DESCRIPTION

The amide linkage is one of the most fundamental and widespread chemical bonds in nature, underlying the properties of a vast array of organic molecules, polymers, and materials, including peptides and proteins. Arthur Greenberg, Curt Breneman, and Joel Liebman’s peerless text provides comprehensive coverage of the experimental, structural, and computational findings that shed light on the chemical and physical properties of the amide linkage, as well as its emerging applications in materials and biotechnology.

Chapters in The Amide Linkage highlight how this chemical bond factors in the design of enzyme inhibitors, cyclic peptides, antibacterial agents, and emerging nanotechnology applications. This one-of-a-kind study also:

• Discusses selected aspects of chemical reactions, structure, bonding, and energetics of the amide bond, including amide rotational barriers, stereochemistry, complexation, spectroscopy, and thermochemistry

• Presents specific applications to supramolecular and stereospecific synthesis

• Discusses key aspects of peptide and protein chemistry—such as molecular recognition, conformation, and folding—in terms of the amide linkage

• Includes chapters contributed by numerous eminent chemists and biochemists
Organic, medicinal, polymer, and physical chemists, as well as biochemists and materials scientists, will find The Amide Linkage to be an invaluable addition to their professional libraries.

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