Special Issue

Stimuli Responsive Compounds for Biological and Materials Sciences: Design, Characterization and Applications

Message from the Guest Editor

Stimuli-responsive materials have the ability to translate a stimulus into a change of physical/chemical properties. This activation leads to a modification at the nano/macromolecular scale such as a bond cleavage, color change or actuation. A wide range of stimuli from the internal/external environment can trigger a molecular response, namely, a variation of temperature, magnetic/electrical field, or combinations thereof. These functional materials can be endowed with multiresponsiveness and find some applications in drug delivery, gels, optical devices, shape-memory polymers, or nanocomposites. In this Special Issue, we will focus on the design and application of stimuli-responsive small molecules and polymeric materials. Particular attention will be paid to the development of new responsive functional groups, and the improvement of their sensitivity/selectivity toward specific stimuli. These studies will also concern the determination of new stimuli from an external/internal environment. These smart compounds will also be endowed with multiresponsiveness and find application in biological and materials sciences.

Guest Editor

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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.

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