

Budapest Neutron Centre*

a neutron star in research and innovation

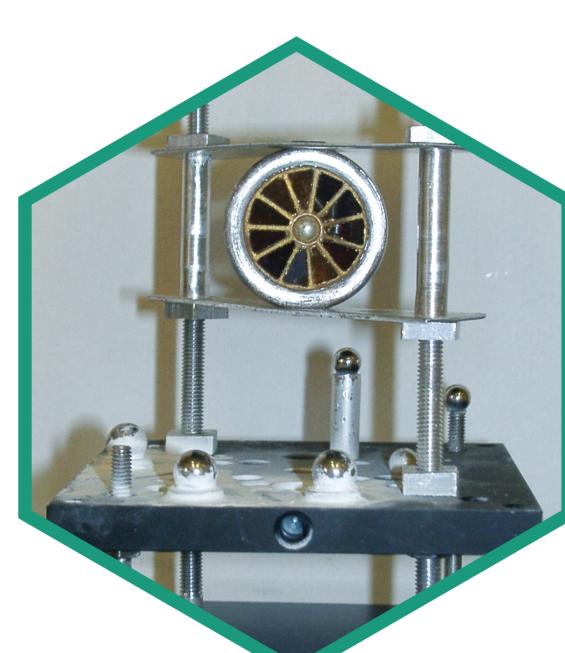
the largest research infrastructure in Hungary, the Budapest Research Reactor and its 14 beam lines. The Budapest Research Reactor has been utilized as a neutron source for scientific investigations and a complex source of irradiations for materials testing and modification, diagnostics in nanotechnologies, engineering and healthcare. It serves the society by producing radioisotopes for the industry and medicine, diagnosis and

* Consortium of the Centre for Energy Research and Wigner Research Centre for Physics of the Hungarian Academy of Sciences

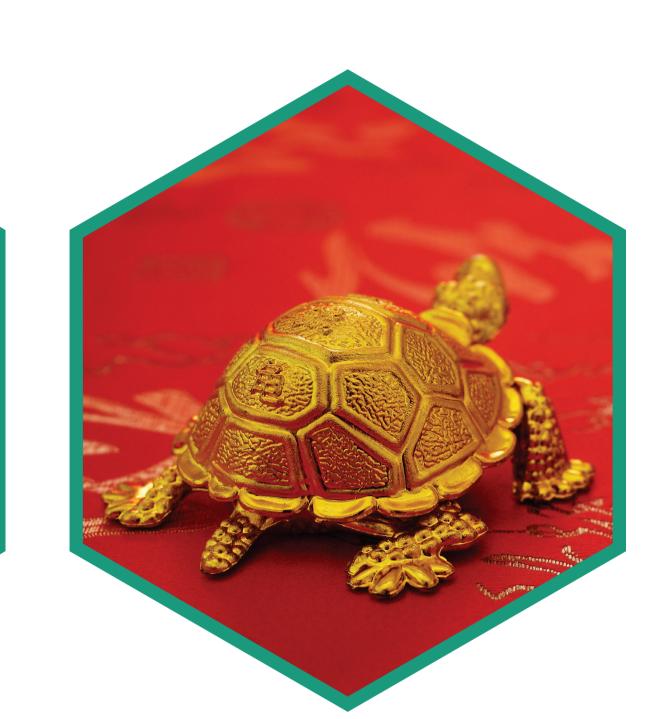
differentiate **O** easily between isotopes SCATTER STRONGLY FROM LIGHT NUCLEI

