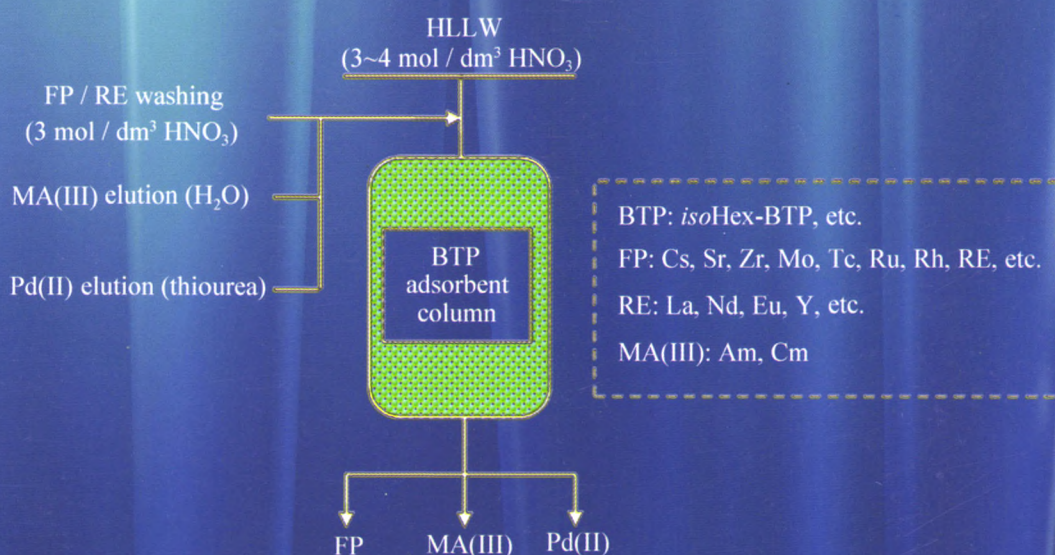




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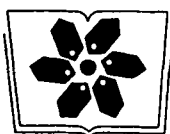
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Conceptual flowchart of direct separation process of MA(III) from fission products in HLLW by extraction chromatography. (P.S10301)

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Guest Editorial:

Special Section on the Second China-Japan Academic Symposium on Nuclear Fuel Cycle (ASNFC-2013)

Shanghai, China, November 27-30, 2013

As a high-density energy with almost no discharge of greenhouse gas, nuclear energy plays an important role in long-term energy security and global warming prevention. However, to realize a sustainable development of nuclear energy for the future, it is necessary to save uranium resource and minimize radioactive waste. Advanced nuclear fuel cycle can achieve such goals, thus greatly contribute to the peaceful use of nuclear power for mankind. To provide a platform for the scientists mainly from China and Japan to discuss their academic achievements and exchange scientific information related to nuclear fuel cycle, following the ASNFC 2011, we organized the 2nd China-Japan Academic Symposium on Nuclear Fuel Cycle (ASNFC 2013) which was held at Shanghai Jiao Tong University from 27 to 30 November, 2013. Prof. Zhifang CHAI (Academician, Chinese Academy of Sciences) and Prof. Toshio Wakabayashi (Professor Emeritus, Tohoku University) served as honorary chairs of the symposium.

Totally near 100 papers from both China and Japan as well as a few invited papers from USA, Russia and Korea were presented at the symposium, which cover the following topics: (1) Basic chemistry of actinide and fission product elements; (2) Nuclear and radiochemistry related to nuclear fuel cycle; (3) Advanced reprocessing and separation technologies; (4) Innovative separation science (Nano-materials, Ionic liquids, etc.); (5) Transmutation, isotope production and element resource utilization. We present this special issue introducing the recent research achievements and progress in nuclear fuel cycle, with 14 contributions after peer review from selected papers of the ASNFC 2013. It is our sincere hope that this Special Section on Nuclear Science and Techniques (NST) will not only present a good review of ongoing research, but also help open new doors for more creative interdisciplinary researches in advanced nuclear fuel cycle.

Finally, we are grateful to all of the authors and reviewers who have greatly contributed to this Special Section. A special thanks goes to the Editor-in-Chief of NST, Prof. Yugang MA and Yongping LI (Vice Editor-in-Chief of NST), in organizing this special topic.

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