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NEW EFFICIENT SYNTHESES FOR 3.3.3-TRIFLUOROALANINE, 2-DEUTERO-3.3.3-TRIFLUOROALANINE AND THEIR N-PROTECTED DERIVATIVES

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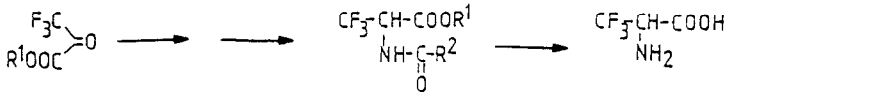
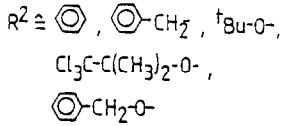
3.3.3-Trifluoroalanine and its 2-substituted derivatives are highly specific enzyme inhibitors, especially for those reactions, where pyridoxal phosphate is involved, e. g. decarboxylation and transamination processes [1].

Syntheses for 3.3.3-trifluoroalanine are already known [2-5]. But there is still a lack of simple, preparative high yield methods, which also can be performed on a large scale.

We now describe four new routes from trifluoropyruvic acid esters to 3.3.3-trifluoroalanine and its N-protected derivatives. By the new methods also 2-deutero-3.3.3-trifluoroalanine, its N-protected derivatives and dipeptides with N-terminal 3.3.3-trifluoroalanine or its deutero-species can be obtained.



$R^1 \triangleq CH_3, C_2H_5$ $R^2 \triangleq$ 

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