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LASERS4EU

LASERS4EU: SCIENCE AT YOUR SERVICE

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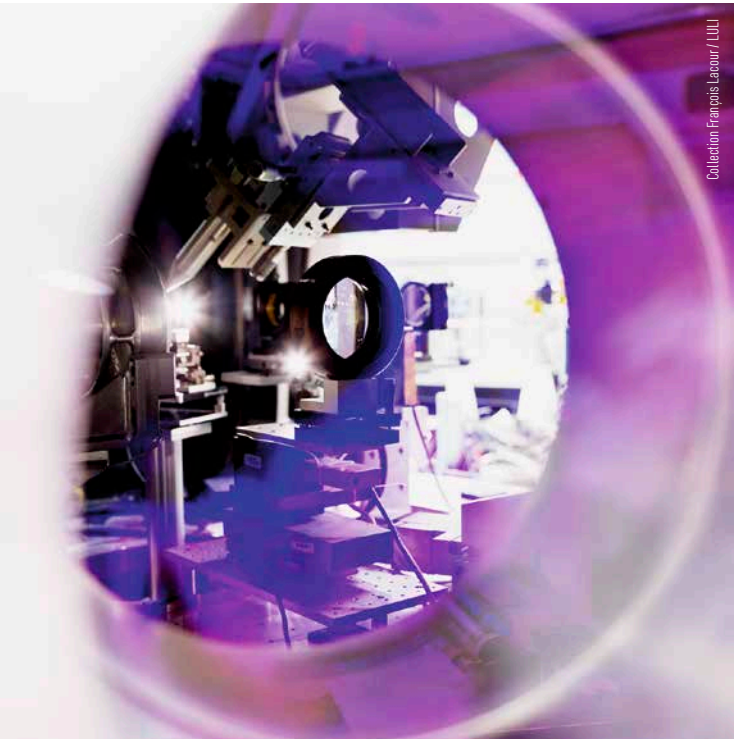


LASERS4EU

Lasers4EU brings together leading laser research institutions from across Europe. It aims to strengthen Europe's key position in laser science, to push the frontiers of laser research and technology, and to foster interdisciplinary collaboration.

CONTACT

Lasers4EU Scientific Coordinator

Sylvie Jacquemot

✉ sylvie.jacquemot@polytechnique.edu

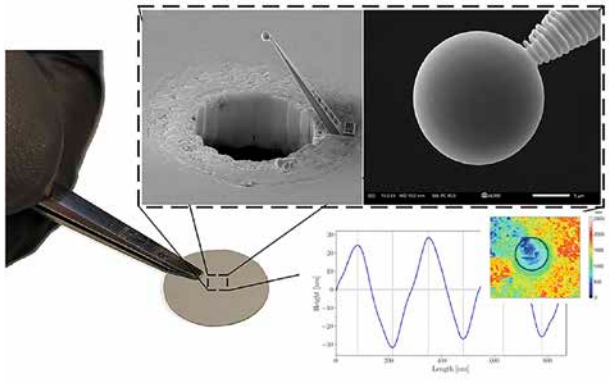
Lasers4EU / Laserlab-Europe Office

✉ info@lasers4.eu

Lasers4EU is co-funded by the EU's HORIZON EUROPE programme under grant agreement number 101131771.

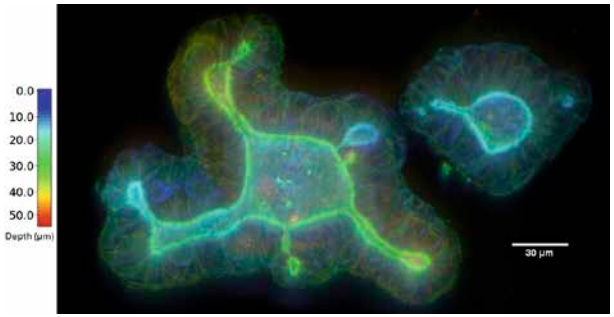
Co-funded by the European Union

MATERIALS SCIENCES



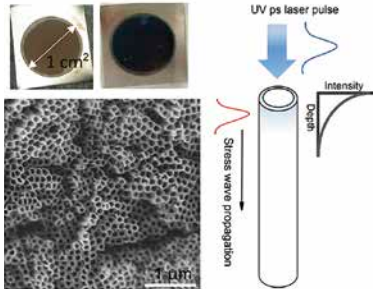
3D micro-device for enhancing lateral resolution in optical microscopy. The device was fabricated using ultrafast laser radiation, which enabled, among other techniques, multi-photon lithography to produce the microsphere. (FORTH)

