

Ultrafast laser processing and functionalization of materials for technological applications			
	Organiser	Institution	Contact
A1.I	Javier Solis	Research Professor Instituto de Óptica de Madrid, CSIC, Madrid Spain	j.solis@io.cfmac.csic.es
	Razvan Stoian	Université Jean MONNET Laboratoire Hubert Curien CNRS UMR 5516 Bat. F, 18 rue Benoit Lauras, 42000 St. Etienne France	razvan.stoian@univ-st-etienne.fr
	Jan Siegel	Senior Researcher Instituto de Óptica de Madrid, CSIC, Madrid Spain	j.siegel@io.cfmac.csic.es
Summary			
<p>The use of ultrashort laser pulses for materials processing is acquiring an increasing importance in different fields like integrated optics, micro-fluidics and precision micro-machining. The recent widespread availability of high power and ultrashort pulsed laser has also made possible multiphoton materials processing, enabling the fabrication of subsurface structures inside functional dielectric materials, laser direct write techniques and true nanoscale materials engineering. The interaction of short pulse (ps and fs) lasers with matter shows unique characteristics in terms of efficient energy deposition, limited heat diffusion effects, and mark resolution. The recent progress in the development of high repetition rate fiber-based ps/fs laser amplifiers with micro-Joule pulse energies has also widened the potential of ultrafast lasers for high throughput industrial processing applications. The symposium is aimed at providing a multidisciplinary forum for discussion of state of the art ultrashort laser pulse-assisted materials processing and functionalization methodologies, as well as fundamental studies on laser-matter interaction mechanisms triggered by ultrashort laser pulses.</p>			