Special Issue

Strategies for Controlling Synthetic Cells: Approaches, Models, Applications

Message from the Guest Editors

This Special Issue will explore cutting-edge research related to synthetic cells (artificial cells), their construction, and the various strategies to control their behavior and their potential applications. Research on synthetic cells has advanced greatly in recent years. Synthetic cells have been used as a tool for mimicking and understanding the behavior of biological cells, as well as functioning for real-life applications such as bioreactors, drug delivery, and biosensors. In order to control synthetic cells, several strategies have been devised. Advances in controlling mechanisms will lead to systems of higher complexity, and at the same time, it will enhance synthetic cell utility and performances, reaching the goal of constructing programmable synthetic cells. Controlling synthetic cell behavior will favor both fundamental research and biological applications. This Special Issue is now open for submissions. Original articles (experiments or numerical models), reviews, perspectives, and opinions about this exciting field are welcome, focusing both on basic and applied science.

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Deadline for manuscript submissions

22 April 2025



Life

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Life (ISSN 2075-1729) is an international, peer-reviewed open access journal that publishes scientific studies related to fundamental themes in life sciences. Some papers are published individually, while others are submitted for inclusion in special issues with guest editors. You are invited to contribute a research article, essay, or a review to be considered for publication.

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