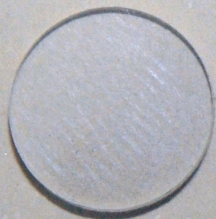




Ciemat

Ciemat





FUSION IN EUROPE



*Ceramics:*  
Ceramics

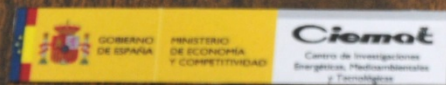
from  
**ANCIENT  
POTTERY**  
to  
**FUTURE**

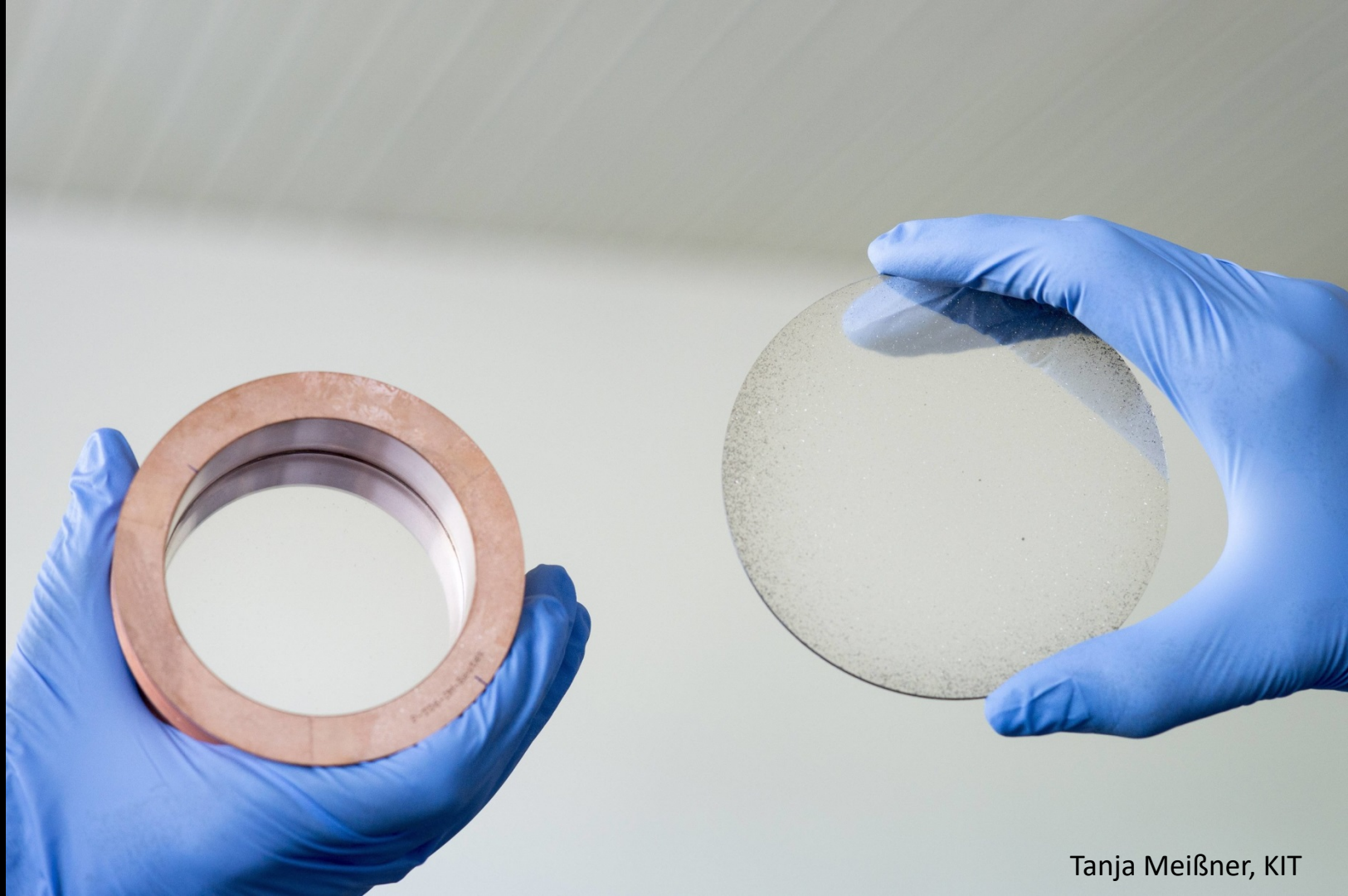
The choice of materials plays a key role in its development. Several ceramics have been selected as candidate materials because their electrical, dielectric, magnetic, optical, mechanical and thermal properties make them suitable for various applications.

