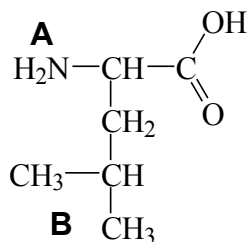


Marks
4

- Shown here is the classical form of the amino acid leucine.



List the types of intermolecular interactions in which the sites **A** and **B** could be involved.

A Hydrogen bonding and dispersion forces

B Dispersion forces

Leucine has an unusually high melting point for a small molecule. Suggest a reason for this.

All amino acids can undergo an acid-base reaction with themselves. Leucine gives the 'zwitterionic' structure below. Being composed of positive and negative charges, the dominant intermolecular force in the crystal is ionic bonding. Hence the abnormally high melting point for a low molecular weight organic compound.

