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Aqueous acid and alkaline extraction of rare earth elements from coal combustion ash



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### **ACCEPTED MANUSCRIPT**

# Aqueous Acid and Alkaline Extraction of Rare Earth Elements from Coal Combustion Ash

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#### Highlights:

- REEs were efficiently leached by heated HCl in Powder River Basin coal fly ashes
- Acid leaching was not effective for ashes from Appalachian and Illinois Basin coals
- Aqueous NaOH digestion of the coal ashes improved the acid leachability of REEs

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