



Tetrathiafulvalene (TTF) derivatives: key building-blocks for switchable processes

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Titre Tetrathiafulvalene (TTF) derivatives: key building-blocks for switchable processes

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Résumé en anglais Besides a traditional use for the development of organic conducting materials, the tetrathiafulvalene (TTF) unit and its derivatives have recently appeared as key constituents for new applications, exploiting remarkable redox properties: a high π -donating ability and occurrence of three stable redox states. Indeed, in very recent years, an impressive variety of switchable TTF-based molecular and supramolecular (multifunctional) architectures have been designed and synthesized. In this feature article, we discuss recent developments of TTF-based molecular and supramolecular systems in this respect, including molecular sensors, redox-fluorescent switches, multi-input systems for logic gates, electrochemically-driven conformational controls, molecular clips and tweezers, and redox-controlled gelation processes.

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