

**Marie Curie Initial Training
Networks (ITN)
Call: FP7-PEOPLE-2011-ITN**

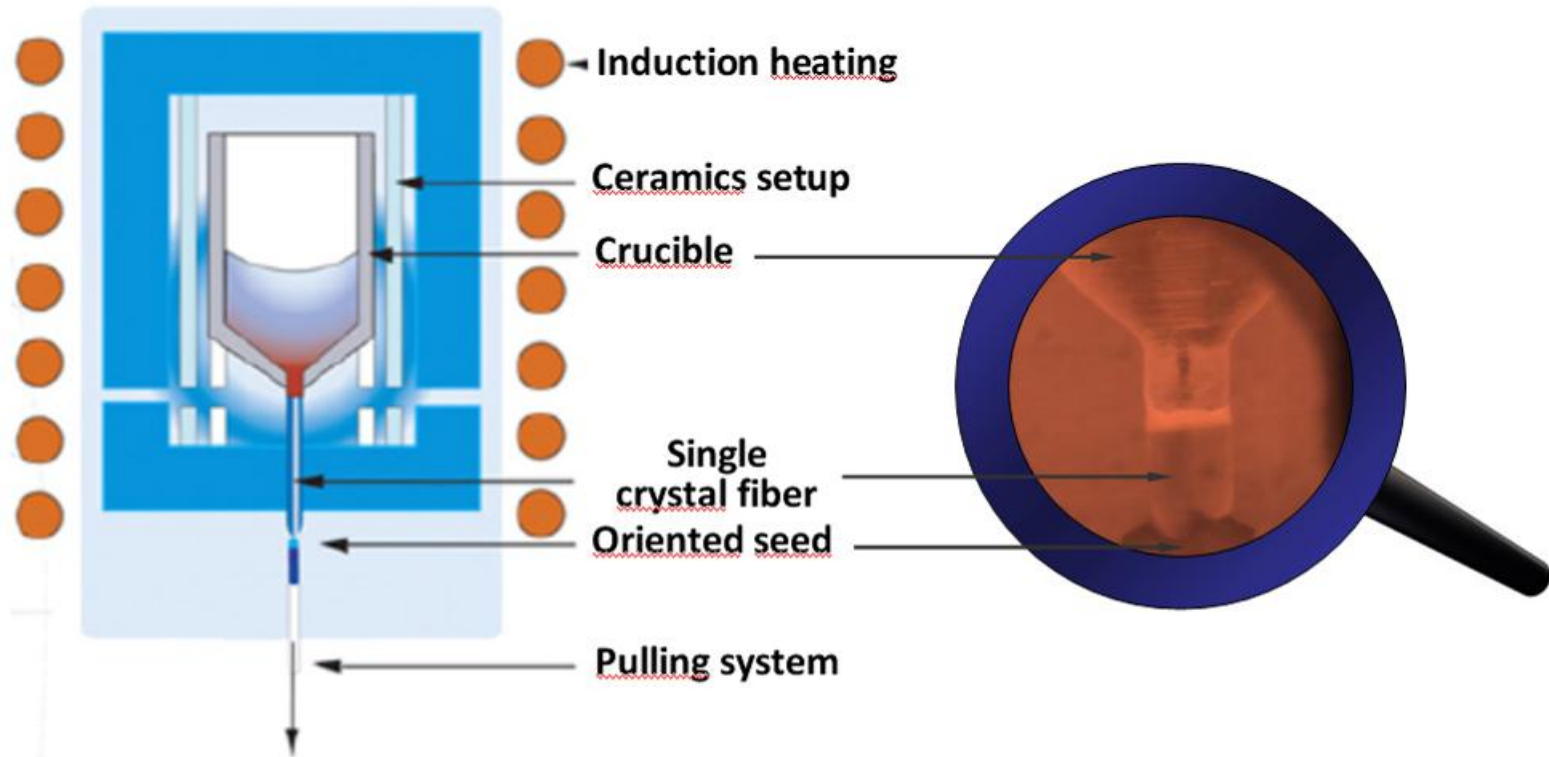
**Fibercryst contribution
WP2**



Thanks to the Micro-pulling down technology, Fibercryst can produce several crystals fibers with diameter ranging from 0.3 mm to 3mm ; LuAG(Ce), YAG(Ce), BGO, LYSO(Ce).

