

# Silica Sulfuric Acid: An Efficient Heterogeneous Catalyst for the One-Pot Synthesis of 1,4-Dihydropyridines under Mild and Solvent-Free Conditions

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**摘要** A series of 1,4-dihydropyridines have been prepared by a one-pot condensation of aldehydes, ethyl acetoacetate, and ammonium acetate in the presence of a heterogeneous catalyst silica sulfuric acid at room temperature under solvent-free condition. This new protocol has the advantage of short reaction time and excellent yields, and is an environmentally benign route to the synthesis of 1,4-dihydropyridines.

**关键词:** [aldehyde](#) [ethyl acetoacetate](#) [ammonium acetate](#) [silica sulfuric acid](#) [1,4-dihydropyridine](#)

**Abstract:** A series of 1,4-dihydropyridines have been prepared by a one-pot condensation of aldehydes, ethyl acetoacetate, and ammonium acetate in the presence of a heterogeneous catalyst silica sulfuric acid at room temperature under solvent-free condition. This new protocol has the advantage of short reaction time and excellent yields, and is an environmentally benign route to the synthesis of 1,4-dihydropyridines.

**Keywords:** [aldehyde](#), [ethyl acetoacetate](#), [ammonium acetate](#), [silica sulfuric acid](#), [1,4-dihydropyridine](#)

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

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