Abstract:

Laser Micro Processing has been considered as promising technique to enhance surface performance of materials or components in various applications including aerospace manufacturing and biomedical devices. This talk will present recent work of laser surface techniques including cleaning, polishing, and texturing on various substrates in our group. How the surfaces could be manipulated at various scales to obtain specific properties will also be elaborated on.

Biography:

Guan Yingchun CEng (TWI) is a Full Professor of material processing who is director of multiscale laser manufacturing center at Beihang University. She has made several contributions in areas of laser material processing over the last dozen years, and her work has affected precision engineering and surface technology.

Publication of speakers:

- Laser polishing of additive manufactured Ti alloys
- Effect of laser surface melting on corrosion behavior of AZ91D Mg alloy in simulated-modified body fluid.



- Study on the solidification microstructure in AZ91D Mg alloy after laser surface melting
- Laser surface cleaning of carbonaceous deposits on diesel engine piston
- Solidification microstructure of AZ91D Mg alloy after laser surface melting

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