

REACTION KINETICS, CATALYSIS AND.....

[bupy]BF<sub>4</sub>-AlCl<sub>3</sub> 离子液体上甲苯和间戊二烯的烷基化反应

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**摘要** The alkylation of toluene with 1,3-pentadiene to produce pentyltoluene was carried out to obtain 2,6-dimethylnaphalene, which is an important intermediate during the production of 2,6-naphthalene dicarboxylic acid. Based on our previous work using anhydrous AlCl<sub>3</sub> as catalyst, [bupy]BF<sub>4</sub>-AlCl<sub>3</sub> ionic liquids were employed to catalyze the reaction of 1,3-pentadiene with toluene. The experimental results show that [bupy]BF<sub>4</sub>-AlCl<sub>3</sub> ionic liquids are suitable for the reaction especially when the molar ratio of AlCl<sub>3</sub> to [bupy]BF<sub>4</sub> is 1.75 : 1, and the reaction could proceed at the temperature as low as 0°C. It could be as active as pure AlCl<sub>3</sub>, but much more environmentally friendly.

**关键词** [\[bupy\]BF<sub>4</sub>-AlCl<sub>3</sub> ionic liquids](#) [toluene](#) [1,3-pentadiene](#) [pentenyltoluene](#)

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**Alkylation of toluene with 1,3-pentadiene over [bupy]BF<sub>4</sub>-AlCl<sub>3</sub> ionic liquid catalyst**

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**Key words** [\[bupy\]BF<sub>4</sub>-AlCl<sub>3</sub> ionic liquids](#); [toluene](#); [1,3-pentadiene](#); [pentenyltoluene](#)

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