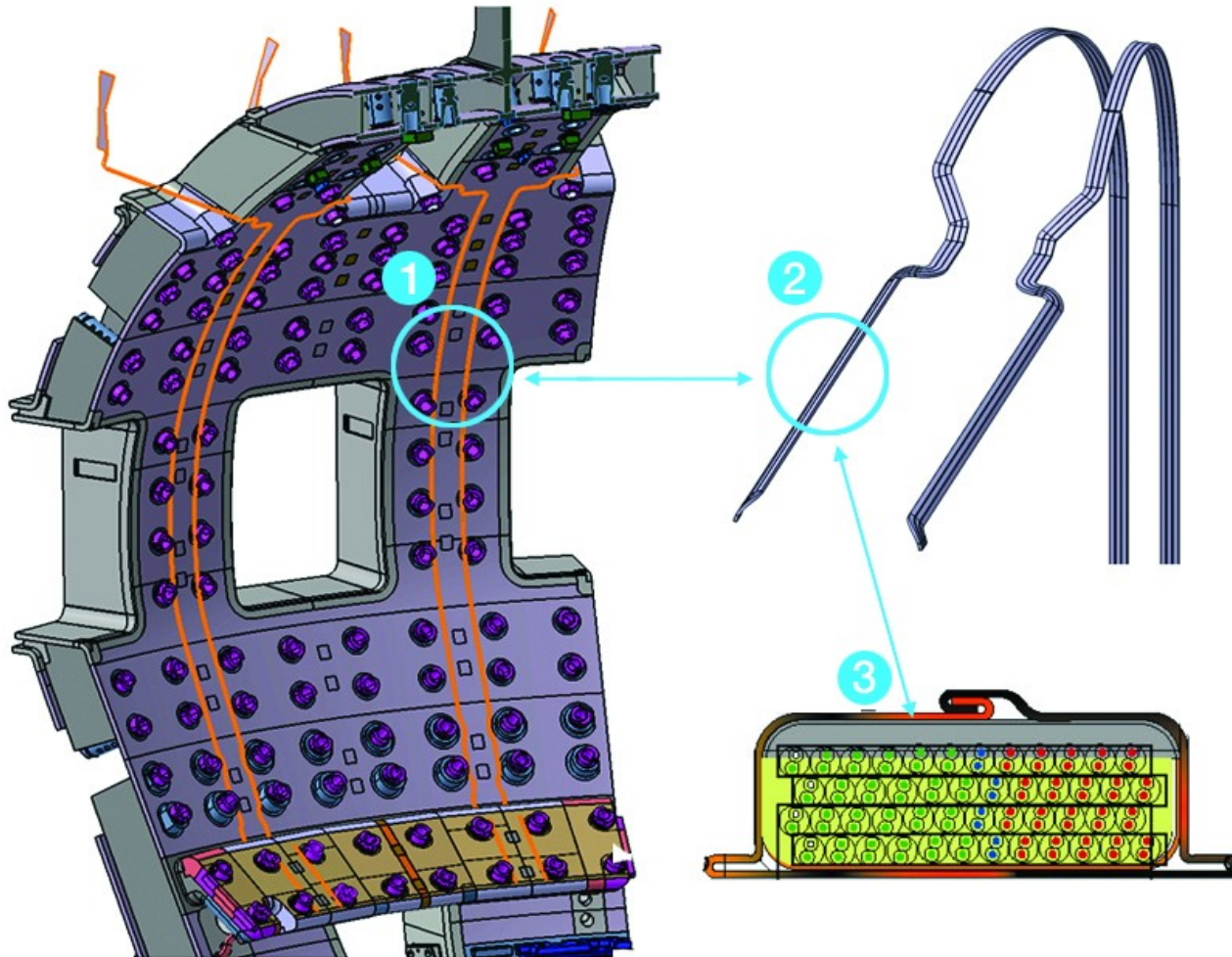
Due to its excellent dielectric properties along a broad range of frequencies, aluminium-oxide (Al<sub>2</sub>O<sub>3</sub>) has been proposed as an insulator for diagnostics, for the Neutral Beam Injector high voltage source and possibly for the Ion Cyclotron Resonance Heating and Lower Hybrid Heating systems. Also, due to its optical and mechanical properties, it has been proposed as a candidate material for optical windows, along with silica components. Diamond is also considered to be a ceramic.

