

Special Issue

Current Advances in Phosphate Bioisosters and Mimics

Message from the Guest Editors

The phosphate function is of high importance in a plethora of biological events. For instance, phosphates are involved in regulation of the kinase activity or nucleic acid replication. Therefore, the design of phosphate-based drugs has become an attractive strategy. However, the development of biological active-phosphate-containing molecules is still challenging due to the enzymatic lability of this residue in vivo and the poor cellular penetration of the charged phosphate. To overcome these limitations the implementation of bioisosters and mimics is an appealing strategy to open new avenues for the discovery of new bioactive molecules and drugs. In this Special Issue, we will highlight the recent progress made in the field of phosphate bioisosters and mimics. We welcome contributions that describe new progress in the synthesis of phosphate bioisosters or mimics, newly designed bioisosters, and new applications of these mimics in the quest for bioactive molecules. In addition, review articles from experts in the field will be considered.

Guest Editors

Dr. Thomas Poisson

Institut National Des Sciences Appliquées de Rouen Normandie, Saint-Etienne-du-Rouvray, France

Prof. Dr. Xavier Pannecoucke

INSA Rouen, UNIROUEN, CNRS, COBRA (UMR 6014), Normandie University, 76000 Rouen, France

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Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
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Message from the Editor-in-Chief

As the premier open access journal dedicated to molecular chemistry, now in its 29th year of publication, the papers published in *Molecules* span from classical synthetic methodology to natural product isolation and characterization, as well as physicochemical studies and the applications of these molecules as pharmaceuticals, catalysts, and novel materials. Pushing the boundaries of the discipline, we invite papers on all major fields of molecular chemistry and multidisciplinary topics bridging chemistry with biology, physics, and materials science, as well as timely reviews and topical issues on cutting-edge fields in all of these areas.

Editor-in-Chief

Prof. Dr. Thomas J. Schmidt

Institute of Pharmaceutical Biology and Phytochemistry, University of Münster, Corrensstrasse 48, D-48149 Münster, Germany

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