

EUROPEAN EUROPART INTEGRATED PROJECT ON ACTINIDE PARTITIONING

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Abstract

This poster presents the objectives of EUROPART, a scientific integrated project between 24 European partners, mostly funded by the European Community within the FP6. EUROPART aims at developing chemical partitioning processes for the so-called minor actinides (MA) contained in nuclear wastes, *i.e.* from Am to Cf. In the case of dedicated spent fuels or targets, the actinides to be separated also include U, Pu and Np. The techniques considered for the separation of these radionuclides belong to the fields of hydrometallurgy and pyrometallurgy, as in the previous FP5 programs named PARTNEW and PYROREP.

The two main axes of research within EUROPART will be:

1. The partitioning of MA (from Am to Cf) from high burn-up UOx fuels and multi-recycled MOx fuels.
2. The partitioning of the whole actinide family for recycling, as an option for advanced dedicated fuel cycles (and in connection with the studies to be performed in the EUROTRANS integrated project).

In hydrometallurgy, the research is organised into five Work Packages (WP). Four WP are dedicated to the study of partitioning methods mainly based on the use of solvent extraction methods, one WP is dedicated to the development of actinide co-conversion methods for fuel or target preparation.

The research in pyrometallurgy is organized into four WP, listed hereafter:

1. Development of actinide partitioning methods.
2. Study of the basic chemistry of trans-curium elements in molten salts.
3. Study of the conditioning of the wastes.
4. Some system studies.

Moreover, a strong management team will be concerned not only with the technical and financial issues arising from EUROPART, but also with information, communication and benefits for Europe. Training and education of young researchers will also pertain to the project. EUROPART has also established collaboration with US DOE and Japanese CRIEPI.