

Title (en)

METHOD FOR LIQUID RADIOACTIVE WASTE REPROCESSING (AND VARIANTS)

Title (de)

VERFAHREN ZUR UMVERARBEITUNG VON FLÜSSIGEN RADIOAKTIVEN ABFALLSTOFFEN (UND VARIANTEN)

Title (fr)

PROCÉDÉ DE TRANSFORMATION DE DÉCHETS RADIOACTIFS LIQUIDES (ET VARIANTES)

Publication

**EP 2101333 A4 20110413 (EN)**

Application

**EP 07852046 A 20071107**

Priority

- RU 2007000614 W 20071107
- RU 2006143293 A 20061206

Abstract (en)

[origin: EP2101333A1] The inventive methods are used for liquid radioactive waste (LRW) reprocessing by immobilizing radionuclides into a crystal material. Said methods consist in the synthesizing of insoluble compounds which immobilise long-lived radionuclides. The insoluble compounds in the form of salts or oxides are synthesised in hydrothermal conditions in a flow by passing LRWs being processed and reagents required for the synthesis through a layer of the insoluble particles at a speed enabling synthesizable radionuclide-containing compounds to be crystallized on the surface of the particles of the layer. Said insoluble particles are embodied in the form of metal oxides, for example, iron, manganese, cobalt, zirconium oxides or salts, for example, hydroxylapatite. The hydrothermal synthesis is carried out at a temperature range from 180°C to 250°C and a pressure range from 20 to 150 atm.

IPC 8 full level

**G21F 9/16** (2006.01)

CPC (source: EP)

**G21F 9/162** (2013.01)

Citation (search report)

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- [XA] US 2002038070 A1 20020328 - CHEKHMIR ANATOLY [IL], et al
- [XA] RU 2185671 C1 20020720 - NEVOSTOCHNOGO OTDEL RAN, et al
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CN110447077A

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