The European Commission's science and knowledge service

Joint Research Centre

European Commission

OPEN ACCESS
to JRC Research Infrastructures

Fabio Taucer, Deputy Head of Unit, A.5 Scientific Development

French Delegation meeting with JRC

Brussels & Petten, 3 September 2019

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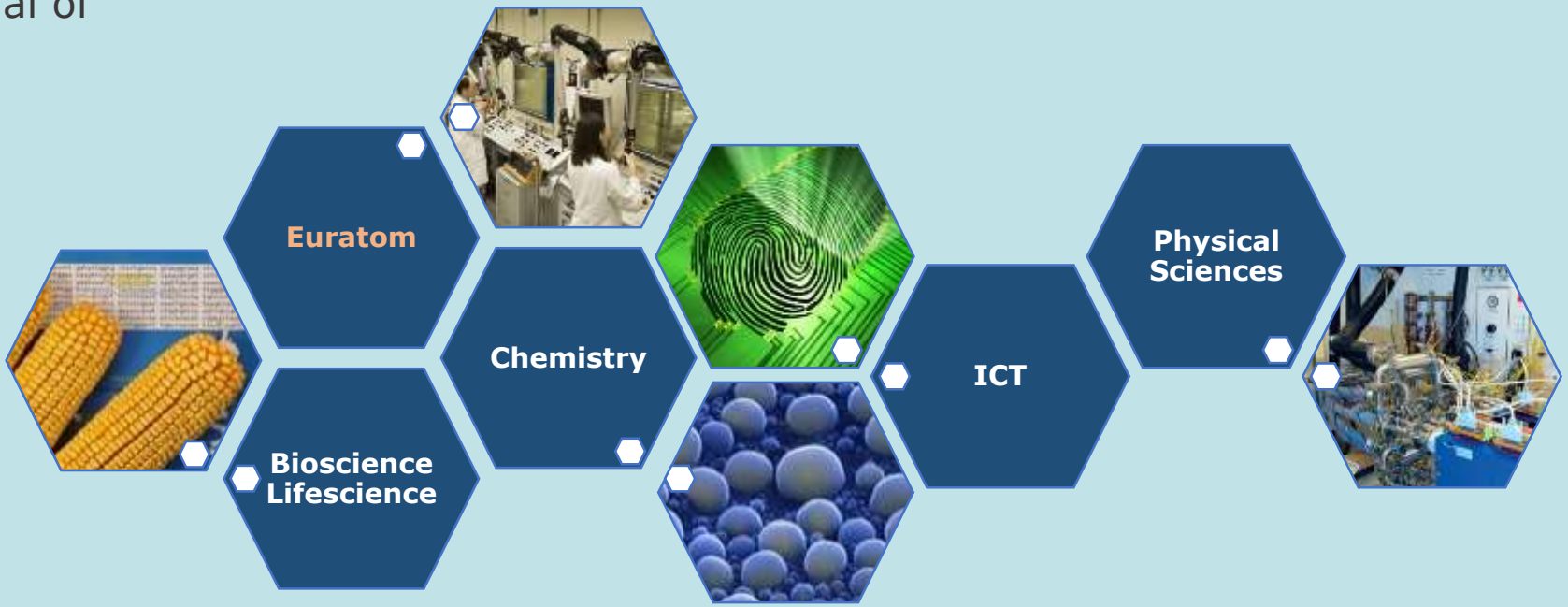
Landscape of JRC Research Infrastructures

JRC hosts **38 physical research infrastructures** with a potential of opening to external users

(out of a total of 58 facilities)



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Rationale

Opening up access to JRC Research Infrastructures is part of the **JRC Strategy 2030**

Benefits to users and the ERA

- **Fair** and **transparent** method for allocating access
- Make JRC RIs available to external users in view of the **limited resources** in Europe
- Provide **capacity building to Enlargement and Integration countries**
- Bridge the **gap between science and Industry**
- **Dissemination** of knowledge, education and training, foster collaboration in Europe

Benefits to the JRC

- Expand JRC **networking** capabilities
- Enter into **new key areas** of research
- Maintain JRC **scientific excellence**
- Raise the **value and visibility** of JRC RIs

Framework for Access

Based on the **Charter of Access to RIs of DG RTD**
Principles and guidelines when defining Access policies for RIs

