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钚(Ⅲ)草酸盐溶解度

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摘要 <正> 一、引言 钚(III)草酸盐晶体具有适于钚转化过程的优良的物理化学性能。研究钚(III)草酸盐溶解度的文献所见不多,且未见系统的,特别是用硝酸羟胺(HAN)作为盥还原剂的研究。 国外多数文献报道,尽管钚(III)草酸盐沉淀的各项性能均优于钚(IV),但因采用钚(III)草酸盐沉淀需要调价步骤雨未能用干工厂规模。如果核燃料后处理中钚的最后纯化循环采用羟胺还原反萃取,则所得钚产品液中主要为三价,此溶液可直接作为钚(III)

关键词 钚(III)草酸盐 络合物

分类号

THE SOLUBILITY OF Pu(Ⅲ) OXALATE

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Abstract The solubility of Pu (III) oxalate in the HNO_3-H_2C_2O_4 medium is determinedin the present work. Experimental results show that at different concentrations ofnitric acid the solubility of Pu (III) oxalate gradually decreases with the increasein the concentration of oxalic acid. Results also show that when the concentrationof nitric acid is less than 1 mol/l, the increase in the concentration of oxalicacid causes a gradual decrease in the solubility of the oxalate, which reaches aminimum and then increases with the addition of more oxalic acid. This is inter-preted in terms of the formation of oxalate complexes. At different concentrationsof oxalic acid, the solubility of Pu (III) oxalate increases with the increase inthe concentration of nitric acid to some extent. The elevation of temperatureresults in greater solubility of Pu(III) oxalate. The ionic strength was kept at I =2.3 except when the concentration of nitric acid is 3 mol/l, in which case I=3.3.

Key words Pu (III) oxalate

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