

Featuring work from Ultrafast Laser Micromachining of Photonic and Optofluidic Devices Research Group (FASTgroup) headed by Dr Roberto Osellame, Institute for Photonics and Nanotechnologies – Italian National Research Council, Italy.

Structured-light-sheet imaging in an integrated optofluidic platform

Measurement throughput and images spatial information content are often counterposed parameters in microscopy, but equally important for targeting heterogeneity investigation of biological samples. An innovative optofluidic platform, encompassing optical circuits and microfluidic components, allows for the first time automatic and 3D imaging of single cells overcoming the diffraction limit by dual-color structured light sheet imaging. The integrated approach enables reaching a new balance between throughput and images resolution and guarantees both performance stability and device ease of use, milestones in the field of advanced microscopy.



