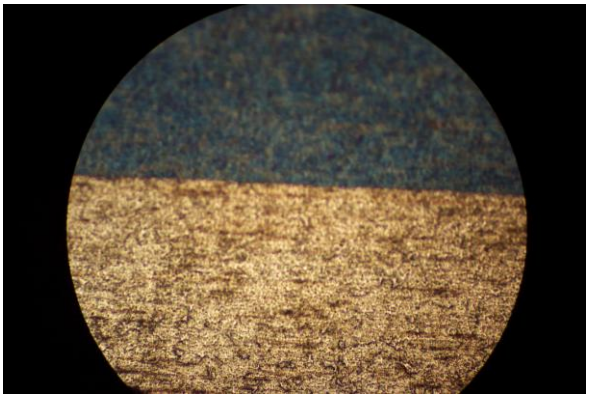
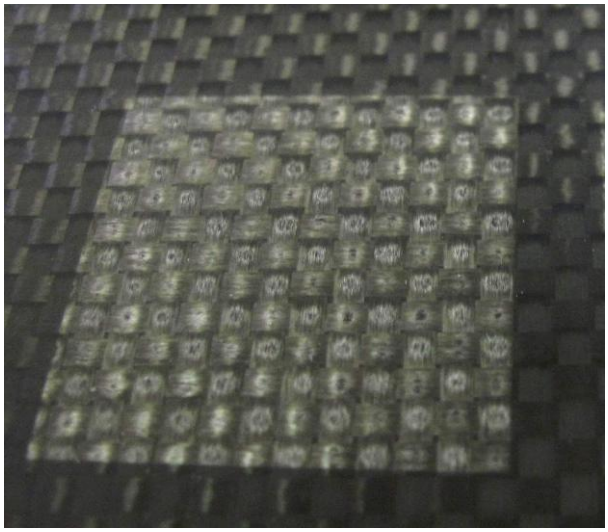
DPSS Lasers

Bringing Light to Applications

Application Note

355 nm DPSS LASER PHOTO ABLATION OF ORGANICS AND OXIDE FROM METALS AND COMPOSITES





Many semiconductor and industrial applications require precise removal of oxides or organic contaminants prior to processing the materials. The removal of the oxide layer can facilitate enhanced bonding or electrical connections. In addition, many of these materials can be damaged by excess heat from IR lasers or physical contact from non-laser based cleaning methods.

Using the Model 3510-30, the oxide layer was selectively removed from Titanium in the top picture. The 30 um, 355 nm beam was scanned at 1000 mm per second, one pass over the material. An area of 2 mm x 180 mm was processed in 30 seconds with no thermal or physical damage to the underling material.

In the lower picture, organics and even the resin, can be removed from carbon fiber a few microns at a time. The 625 sq mm area was cleaned in 3.8 seconds.

Laser Model	Average Power	Rep Rate	Scan Rate
3510-30	1 Watt @ 355 nm	30kHz	3000 mm /sec

2525 Walsh Ave., Santa Clara, CA 95051 Ph 408.988. 4300 Sales@DPSS-Lasers.com
WWW.DPSS-Lasers.Com