

N-acyl transfers in peptide elongation

JING SHANG, Craig Hutton

The university of Melbourne, Melbourne, Australia

We have recently developed the method for the synthesis of peptides using a silver-promoted coupling of thioamides with amino acids. This method was shown to generate peptide imides which can be selectively hydrolysed to give peptides. During this investigation, acyl migration of the imides was observed to occur.

We are exploring the acyl migration reactions of peptide imides towards the insertion of amino acid residues into peptide thioamides. In particular, application in the ring expansion of cyclic peptides through this peptide imide formation-acyl migration process will be described.