Access Modes

- **Relevance-driven**
  - Peer-review selection following a call for proposals: Scientific implementation, collaboration and access to new users, strategic relevance to the JRC, strategic importance for Europe
  - Mainly targeted to academia and research institutions, as well as to **SMEs**
  - Users charged the additional costs associated (18% overheads); nuclear RIs free of charge
  - Open dissemination after an 18 month embargo period
- **Market-driven**
  - Selection by the JRC
  - Mainly targeted to industry
  - Users charged the full costs
  - Data not disseminated via open schemes

Open to

✓ EU Member States
✓ Countries associated to Horizon 2020

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Dedicated portal at JRC Science Hub

- **All supporting documents**: Framework and related annexes (template for proposals, agreement documents, IP rules, etc.)
- **Eligibility Criteria**
- **Call for proposals per Research Infrastructure**
  - ✓ Estimated total number of Access Units allocated to the call
  - ✓ Average number of Access Units per project
  - ✓ Estimated additional costs per Access Unit
  - ✓ Priority topics of the Research Infrastructure
- **Selected Projects**
- **User Access Report** / link to databases (after embargo period)

https://ec.europa.eu/jrc/en/research-facility/open-access

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Facilities opening up access

FACILITIES NOW OPENING ACCESS

European Laboratory for Structural Assessment (ELSA) (Ispra, IT)

Reaction Wall

HopLab

Consumer Products Safety (Ispra, IT)

Nanobiotechnology Laboratory

Energy Storage Facilities (Petten, NL)

BESTEST – Battery Energy Storage Testing for Safe Electric Transport

FCTEST – Fuel Cells and Electrolyser Testing facilities

GASTEF – Gas Tank Testing Facility

European research infrastructure for nuclear reaction, radioactivity, radiation and technology studies in science and applications (EUFRAT) (Geel, BE)

GELINA – Neutron time-of-flight facility for high-resolution neutron measurements

HADES – Underground laboratory for ultra-low level gamma-ray spectrometry

MONNET – Tandem accelerator based fast neutron source

RADMET – Radionuclide Metrology laboratories

Actinide User Laboratory (ActUsLab) (Karlsruhe, DE)

PAMEC – Properties of Actinide Materials under Extreme Conditions

FMR – Fuels and Materials Research

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Facilities opening up access

FACILITIES PLANNING TO OPEN ACCESS IN 2019

Nuclear Reactor Safety and Emergency Preparedness (Petten, NL)

AMALIA – Ageing of Materials under the effect of environmentally assisted stress corrosion cracking

LILLA – Liquid Lead Laboratory

MCL – Tandem accelerator based fast neutron source

MAIS – Microstructural Analysis Infrastructure Sharing

SMPA – Structural Materials Performance Assessment Laboratories

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Calls for Access (Relevance-driven) Statistics

GELINA, Neutron time-of-flight facility for high-resolution neutron measurements Closed

JUL 27 2018 ▸ OCT 15 2018

Geel, Belgium. GELINA is a 150 MeV electron accelerator serving as strong white neutron source for high resolution neutron time-of-flight measurements.

Details of the call #2018-1-RD-EUFRAT-GELINA

HADES, Underground laboratory for ultra-low level gamma-ray spectrometry Closed

JUL 27 2018 ▸ OCT 15 2018

Geel, Belgium. JRC operates a laboratory for ultralow-level radioactivity measurements inside the 225 m deep underground laboratory HADES, which is located at the premises of the Belgian Nuclear Research Centre. In HADES, the muon flux (secondary cosmic rays) is a factor of 5000 lower compared to above ground and the flux of protons, neutrons and electrons is reduced to an insignificant level.

Details of the call #2018-1-RD-EUFRAT-HADES

MONNET, Tandem accelerator based fast neutron source Closed

JUL 27 2018 ▸ OCT 15 2018

Geel, Belgium. MONNET is a high-intensity quasi mono-energetic fast neutron source, driven by a vertical 3.5 MV Tandem accelerator producing either continuous or pulsed beams of protons, deuterons or helium ions.

Details of the call #2018-1-RD-EUFRAT-MONNET

RADMET, Radionuclide Metrology laboratories Closed

JUL 27 2018 ▸ OCT 15 2018

Geel, Belgium. The Radionuclide Metrology laboratories (RADMET) are equipped with a broad set of instruments used for nuclear decay measurements, determination of related nuclear data and radiological characterisation of samples and materials.

