

Classroom



In this section of *Resonance*, we invite readers to pose questions likely to be raised in a classroom situation. We may suggest strategies for dealing with them, or invite responses, or both. “Classroom” is equally a forum for raising broader issues and sharing personal experiences and viewpoints on matters related to teaching and learning science.

A Simple and Benign Route to Acetylation of Primary Aromatic Amines: An Undergraduate Chemistry Experiment*

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The tartaric acid–glacial acetic acid system is found to be a simple, inexpensive and environmentally benign catalyst for the N-acetylation of primary aromatic amines.

Introduction

The acetylation of amines is one of the most commonly used reactions in organic synthesis as it provides an efficient and inexpensive means for protecting the amino groups in a multistep synthetic process[1, 2]. Despite several procedures already reported [3–15], new efficient methods are still in strong demand.

The use of acetic acid as acetylating agent is normally discouraged due to the slow reaction rate. Carbonyl carbon of the carboxyl group is not activated for nucleophilic acyl substitution due to the +R effect of the -OH group. The use of mild Lewis/Brønsted acid catalysts may, however, facilitate this reaction since they will activate the carbonyl group for nucleophilic acyl substitution. The use of acetic acid is both economically and environ-

Keywords

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