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| Altri autori (Persone) | CompainPhilippe MartinOlivier R |
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| Nota di contenuto | Iminosugars; Contents; Foreword; Preface; List of contributors; 1 Iminosugars: past, present and future; 2 Naturally occurring iminosugars and related alkaloids: structure, activity and applications; 2.1 Introduction; 2.2 -Glucosidase inhibitors; 2.3 -Glucosidase inhibitors; 2.4 - and -Galactosidase inhibitors; 2.5 -Mannosidase inhibitors; 2.6 Concluding remarks and future prospects; References; 3 General strategies for the synthesis of iminosugars and new approaches towards iminosugar libraries; 3.1 Introduction; 3.2 Monocyclic compounds; 3.3 1-N-Iminosugars; 3.4 Bicyclic compounds 3.5 Other bicyclic compounds3.6 Iminosugar conjugates; 3.7 Conclusions; References; 4 Iminosugar C-glycosides: synthesis and biological activity; 4.1 Introduction; 4.2 Synthesis of iminosugar C-glycosides; 4.3 Biological activity of iminosugar C-glycosides; 4.4 Conclusion; References; 5 Imino-C-disaccharides and analogues: synthesis and biological activity; 5.1 Introduction; 5.2 Synthesis of imino-C-disaccharides; 5.3 Conformations of imino-C-disaccharides; 5.4 Glycosidase inhibitory activities of imino-C-disaccharides |

5.5 Efficient combinatorial method for the discovery of glycosidase inhibitors; 5.6 Antitumour activity of new -mannosidase inhibitors; 5.7 Conclusion; References; 6 Isofagomine, noeuromycin and other 1-azasugars, iminosugar-related glycosidase inhibitors; 6.1 Introduction; 6.2 1-Azasugars that are piperidines (isofagomine, noeuromycin, etc.); 6.3 1-Azasugars that are hydrazines; 6.4 1-Azasugars that are oxazines; 6.5 1-Azasugars that are piperidones; 6.6 Sulphur-containing analogues of 1-azasugars; 6.7 Slow inhibition and thermodynamics of binding
6.8 Are 1-azasugars (and iminosugars) transition state analogues? References; 7 Iminosugar-based glycosyltransferase inhibitors; 7.1 Biological role and structural features of glycosyltransferases; 7.2 Development of inhibitors of glycosyltransferases; 7.3 Conclusion; References; 8 Transition state analogue inhibitors of N-ribosyltransferases; 8.1 Introduction; 8.2 Nucleoside hydrolases; 8.3 Purine nucleoside phosphorylases (PNPs); 8.4 5'-Methylthioadenosine (MTA) nucleosidases and phosphorylases; 8.5 Ricin A-chain; References; 9 Iminosugars as antiviral agents; 9.1 Introduction
9.2 The relationship between glucosidase inhibition and antiviral action
9.3 Fate of viral glycoproteins in glucosidase-inhibited cells; 9.4 Specificity of glucosidase inhibition; 9.5 N-Alkyl DNJs inhibit virus growth by non-glucosidase inhibitory mechanisms - other potential activities of these compounds; 9.6 New directions for improving glucosidase inhibitors as antiviral agents; References; 10 Iminosugars as active-site-specific chaperones for the treatment of lysosomal storage disorders; 10.1 Introduction; 10.2 Degradation of glycosphingolipids
10.3 Lysosomal enzyme biosynthesis and ER-associated degradation (ERAD)

Sommario/riassunto

Iminosugars form undoubtedly the most attractive of carbohydrate mimics reported so far. In these structures, the substitution of the endocyclic oxygen of sugars by a basic nitrogen atom leads to remarkable biological properties and raises many challenges in organic synthesis. Since the discovery of their biological activity as glycosidase inhibitors in the 1970's, these polyvalent molecules have progressively made their way from the laboratory to the clinic. The impressive series of discoveries in the field over the past ten years indicates clearly that it is "a boom time" for iminosugar

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| 2. Record Nr. | UNICASIEI0035552 |
| Autore | Jaeger, Werner <1881-1961> |
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| Pubbl/distr/stampa | Roma, : Edizioni di storia e letteratura, 1960 |
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| Autore | Quarteroni Alfio |
| Titolo | Numerical Models for Differential Problems // by Alfio Quarteroni |
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Nota di bibliografia

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Nota di contenuto

1 A brief survey of partial differential equations -- 2 Elements of functional analysis -- 3 Elliptic equations -- 4 The Galerkin finite element method for elliptic problems -- 5 Parabolic equations -- 6 Generation of 1D and 2D grids -- 7 Algorithms for the solution of linear systems -- 8 Elements of finite element programming -- 9 The finite volume method -- 10 Spectral methods -- 11 Isogeometric analysis -- 12 Discontinuous element methods (D Gandmortar) -- 13 Diffusion-transport-reaction equations -- 14 Finite differences for hyperbolic equations -- 15 Finite elements and spectral methods for hyperbolic equations -- 16 Nonlinear hyperbolic problems -- 17 Navier-Stokes equations -- 18 Optimal control of partial differential equations -- 19 Domain decomposition methods -- 20 Reduced basis approximation for parametrized partial differential equations -- References.

Sommario/riassunto

In this text, we introduce the basic concepts for the numerical modelling of partial differential equations. We consider the classical elliptic, parabolic and hyperbolic linear equations, but also the diffusion, transport, and Navier-Stokes equations, as well as equations representing conservation laws, saddle-point problems and optimal control problems. Furthermore, we provide numerous physical examples which underline such equations. We then analyze numerical solution methods based on finite elements, finite differences, finite volumes, spectral methods and domain decomposition methods, and reduced basis methods. In particular, we discuss the algorithmic and computer implementation aspects and provide a number of easy-to-use programs. The text does not require any previous advanced mathematical knowledge of partial differential equations: the absolutely essential concepts are reported in a preliminary chapter. It is therefore suitable for students of bachelor and master courses in scientific disciplines, and recommendable to those researchers in the academic and extra-academic domain who want to approach this interesting branch of applied mathematics.