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化学

单甲基肼改善铀纯化循环中钌的净化

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摘要 通过单级条件实验研究单甲基肼或肼浓度、预处理酸度、温度等因素对钌的预处理效果的影响。采用确定的条件进行了模拟铀纯化循环2D槽的串级实验，获得了料液经单甲基肼或肼预处理后钌的净化系数（DF_{Ru}）。结果表明，单甲基肼作为预处理试剂提高钌净化的效果明显，与料液中未加预处理试剂相比，其净化系数提高近10倍，且在相同预处理条件下，其预处理效果优于肼。通过台架温试验，进一步验证了单甲基肼对钌的预处理效果，钌的净化系数达到10^4。

关键词 单甲基肼 钌 预处理 净化系数

分类号

Improvement of Ruthenium Decontamination in Uranium Purification Cycle With Monomethylhydrazine

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Abstract

Influences of monomethylhydrazine (MMH) or hydrazine concentration, acidity, temperature on decontamination of ruthenium (Ru) were investigated in this study. The cascade experiments simulated 2D contactor of uranium purification cycle indicate that the pretreating effect of MMH or hydrazine is obvious, and the value of decontamination coefficient (DF_{Ru}) increases by 10 times compared with that of the experiments without the application of MMH or hydrazine. Under the same condition, MMH is more effective than hydrazine. The bench-scale mixer-settler test demonstrates that the value of DF_{Ru} achieves 10^4.

Key words monomethylhydrazine _ Ru _ pretreatment _ decontamination coefficient

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