

Publications productgroup Fuels Actinides and Isotopes

The sections hereafter show the publications made at ECN/NRG in the field of transmutation research starting from 1990 until present.

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P&T

Partitioning

1. Chen, J.B., Boerrigter, H. and Veltkamp, A.C., Technetium(VII) transport across supported liquid membranes (SLMs) containing 2-nitrophenyl octyl ether (NPOE). *Radiochim. Acta* 89 (2001) 523
2. Chen, J. and Tomasberger, T., Solvent extraction of Tc(VII) by the mixture of TBP and 2-nitrophenyl octyl ether. *J. Radioanal. Nucl. Chem.* 247 (2001) 519
3. Boerrigter, H., Tomasberger, T., Verboom, W. and Reinhoudt, D.N., Novel ligands for the separation of trivalent lanthanides and actinides - tetrakis(phosphane sulfide) and - (phosphinic acid) cavitands. *Eur. J. Org. Chem.* (1999) 665.

Actinide transmutation

Inert Matrix fuels general

1. "On the use of spinel-based nuclear fuels for the transmutation of actinides", R.J.M. Konings, K. Bakker, J.G. Boshoven, H. Hein, M. Huntelaar, J.D. Meeldijk, C.F. Woensdregt and H. Zhang, in the Proceedings of Global '97.
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10. Neeft,E.A.C., Konings,R.J.M., Bakker,K., Boshoven,J.G., Hein,H., Schram,R.P.C., van Veen,A., and Conrad,R. (1999): Neutron irradiation of polycrystalline yttrium aluminate garnet, magnesium aluminate spinel and alfa-alumina. *J.Nucl.Mater.*, 274:78-83.
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12. Bakker,K., Belvroy,R., Berg van den,F.A., Casalta,S., Conrad,R., Neeft,E.A.C., Schram,R.P.C., and Tams,W.J. (2001): Fission-gas release in a spinel-based fuel used for actinide transmutation. *Progress in Nucl.Energy*, 38:313-316.
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15. Neeft, E.A.C., Bakker,K., Schram,R.P.C., Conrad,R., and Konings,R.J.M.: "The EFFTRA-T3 irradiation experiment on inert matrix fuels". *J. Nucl. Mater* 320 (2003) 106.
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Inert Matrix fuels Americium

Publications

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Fission product transmutation:

Iodine

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Technetium

1. Konings,R.J.M., Franken,W.M.P., Conrad,R., Gueugnon,J., and Spirlet,J. (1997): Transmutation of Technetium and Iodine-Irradiation tests in the frame of the EFTTRA cooperation. Nucl.Technol., 117:293-298.
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