In DEMO, these ceramic materials will be operated under harsh conditions. They will, in particular, be subjected to considerable levels of neutron irradiation. Their optimum properties must be tested under these conditions.

**EUROPEAN WORK IN PROGRESS**  
Scientists at the EUROfusion Joint Undertaking (JU) are currently testing candidate materials. This work is part of the JU Package 10, which is currently being developed.





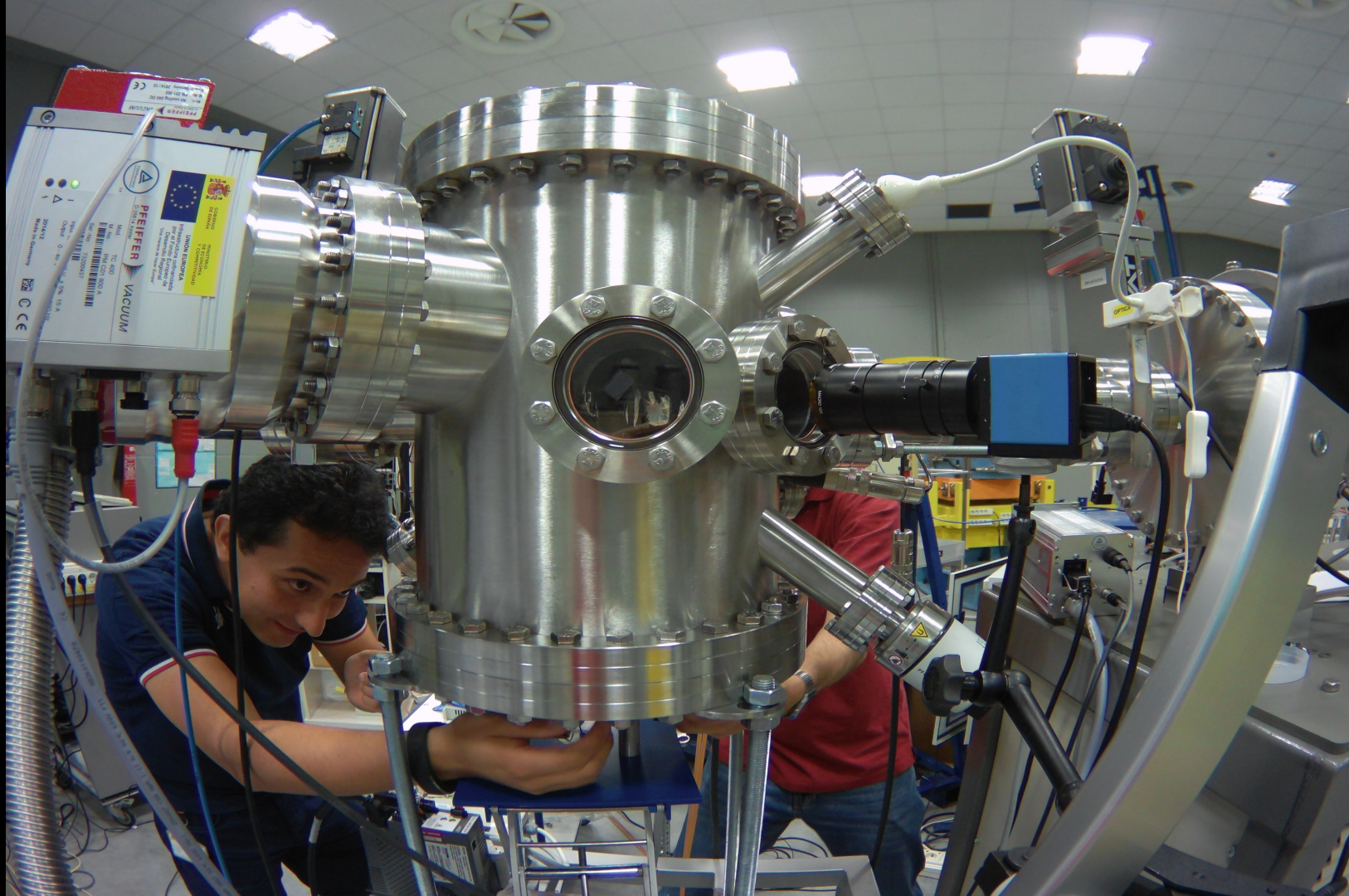


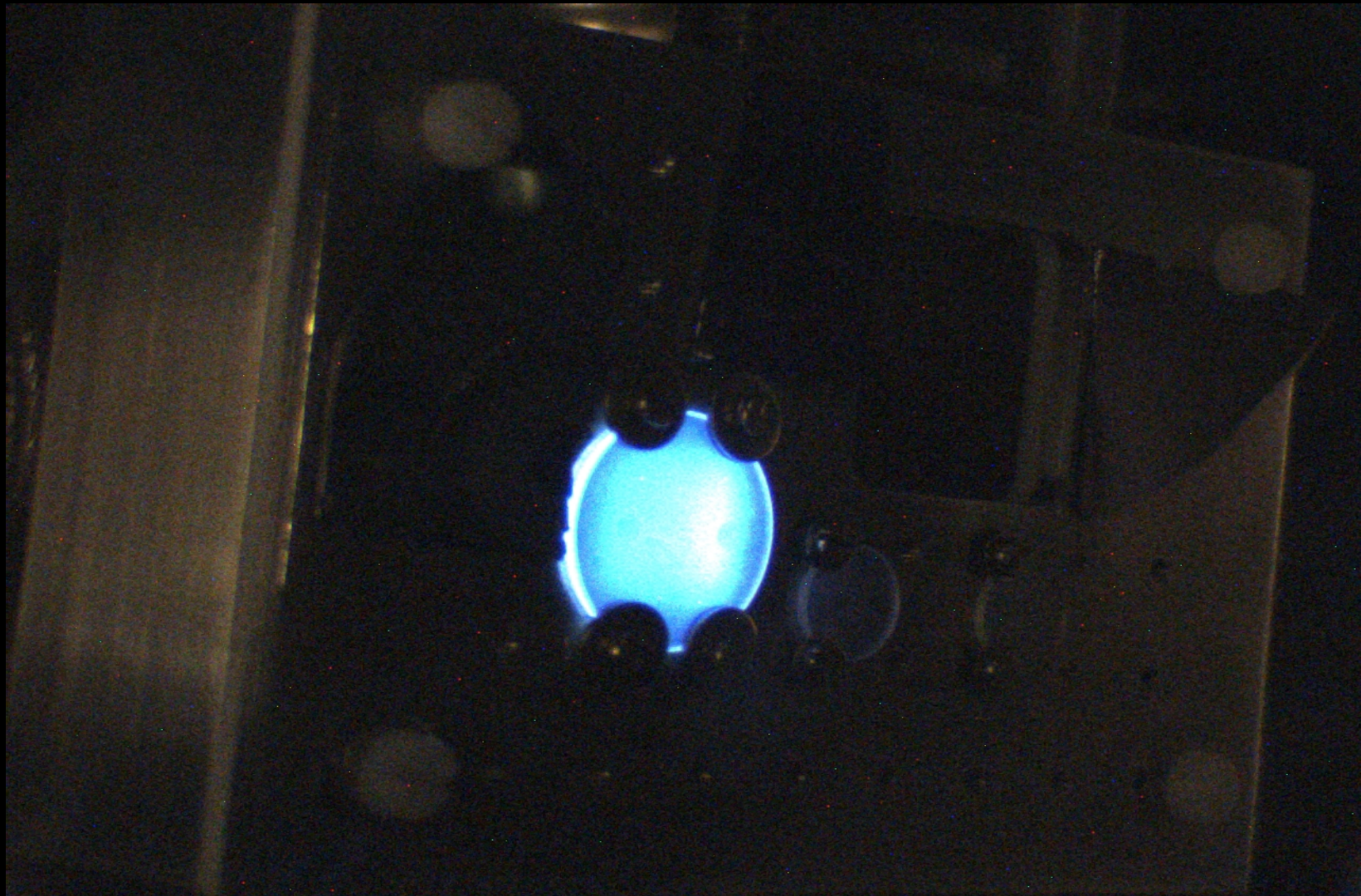
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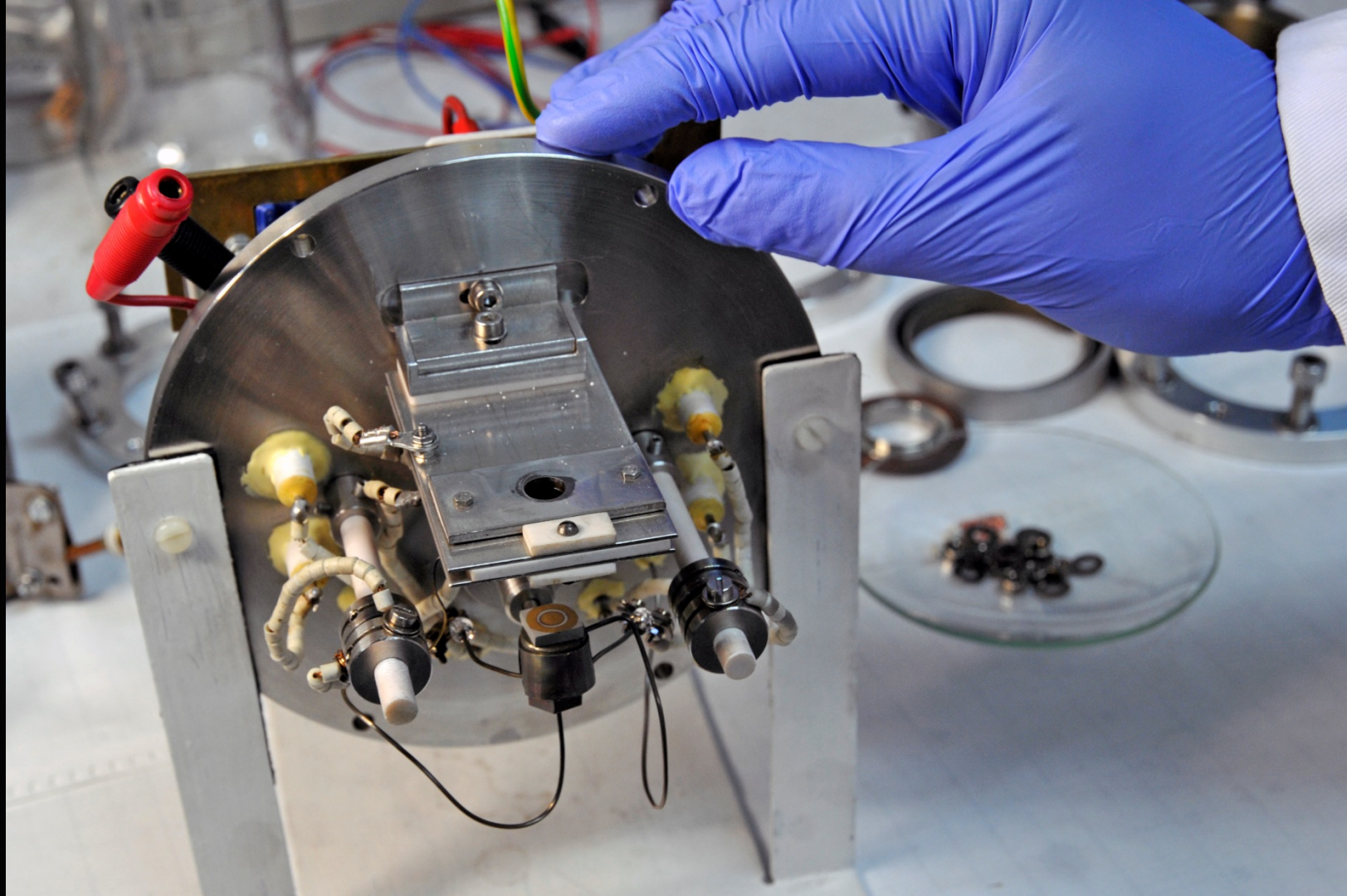