strong magnetic interactions







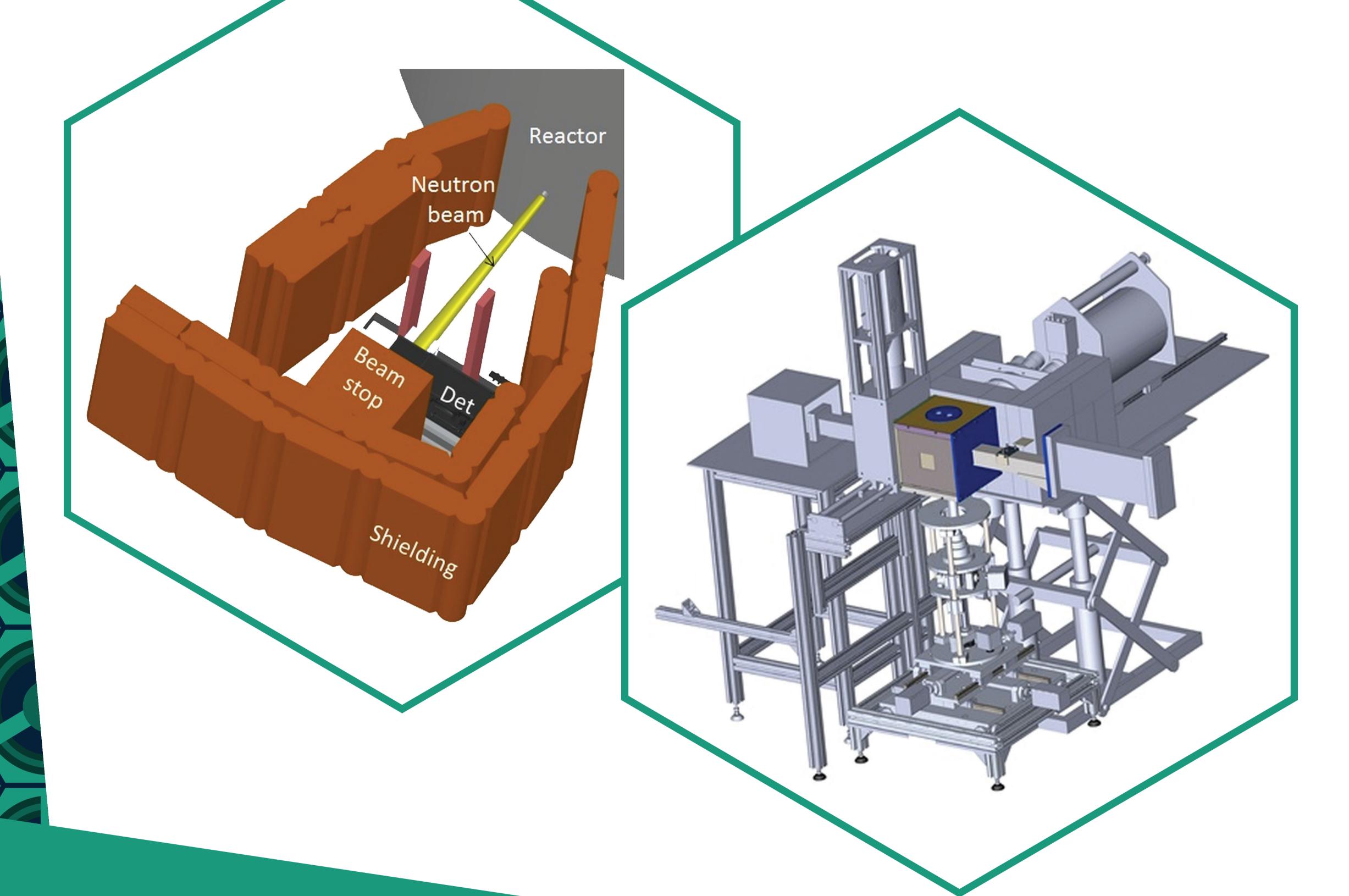


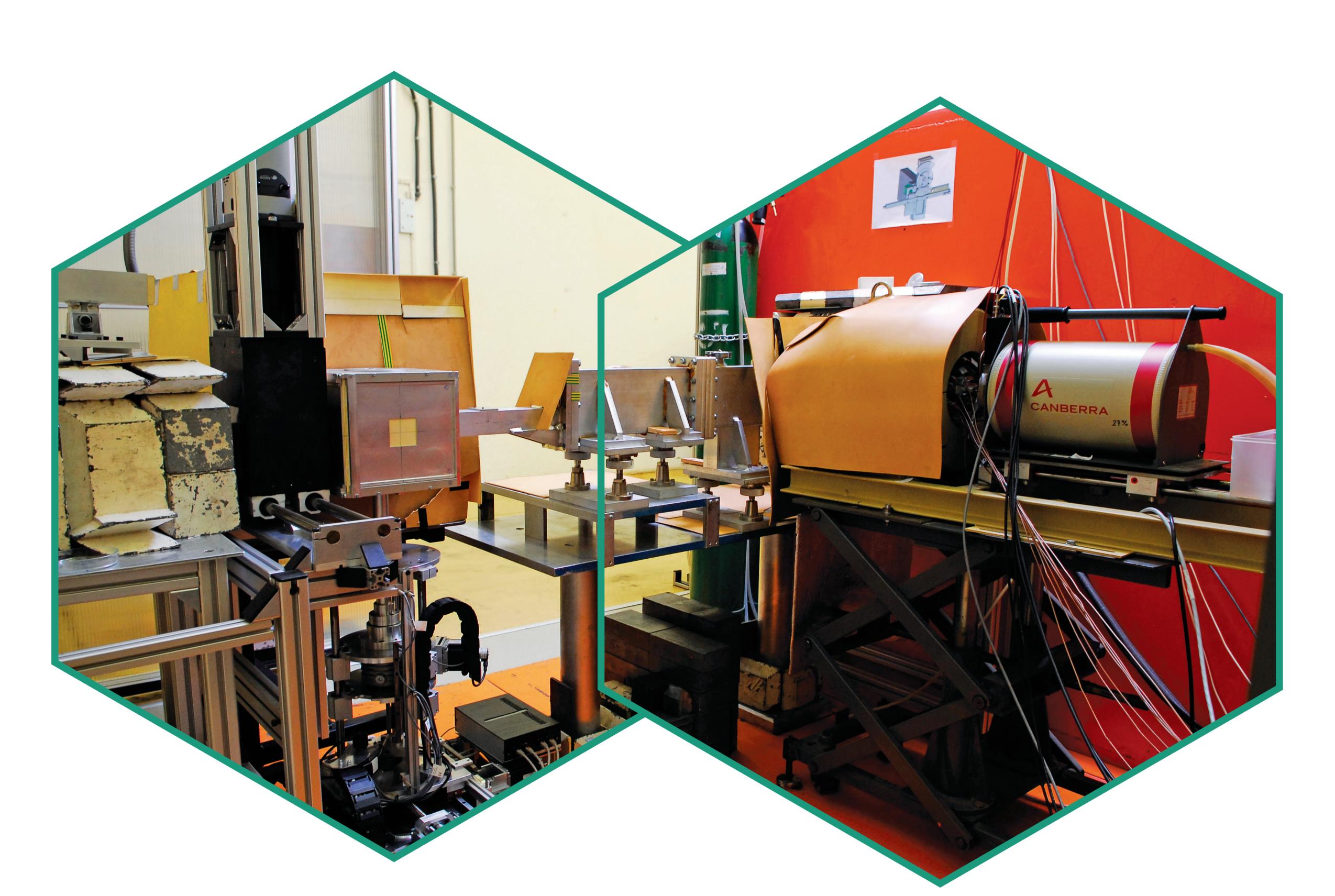


NEUTRON IMAGING

