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1,3 Dipolar cycloaddition of C-benzoyl-N-phenylnitrone to esters of vinyl-, β-cyanovinyl, and allylphosphophosphonic acids and of C,N-diphenylnitrone to an allylphosphonic acid ester

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Abstract

1. The reaction of 1,3 dipolar cycloaddition of C-benzoyl-N-phenylnitrone to dimethyl vinylphosphonate at 20° gave isomeric trans-2-phenyl-3-benzoyl-4-dimethylphosphono- and trans-2-phenyl-3-benzoyl-5-dimethylphosphonoixoxazolidines. Only the first isomer is obtained in the reaction in boiling benzene. 2. The 1,3 dipolar addition of C-benzoyl-N-phenylnitrone to the diethyl ester of β-cyanovinylphosphonic acid leads to trans-2-phenyl-3-benzyl-4-diethylphosphono-5-cyanoisoxazolidine. 3. The cycloaddition of C,N-diphenylnitrone to the dimethyl ester of allylphosphonic acid leads to the formation of trans-2,3-dipheny--5-dimethylphosphonomethyleneisoxazolidine, while the cycloaddition of C-benzoyl-N-phenylnitrone to this diester gives trans-2-phenyl-3-benzyl-5-dimethylphosphonomethyleneisoxazolidine.

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