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(54) **METHOD FOR PREPARING ALUMINUM SALT FUNCTIONAL MATERIAL FOR LITHIUM EXTRACTION**

(57) The present invention relates to a preparation method for a functional material for extracting lithium from an aluminum salt. The method includes the following steps: step 1, preparation of an aluminum salt functional material precursor slurry: mixing polyaluminum, a lithium source and water in proportion, adding an additive, performing ultrasonic stirring to obtain a mixed salt solution, adding an alkali liquor or a basic salt solution into the mixed salt solution at a certain flow rate, adjusting the pH value, and then performing constant-temperature stirring reaction to obtain a lithium-intercalated aluminum salt functional precursor slurry; and step 2, preparing a functional material for extracting lithium from an aluminum salt, namely performing solid-liquid separation, washing and drying on the precursor slurry obtained in

the step 1 to obtain the functional material for extracting lithium from an aluminum salt. According to the present invention, cheap polyaluminum is adopted as an aluminum source, and the water solubility is good; the functional material for extracting lithium from an aluminum salt is synthesized with alkali in one step, with high reaction rate, short process and low cos. According to the method, the functional material for extracting lithium from an aluminum salt with high specific surface area, high porosity and high lithium adsorption capacity can be prepared by virtue of strengthening of a freeze-drying technology, and the method can be well used for extracting lithium from high-impurity salt lake brine, with high lithium extraction speed, high selectivity, and potential application value.

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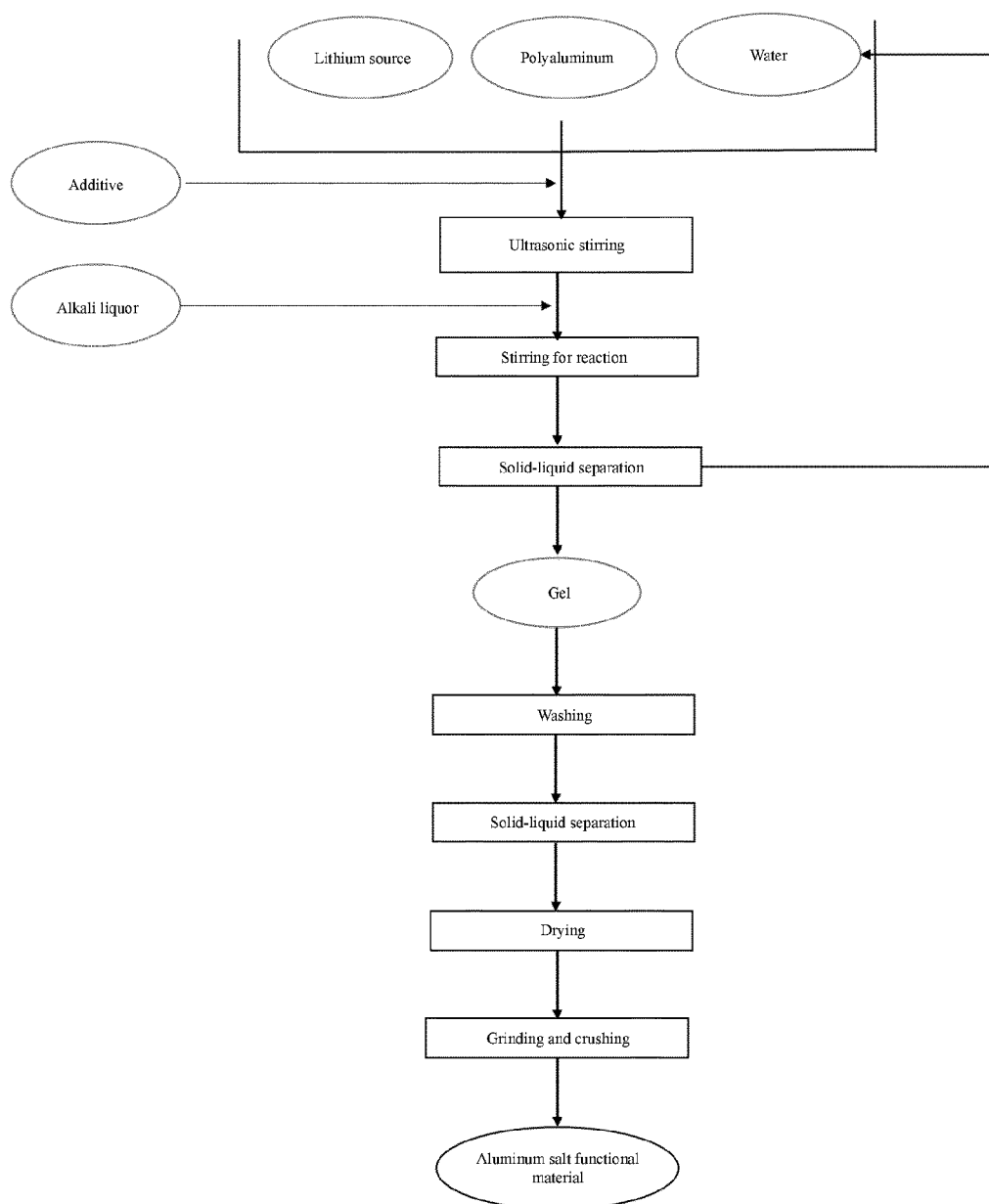


Fig. 1