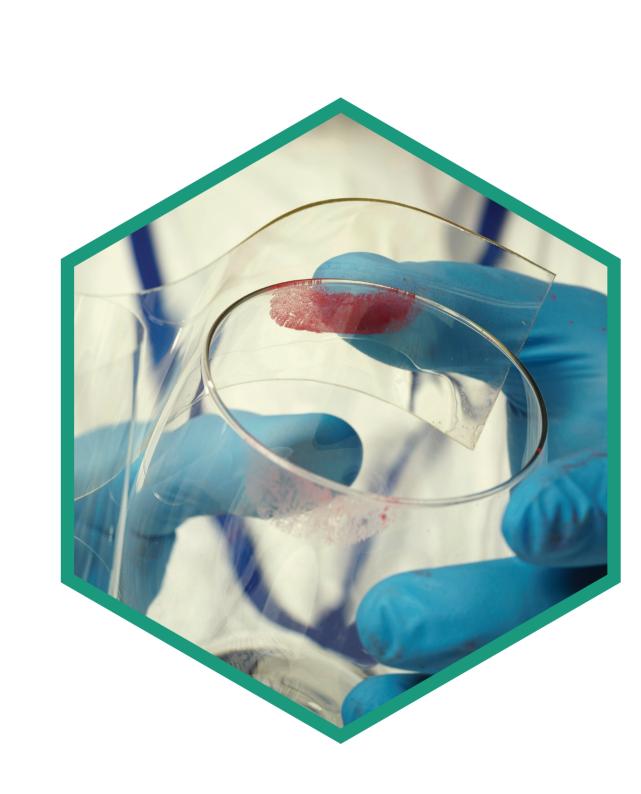
Neutron radiography and tomography non-destructively visualize the internal structure of objects in 2D and 3D to observe

