

Special Issue

Fluorinated Compounds and Materials: Synthesis, Properties and Applications

Message from the Guest Editor

After the synthesis of the first fluorinated organic compound, methyl fluoride, CH_3F , by Dumas and Péligot in 1835, the pioneers of fluorine chemistry soon noticed this wide synthetic opportunity, which, supported by the study of the C–F bond, later led to the discovery of numerous new materials with unique properties, such as excellent thermostability, high chemical inertness, UV resistance, low refractive index, low friction coefficient, water and oil repellency, low surface energy, and anti-stick properties. Therefore, it was already foreseen that many new and useful fluorine-based products would become available. Progressively increasing the number of the applications, some features of fluorinated compounds, however, resulted in some adverse cases for the environment, and the more evident environmental issues are. Today, the chemical reactivity of elemental fluorine and of many fluorinated compounds is well understood and fairly predictable, also taking into consideration their environmental impact. Thus, the research is driven by a precise and organized strategy, typically planned in advance. Many of these topics will be discussed in this Special Issue.

Guest Editor

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Message from the Editor-in-Chief

Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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