



## Glycopolymers and Polysaccharide-Based Copolymers

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### Message from the Guest Editors

Narrowly defined, glycopolymers are synthetic polymers modified with saccharidic moieties exhibiting specific biological functionality. Such glycopolymers can be obtained either by chemical modification of the synthetic polymers with adequate carbohydrates or by controlled polymerization of glycomonomers (monomers containing a (oligo)saccharidic part). More broadly, glycopolymers can be defined as copolymers associating natural polysaccharides and synthetic polymers. In this case, they can be produced by coupling controlled polymer chains onto polysaccharide ones (grafting onto strategy) or by using modified polysaccharides as macroinitiators within a controlled polymerization (grafting from strategy). In addition, associating the hydrophilic behavior of polysaccharide to the hydrophobic one of synthetic polymers chains allows the elaboration of amphiphilic glycopolymers, which can stabilize an interface or self-assemble into nanostructures, for instance. Such “polysaccharide-based copolymers” can exhibit particular bio-functionality if bioactive polysaccharide and biodegradable or biocompatible synthetic parts are chosen.





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