Laser-treated polymer surfaces to alter organic crystallization pathways

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Polycaprolactone (PCL) spin-coated on a flat Au surface was treated with Nd:YAG laser. Direct laser-PCL interactions were minimized by employing 532-nm laser, and indirect effects on PCL were induced via laser-Au interactions. Laser power and pulse numbers were modulated to regulate the microstructure of PCL surfaces. PCL structures were characterized using X-ray diffraction and atomic force microscopy. Preliminary results of some organic crystallization on these surfaces are also presented.