amino acids, peptides

U 0400 34 - 215 New Expedient Route to Both Enantiomers of Nonproteinogenic α-Amino Acid Derivatives from the Unsaturated 2-Aza-bicyclo Moiety.

— Unsaturated 2-azabicyclo derivatives (I) give under the indicated conditions amino acid derivatives (II), which after reduction to the amino alcohols can be used as chiral building blocks, e.g. in ligand synthesis of compound (IV). By variation of the hydrogenation conditions, acidity and hydrogen pressure, a control of the extent of allylic vs benzylic C-N hydrogenolysis is possible leading to three other types of products such as (V), (VIII), and (IX). The new approach can also be used for the synthesis of chiral α -amino ketone (VII). — (ALONSO, DIEGO A.; BERTILSSON, SOPHIE K.; JOHNSSON, SANDRA Y.; NORDIN, SOFIA J. M.; SOEDERGREN, MIKAEL J.; ANDERSSON, PHER G.; J. Org. Chem. 64 (1999) 7, 2276-2280; Dep. Org. Chem., Univ. Uppsala, S-751 21 Uppsala, Swed.; EN)

$$I^*a \xrightarrow{A)} HN Ph \\ CO-O-Et \\ (-)-V^* 98\% \\ A): 1 atm H_2, Pd-C (cat.), AcoH \\ HM Ph \\ H CO-Ph \\ (+)-VI^* \\ (-)-VII^* 97\%$$

$$I*a \xrightarrow{\text{1 atm H}_2. \text{1 equiv. } K_2CO_3} Pd-C \text{ (cat.), EtoH} \xrightarrow{\text{H}} H \xrightarrow{\text{NPh}} Ph \\ \text{VIII*} > 95\%$$

$$I*a \xrightarrow{\text{7 atm H}_2} Pd-C \text{ (cat.)} \xrightarrow{\text{NH}} NH \\ \text{EtoH} H \xrightarrow{\text{NH}} CO-O-Et$$

$$IX* 98\%$$