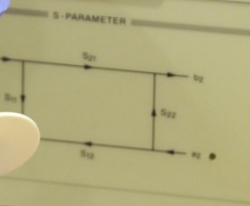
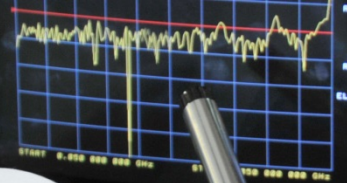
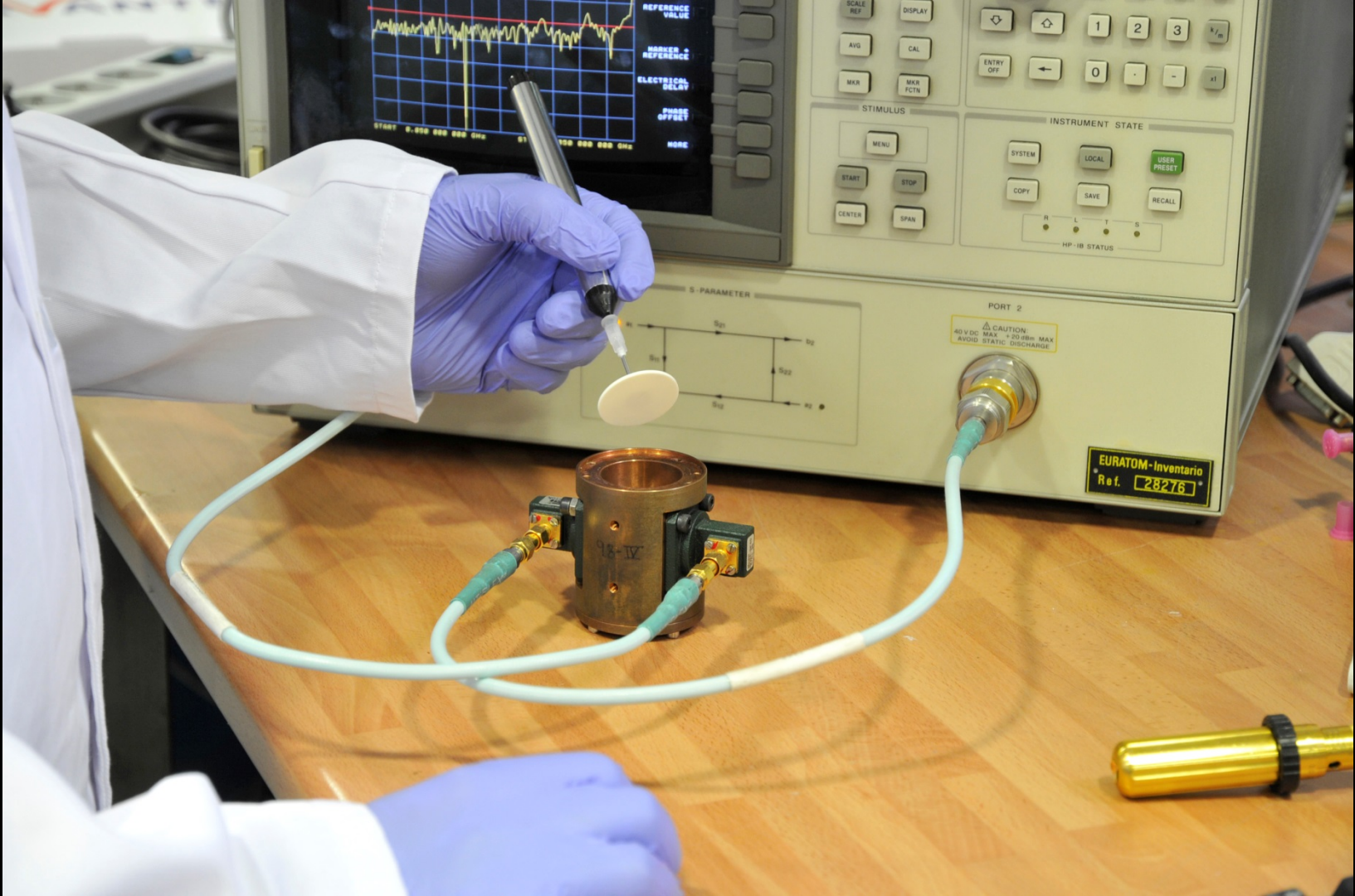
UNIDAD DE IRRADIACION  
NAYACI

No swimming

50  
40  
30  
0







PORT 2  
CAUTION:  
40 V DC MAX +20 dBm MAX  
AVOID STATIC DISCHARGE

EURATOM-Inventario  
Ref. 28276





# SPINEL CRYSTRAN PRE AND POST IRRADIATED

