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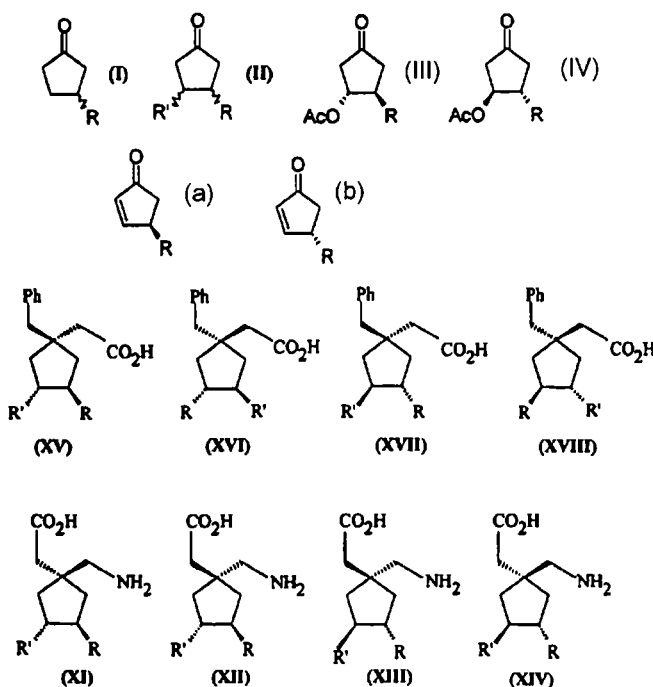
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(54) Title: CYCLIC KETONES, THEIR PREPARATION AND THEIR USE IN THE SYNTHESIS OF AMINO ACIDS



(57) Abstract: A method is provided for making an enantiomerically pure compound of the formula: in which R and R' represent C1?C10 alkyl, C2?C10 alkenyl or C3?C10 cycloalkyl and the wedges signify (S)- or (R)- stereochemistry, the substituents in compound (II) being trans. Conjugate addition is carried out between an organometallic nucleophile that provides a group R as defined above and (R)-4-acetoxycyclopent-2-en-1-one, (S)- 4-acetoxycyclopent-2-en-1-one or a similar compound in which acetoxy is replaced by another leaving group to give, e.g. in the case of the acetoxy compound, a trans 3,4-disubstituted addition product of formula III or IV; The acetyl group is eliminated from the addition product to give an (R)- or (S)- 4-alkyl or 4-alkenyl cyclopent-2-en-1-one the compound of formula is then to be hydrogenated to give a cyclopentanone of formula (I) or conjugate addition of a second organometallic nucleophile that provides a group R' as defined above to the compound of the above formula may be carried out to give a trans 3,4-disubstituted addition product of formula (II). One of the above compounds may be converted e.g. via an intermediate (XV)-(XVIII) (in which the substituents R and R' and the wedges have the meanings indicated above) to a gabapentin

analogue of one of the formulae shown below: in which the substituents R and R' and the wedges also have the meanings indicated above.

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