Details of the call #2018-1-RD-EUFRAT-RADMET

24 calls since June 2017

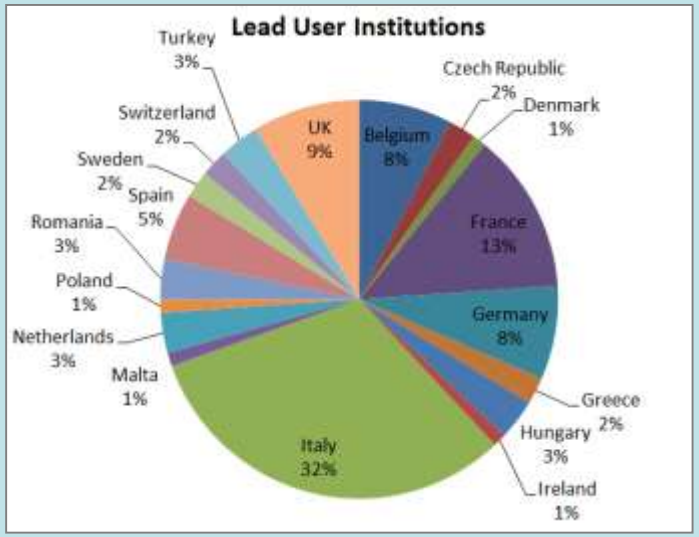
- ✓ **12** Research Infrastructures
- ✓ **94** Eligible proposals
- ✓ **80** Accepted proposals
- ✓ **23** Countries (4 from AC H2020)

User Selection Committees

- ✓ **6** USCs
- ✓ **26** Members Appointed
- ✓ **11** Meetings

Accepted proposals

- ✓ **84** User Institutions
- ✓ **237** Users
- ✓ **12** Completed Projects



Other countries as User Institutions

Bulgaria, North Macedonia, Portugal, Slovenia, CERN

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Results: ELSA, Ispra

HOPLAB

Dynamic Performance of Adobe masonry components

Delft University of Technology




Steel under severe high impact

Scuola Universitaria Professionale della Svizzera Italiana, Ruhr-Universität Bochum, ETH Zürich

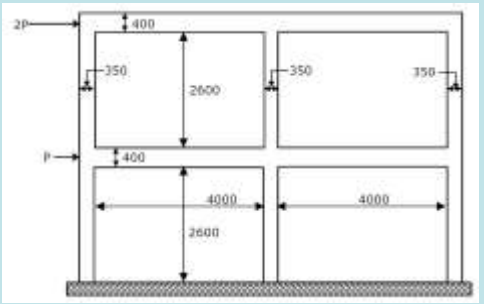
Reaction Wall

A new generation of steel reinforcing bars for concrete structures

University of Pisa, Ferriere Nord S.p.A, Compañía Española de Laminación, Institut für Stahlbetonbewehrung, Instituto de Soldadura e Qualidade, University of Patras, University of LjubljanaRuhr-Universität Bochum, ETH Zürich

Haunch innovative retrofit for European seismic design

University of Stuttgart, Politecnico di Milano



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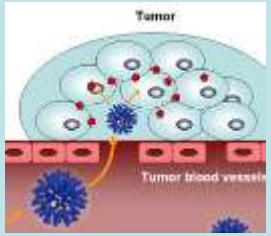
Results: Nanobiotechnology Laboratory, Ispra

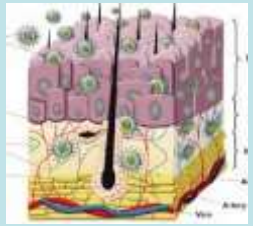
Stability of polymeric micelles in serum

Utrecht University



Characterization of soft NANOCAPsules in complex COsmetic Matrices

CIDITEC



A chemical trap for food allergens

University of Ferrara

Biopersistence of nano-materials used in food-related applications: in vitro tests to assess dissolution and biological fate

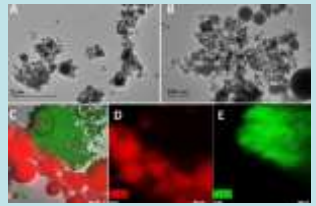
Italian Institute of Health

Health

Environment

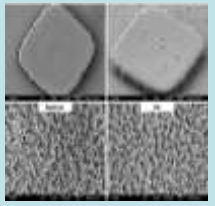
SUNSPACE, A Porous Material to Reduce Air Particular Matter

University of Brescia



Development of parahydrophobic surfaces for water harvesting

Nice University



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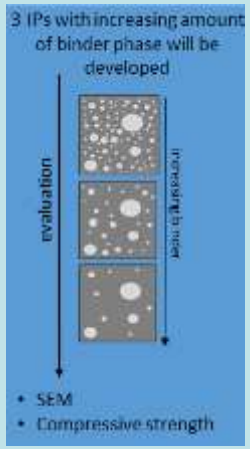
Results: ActUsLab, Karlsruhe

