

Technical Meeting on Nuclear Forensics: From National Foundations to Global Impact

Contribution ID: 12

Type: Oral

The oxygen isotopes composition of uranium oxides in the nuclear fuel cycle as a new signature for process attribution

Dear All,

Our work aims to expand the traditional nuclear forensics characterization techniques by measuring the oxygen isotopic composition of U_3O_8 to explore new isotope signatures for attribution. We investigated the effect of different syntheses conditions such as calcination time, temperature, and cooling rates, on the final oxygen isotopic composition of U_3O_8 , produced from Uranium metal, Uranyl Nitrate Hydrate, and Uranium Trioxide as starting materials.

It will be our honor to present this work at this technical meeting on Nuclear Forensics.

Regards,

Maor Assulin

Author: ASSULIN, Maor

Co-authors: Dr ELISH, Eyal (NRCN); Dr YAM, Ruth (WIS); Prof. SHEMESH, Aldo (WIS)

Presenter: ASSULIN, Maor

Session Classification: Oral Session #7 –Signature Research on Isotopic Signatures and Age-Dating

Track Classification: 1. Nuclear Forensics Capability Building: Initiation and Sustainability; 1.2 New Technologies, R&D and Signature Research in Nuclear Forensics