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Review

# Orthoesters: Multiple Role Players in Organic Synthesis

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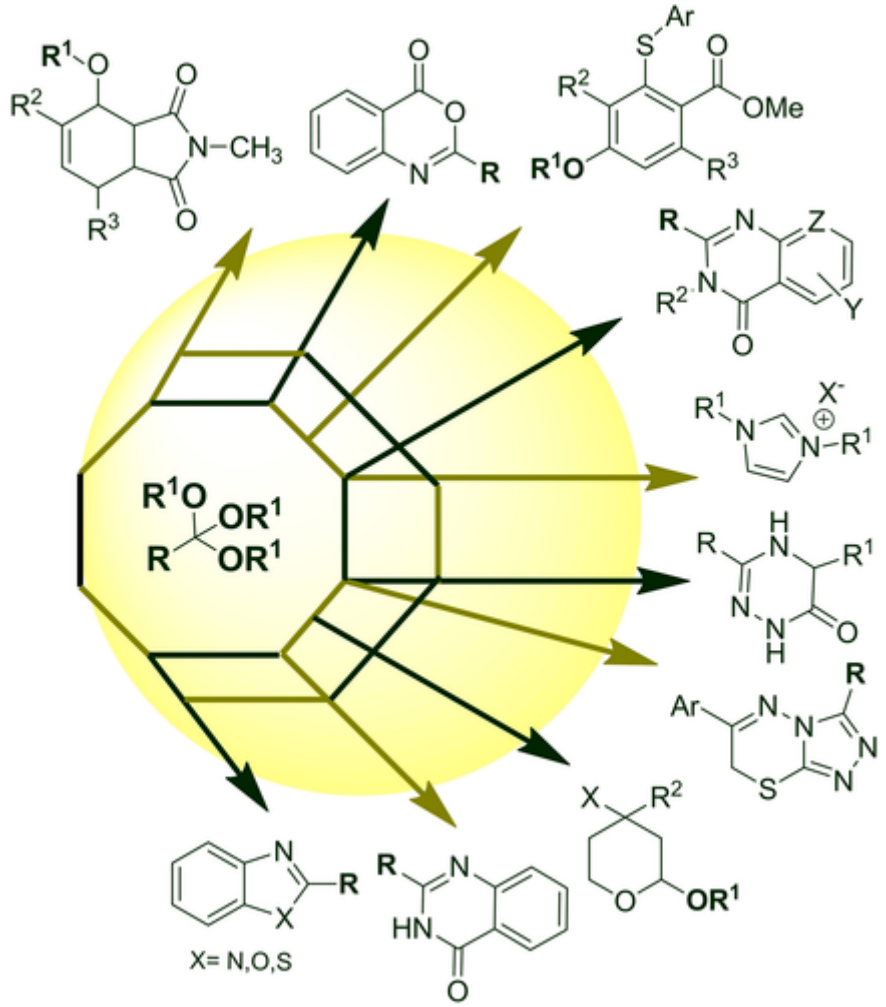
Dedicated to the memories of Prof. Abbas Shafiee

## Graphical Abstract

This review exhibits the role of orthoesters as versatile precursors in synthetic methodologies, which provide access to wide range of compounds with pharmaceutical, agrochemical values. Moreover, highlight studies demonstrating the contribution of orthoesters in inducing stereoselectivity in certain reactions have been reported. In light of the recent utilities of orthoesters in preparation of the environmentally benign compounds, it is expected orthoesters to show further applications in sustainable chemistry in future endeavors.





## Abstract

Orthoesters are characterized by three alkoxy groups attached to a single carbon atom. This functional group is used primarily as a masking group for carboxylic acids, due to its robust stability towards strong nucleophiles and bases. Besides this protection role, orthoesters have further utility as versatile precursors in organic synthesis. This review focuses on the latter role of orthoesters as well as their applications in stereoselective synthesis.


# Conflict of interest

The authors declare no conflict of interest.

## References


1 T. W. Greene, P. G. M. Wuts, in *Protective Groups in Organic Synthesis*, John Wiley & Sons, Inc., New York, 1999, pp. 369–453.

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