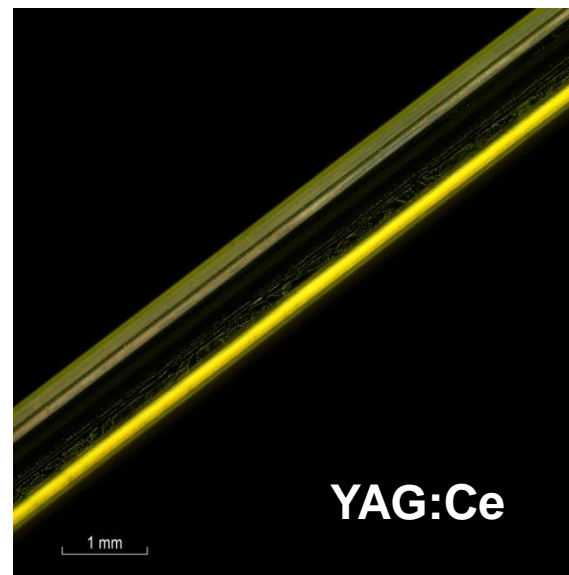
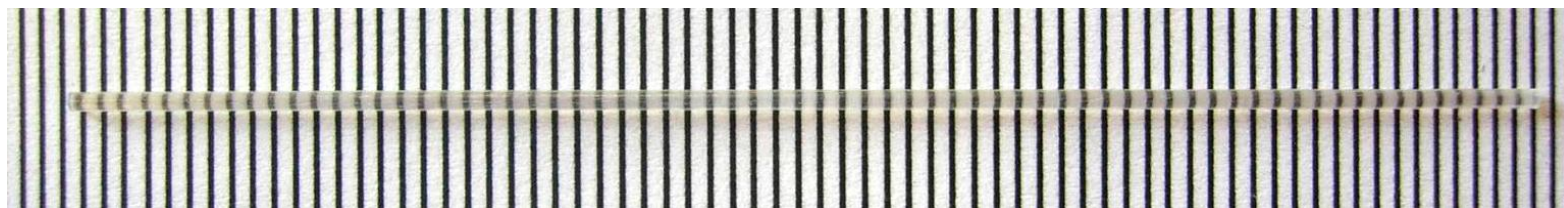


Micro-pulling down technology

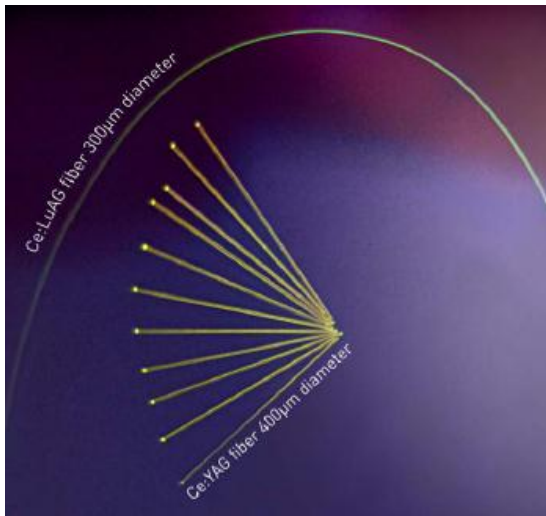


Fibers examples

LYSO:Ce



LuAG : Ce



Several diameters from 0.3mm to 2mm
Large bundling

Application

**AWE Tungsten grid
Flash X-ray radiography 6 MeV**

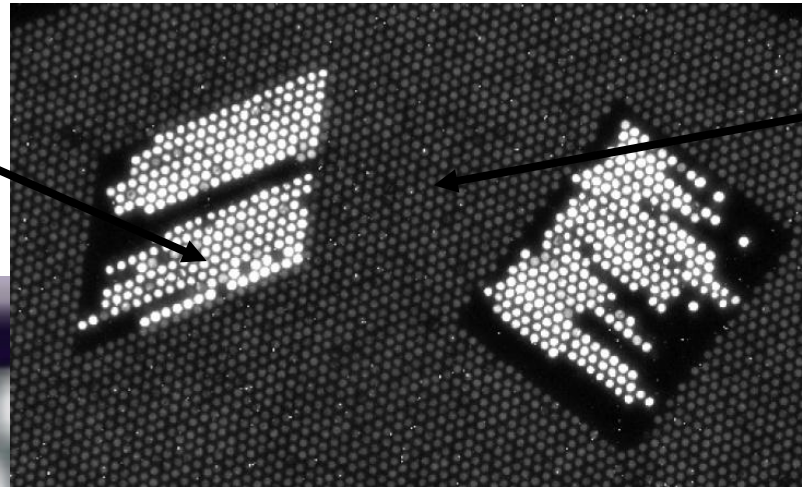
LuAG : Ce fibers

Fibers diameter 350 μm

Plastic fibers

LuAG:Ce Fibers

Organic Fibers



Courtesy of AWE



IN

PICOSEC

We propose to use the ***Micro-Pulling-Down Technique (MPD)*** to grow **20mm long scintillating fibers** with a diameter of 800 μ m.

This allows us to build a highly granular detector head for a PET probe.

ESR will:

understand and improve light production in scintillator;

improve the crystal properties ;

correlating growth parameters and scintillation characterizations.

This novel scintillating material is of prime importance for the project to potentially break the 'time barrier' of ~ 200 ps for the envisaged high precision photon detectors in TOF-PET and HEP.



THANK YOU

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