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双丙酮丙烯酰胺为阳离子的新型离子液体及其在酯化反应中的应用

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收稿日期 2006-2-7 修回日期 2006-7-12 网络版发布日期 2006-12-14 接受日期

摘要 本文通过酸碱在室温下的中和反应合成了以双丙酮丙烯酰胺为阳离子, 乙酸根、三氟乙酸根、四氟硼酸根、六氟磷酸根、硫酸根与氯离子为阴离子的六种盐, 用IR, ¹H NMR和元素分析对其进行了表征。研究表明, 这六种新的化合物具有离子液体的特征, 并且其中四种盐是C1-C6及辛醇与乙酸进行酯化反应的高效催化剂。

关键词 [离子液体; 双丙酮丙烯酰胺; 酯化; 合成与表征](#)

分类号

A Novel Category of Ionic Liquids Based on Diacetone Acrylamide Cation and Their Use as Esterification Catalysts

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Abstract A novel category of salts based on diacetone acrylamide cation (DA⁺) and the anions such as acetate (Ac⁻), trifluoroacetate (TF⁻), tetrafluoroborate (BF⁻), hexafluorophosphate (PF⁻), sulfate (SO⁻) and chloride (Cl⁻) were synthesized by usual neutralization of acids and bases at room temperature and characterized by IR, ¹H NMR and elemental analysis (EA). The results show that these compounds possess the characteristic of ionic liquids. In addition, four of them, DABF, DACl, DASO and DAPF, were efficient catalysts for esterification of acetic acid with C₁—C₆ alcohols and octanol.

Key words [ionic liquid](#) [diacetone acrylamide](#) [synthesis and characterization](#) [esterification](#)

DOI:

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