LIFE SCIENCES



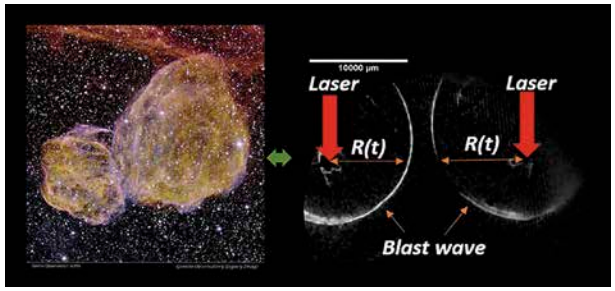
Depth-encoded Maximum Intensity Projection of a colon organoid acquired with oblique light sheet microscopy. (POLIMI)

CHEMISTRY



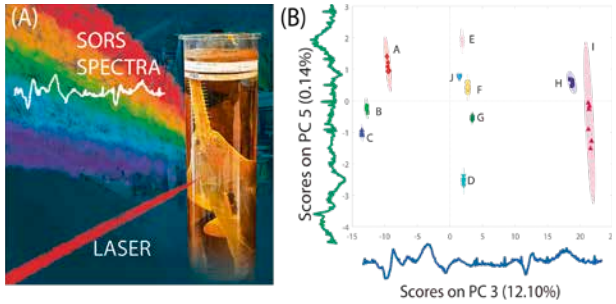
Left: Initial and laser-annealed TNT sample (1 cm²) and its magnified view, demonstrating the absence of a sign of melting or deformation. Right: a schematic of the laser-induced solid phase of crystallisation. (HiLASE)

SPACE



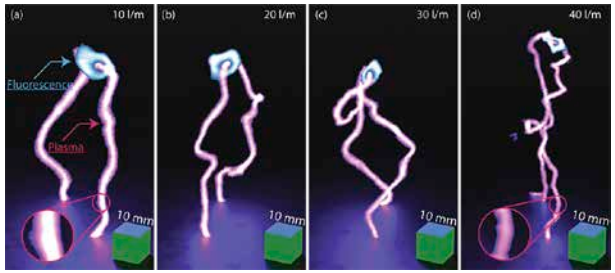
The collision of two interacting Taylor Sedov blast waves. Left: two supernova remnants located in Large Magellanica Cloud. Right: Schlieren images of analogue experiment. (LULI)

CULTURAL HERITAGE & HISTORICAL PRESERVATION



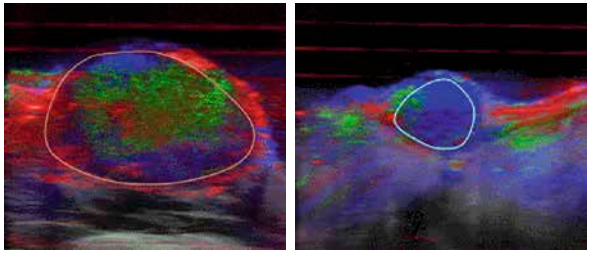
Configuration of Spatially Offset Raman Spectroscopy (SORS) measurements used to non-invasively identify preservation fluids through glass jars, enabling rapid *in-situ* analysis without opening specimen containers. (CLF)

ENERGY & ENVIRONMENTAL SCIENCES



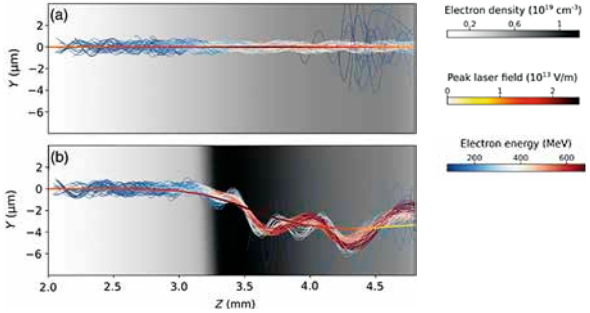
Imaging of laser-induced fluorescence of hydroxyl radicals combined with 3-D plasma emission tomography in gliding arcs, a type of non-thermal plasma with significant potential in environmental and energy applications. (LLC)

MEDICINE & HEALTH



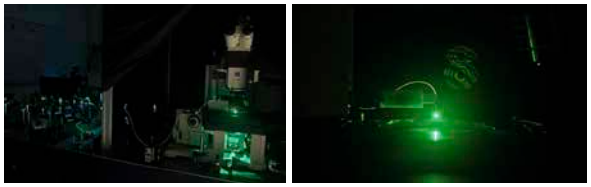
Photoacoustic tomography signals showing redaporfin levels in CT26 tumours (left) and 4T1 tumours (right). (CLL)

PHYSICS



Particle-in-cell simulations showing the laser propagation (thick curve) and the particle trajectories (thin curves) in (z,y) plane. The orbits are colored according to the laser peak field and the particle energy, respectively. Gray levels represent plasma density. (a) Up-ramp gradient. (b) Up-ramp gradient and transverse density gradient. (LOA)

LASER OPTICS & IMAGING TECHNIQUES



Scanning near-field optical microscope (SNOM) that allows sub-diffraction limited spatial resolution in the visible and near IR spectral range. (LENS)

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