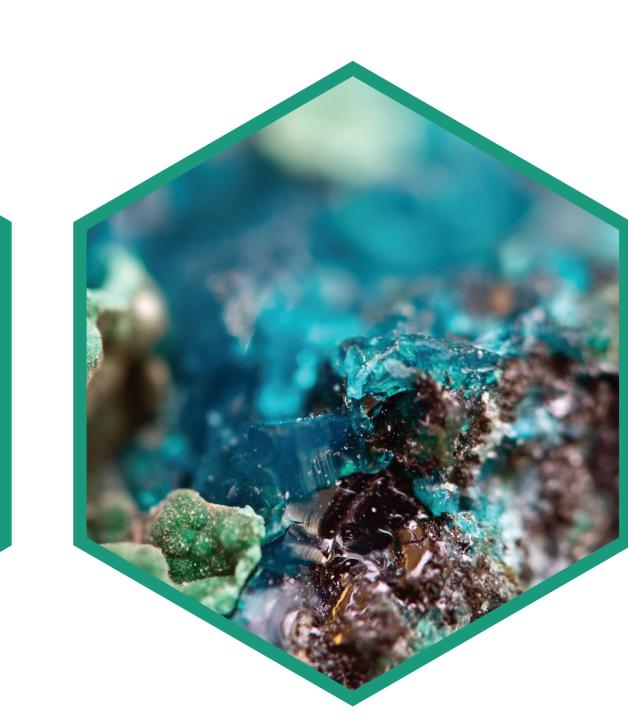
- valuable cultural heritage object details, paintings, figurines, arms, pottery, metallic and wooden artefacts
 In combination with X-ray imaging helps discriminating between similar materials.
 It may assist industrial quality assurance, product development, reverse engineering.
 BNC Instruments: RAD, NORMA





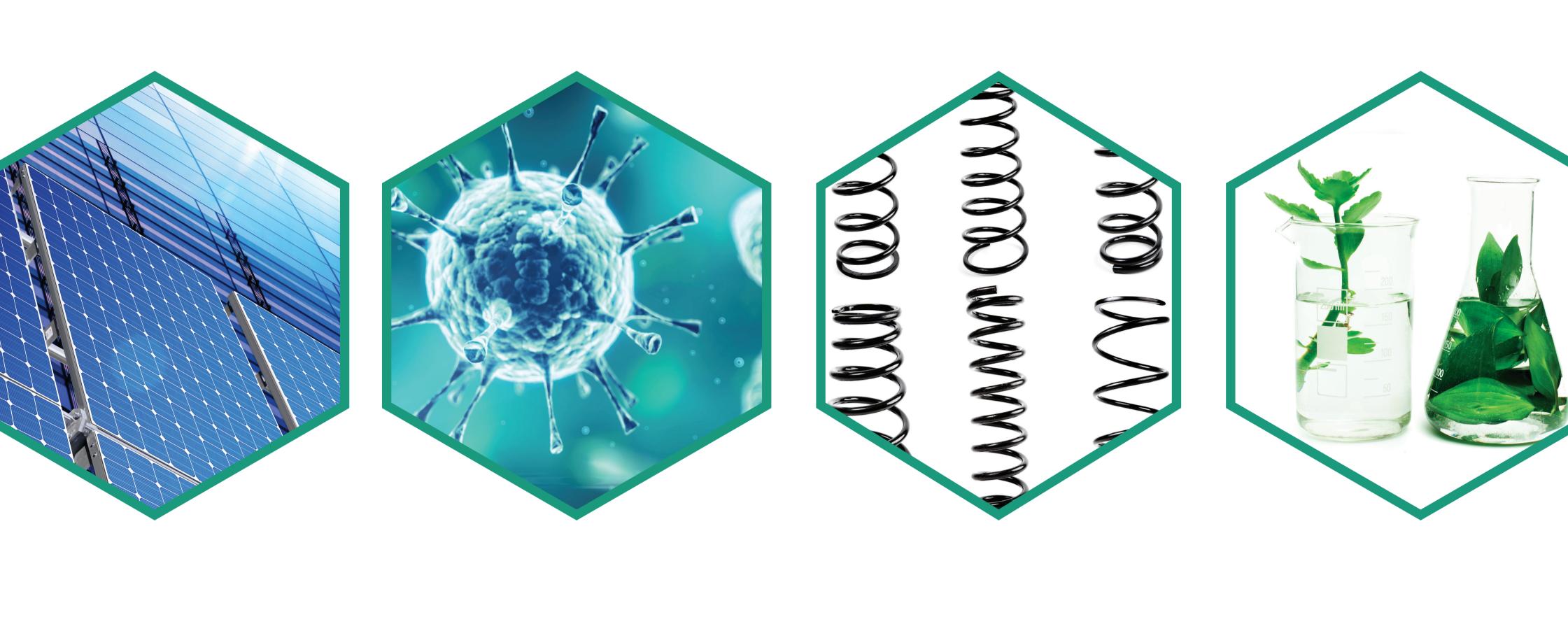
NEUTRON ACTIVATION FOR RADIOISOTOPE PRODUCTION AND ANALYSIS











NEUTRON SCATTERING STUDIES ON THE ATOMIC,

NANO- AND THE MICRO SCALE MATERIAL SCIENCE: crystal structure and internal stress and deformation analysis in metals, alloys,

FOOD SCIENCE: structure-function relationships in food components, lipids, proteins, polysaccharides BNC instruments: SANS, PSD, TOF-ND, MTEST, GINA

