

First results by nanosecond laser irradiation of different NANOSTRUCTURED targets

Wednesday, 7 September 2016 10:45 (20 minutes)

An experimental campaign aiming to investigate the effects of innovative nanostructured targets based on Ag, Ni, Fe, Co nanowires on laser energy absorption in the ns time domain has been carried out at the LENS (Laser Energy for Nuclear Science) laboratory of INFNLNS, Catania. Nanowires structures are tuned to increase the light absorption in the visible and infrared range due to plasmonic excitation driven by the incoming photons. Different techniques permit to monitor the plasma and to determine its reproducibility. Targets were then irradiated by Nd:YAG 2J, 6 ns infrared laser ($\lambda=1064$ nm) at different pumping energies. Some preliminary results will be illustrated.

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Session Classification: Poster Session