DESCRIPTION

Guanidines, amidines and phosphazenes have been attracting attention in organic synthesis due to their potential functionality resulting from their extremely strong basicity. They are also promising catalysts because of their potential for easy molecular modification, possible recyclability, and reduced or zero toxicity. Importantly, these molecules can be derived as natural products – valuable as scientists move towards “sustainable chemistry”, where reagents and catalysts are derived from biomaterial sources.

*Superbases for Organic Synthesis* is an essential guide to these important molecules for preparative organic synthesis. Topics covered include the following aspects:

- an introduction to organosuperbases
- physicochemical properties of organic superbases
- amidines and guanidines in organic synthesis
- phosphazene: preparation, reaction and catalytic role
- polymer-supported organosuperbases
- application of organosuperbases to total synthesis
- related organocatalysts: proton sponges and urea derivatives
- amidines and guanidines in natural products and medicines
Superbases for Organic Synthesis is a comprehensive, authoritative and up-to-date guide to these important reagents for organic chemists, drug discovery researchers and those interested in the chemistry of natural products.

ABOUT THE AUTHOR

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Professor Ishikawa leads a laboratory of researchers at Chiba University in the fields of drug-oriented organic chemistry, natural product chemistry, guanidine-based organic reactions, synthetic studies on aziridines, and the preparation of new polymer-supported reagents. He has published 30 papers, including "Guanidines in Organic Synthesis" - one of the top 5 most downloaded papers of 2006 in the leading organic chemistry journal Synthesis.

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