FMR

Investigation of the use of inorganic polymers in nuclear applications: influence of irradiation

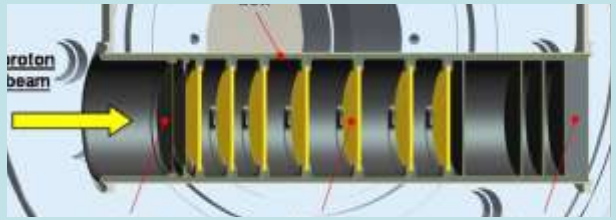
Hasselt University



PAMEC

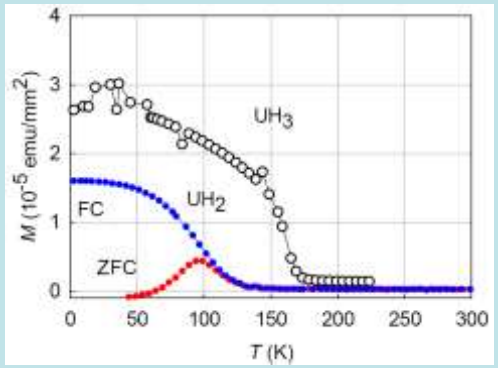
Thorium carbide nanostructured ISOL TArgets for Nuclear medicine applications

Istituto Nazionale di Fisica



Thin films of U hydrides and arsenides

Charles University



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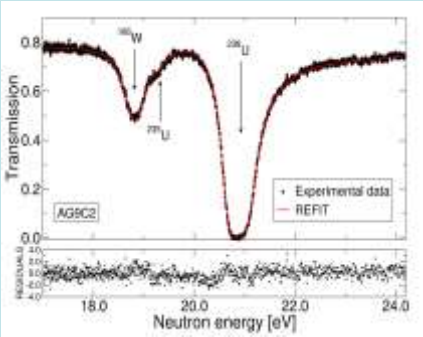
Results: EUFRAT, Geel

GELINA

Characterisation of MINERVE samples by Neutron Resonance Transmission Analysis

CEA Cadarache



MONNET

Measurement of the (n,2n) reaction cross section for the 136Ce and 156Dy isotopes

University of Ioannina

HADES

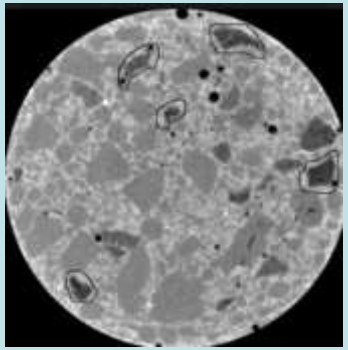
Greenland Ice core Radioisotope Fingerprint

Technical University of Denmark

RADMET

Testing of Industrially useful characterisation methods and reference materials for Nuclear Decommissioning

University of Hasselt



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Revision of the Framework in 2019

Relevance-driven mode

- **Cover travel and accommodation** of Users from User Institutions located in **countries associated to H2020** from the RTD Spreading Excellence and Widening Participation list.
- **Waive the access costs** in the relevance-driven mode to proposals where the Lead User Institution, and at least 2/3 of the Users Institutions are from the **RTD Spreading Excellence and Widening Participation list** of countries.
- The calls are in competition with EU Member States

Spreading Excellence and Widening Participation countries

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Training and Capacity Building at JRC RIs

- Addressed to groups of Users from **universities, research or public institutions, or from a Small-Medium-Enterprises (SME)**
- Preferably with existing or under construction RIs similar to those of JRC
- Calls opened under the **JRC Enlargement and Integration Action**
- User Institutions from **countries associated to the EU Research Program Horizon 2020**
- The JRC covers the costs of **travel and accommodation** of Users
- Stays at the JRC will comprise a **full week**, with the participation of groups from several institutions and countries.

First call launched **4 March 2019** on a pilot basis at the **Nanobiotechnology laboratory** located in Ispra

8 Submitted eligible proposals

- ✓ **9** User Institutions
- ✓ **40** Users
- ✓ **5** Countries (Serbia, Armenia, Bosnia and Herzegovina, Switzerland, Turkey)

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Any questions?

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https://ec.europa.eu/jrc/en/research-facility/open-access

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