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INVITED LECTURE - Nuclear energy chemistry and recent progresses in nuclear fuel reprocessing in China

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Nuclear energy chemistry is one of the frontier areas of chemistry with high impact on national security, energy supply, scientific advances, social and economic development. Nuclear energy chemistry in China is now experiencing a renaissance, which is being strongly motivated by China's huge demand for nuclear energy. In this presentation, the progress in nuclear energy chemistry of China is selectively addressed. Some hot topics have been summarized and the main research results achieved by Chinese scientists in this field are highlighted, with emphasis on the chemistry of nuclear fuel cycle, such as front-end chemistry, materials chemistry and nuclear fuel fabrication, actinide chemistry and nuclear fuel reprocessing as well as nuclear waste disposal. Some measures about how to promote the radiochemical education and research in China are suggested, and future perspectives are briefly outlined as well.

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Gen IV and Th reactors)

Track Classification: Nuclear fuel cycles, present Gen III+ NPPs, Gen IV and Th based reactors