



ICCRAM (International Research Center in Critical Raw Materials for Advanced Industrial Technologies). University of Burgos (SPAIN).

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ICCRAM:

- An *International Excellence Research Center in Critical Raw Materials for Industrial technologies* with experts in CRMs substitution and advanced materials and technologies. *MORE THAN 26 RESEARCH GROUPS*, constituting an innovation core being part of several industrial clusters and with a board of 15 industries.
- Takes part of the *international strategy* of industrial resource efficiency management, energy efficiency, ecoinnovation and critical materials substitution.
- Directly related to the *European Innovation Partnership in Raw Materials* and the proposed *KIC-RM*; part of two different **Action Groups** within the EIP-Raw.
- Coordinating the critical raw materials strategy and with a key role in the RIS3 regional strategy in Castilla y León (Spain).
- Core member of the Regional and National industrial strategy, founder member of industrial clusters like CYLSOLAR and CBECyL, with an existing strong alliance with large scale industrial associations like SERCOBE (National Association of Manufacturers of Capital Goods), international industrial research Centers (i.e. ENEA) and international organizations like EU-NANOFUTURES.

RESEARCH DIVISIONS:

- Critical Raw Materials (CRMs). **CRMs strategy and internationalization**. Advanced Technologies to facilitate the replacement or efficiency/ optimization of CRMs in industrial processes.
- Nanosafety. Nanotoxicity, eco-compatibility and nanobiotechnology (priority as it is compulsory for new materials).
- Innovation and Nanotechnology for alternatives in CRMs substitution.
- Design of advanced new materials (following the "Materials Genome" initiative & EU program) & "Materials by Design" (new CRMs alternative materials).
- Design of industrial value chains (eco-design, life cycle analysis, and resource efficiency) & New models & strategies of business and economy for products.
- **Graphene technology and carbon chemistry** (at theoretical and experimental level,: graphene, its derivatives and other carbon-based alternatives as the high value substitutive route for CRMs in many technological applications).
- New photonic technologies and development of new materials for photonics.
- New materials and alloys for engineering extreme conditions ((manufacturing industry, aerospace, energy (including fission and fusion)).
- Resource efficiency and raw materials in value chains critical for Europe for the use of CRMs and their impact on society: (Automotive, electronic and magnetic materials, packaged food...).

INTERNATIONAL PROJECTS:

- Currently developing a **FP7**-NMP project RADINTERFACES- designing a radiation damage resistant material based on nanostructured multilayers of immiscible alloys.
- Various previous projects in FP5 & FP6 and over 10 proposals submitted to H2020 & other european programmes.

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INCO

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Científico Tecnológico

Associated to 2 regional and 1 national industrial clusters. More than 15 companies within its industrial board.

Strategically linked with industry. AN INNOVATION CORE

INFRASTRUCTURES KBBF COST **EUROATOM** NMP **ERASMUS** SUDOF PEOPLE-ITN **TEMPUS**

ICCRAM

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EU POLICIES TARGETED: European Innovation Partnership on Raw Materials

CALLS OF INTEREST:

- -H2020 SC 5. Supply of Raw Materials
- -H2020 EXCELLENT SCIENCE
- -Other calls related to our research lines
- H2020 NMP-B
- ERA NET SIINN