

Special Issue

Research on Cyclodextrin

Message from the Guest Editor

Cyclodextrins (CyDs), a cyclic oligosaccharide with a hydrophobic internal cavity, are characterized by exceptional inclusion capability and molecular recognition properties that allow them to encapsulate hydrophobic molecules through a host–guest interaction, playing a crucial role in pharmaceuticals, food, agriculture, biotechnology, chemicals, and environmental applications. Over the past 30 years, researchers have developed cyclodextrin-based polymers and nanocomposites to improve their adsorptive capacity and selectivity. These materials combine the inclusion properties of cyclodextrins with the stability and robustness of polymeric frameworks. Moreover, the functionalization of cyclodextrins with various chemical groups can further improve their binding affinity and selectivity for specific molecules. Additionally, these materials can be regenerated and reused, making them cost-effective and sustainable. This Special Issue aims to bring to the scientific community the latest advancements in the development of novel and smart CyD-based systems, ranging from pharmaceutical to environmental field applications.

Guest Editor

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