

Feature Papers in *Compounds*

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1. Introduction and Scope

Nearly two years ago, when *Compounds* was founded, the journal was introduced as an interdisciplinary tool for the scientific community to present their scientific results in an open access format so that their findings are disseminated quickly and efficiently [1]. In this sense, practically at the same time, a Special Issue was launched under the title of “Feature Papers in *Compounds*” to make up a collection of high-quality articles published in open access by members of the Editorial Board and authors invited by the Editorial Office as per the Editor-in-Chief [2].

2. Contributions

This Special Issue, as we have already indicated, is made up of 14 manuscripts, of which 4 are review articles, 8 are research articles and 2 are communications, whose thematic variety is clear proof of the interdisciplinary spirit that we seek in *Compounds*.

In this way, contributions related to the synthesis [3–6] and characterization [6,7] of the compounds—with a special interest in natural products [8–12]—chemical reactivity [13,14] were incorporated. Likewise, there have been contributions in the field of crystalline structures [15] and computational modeling in quantum chemistry and molecular dynamics [16].

In the synthesis section, Damkaci et al. [3] addressed the development of a simple, efficient and profitable synthesis of a library of thiazolidinedione compounds (glitazones) whose interest lies in the fact that they are compounds with important applications in the pharmaceutical industry, because they exhibit antidiabetic, anti-inflammatory and anticancer properties. Microwave irradiation together with reduction under pressurized hydrogen gas using palladium hydroxide was used for the synthesis. Thus, a fast and simple synthetic route is presented that, in addition, obtains satisfactory yields. Further, Aubert et al. [4] presents the synthesis of on-symmetrical atropisomeric polyhalogenated 4,4'-bipyridines and the subsequent functionalization using cross-coupling reactions. Moreover, a review article on the preparation of various carbon compounds from glycerol (by-product of the transesterification processes of fats and oils) together with their different applications is included [5].

Along with the previous contribution, we must comment on the one made by Peosi et al. [6], where they present the synthesis of four thiosemicarbazones derived from naphthaldehyde and anthraldehyde and their copper complexes with biological properties (particularly their antileukemic properties). These compounds were characterized using different instrumental techniques, their stability under physiological conditions was verified and they were subjected to in vitro biological tests against a histiocytic lymphoma cell line, finding interesting results.

Kim et al. [7] evaluated the effects of structural defects caused by impurities in silicon carbide, characterizing them with various instrumental techniques.

Within this Special Issue, we should also point out that where studies on natural products are concerned, we must point out studies on the determination by chromatographic techniques of volatile organic compounds present in *Dactylorhiza* (*D. viridis*, *D. romana*, *D. saccifera* and *D. sambucina*) [8], *Himantoglossum* (*H. hircinum*, *H. adriaticum*, *H.*



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robertianuma) [9,10], *Barlia robertiana* [10], *Orchis* (*O. anthropophra*, *O. purpurea*, *O. italica*, *O. masculua*, *O. pauciflora*, *O. quadripunctata*, *O. provincialis* and *O. pallens*) [11]. Likewise, the volatile fraction of avocado oil (*Persea americana*, Greek variety “Zutano”) was evaluated [12].

Regarding chemical reactivity studies, the Special Issue includes a study on the effect of electrolytes on the dediazonation of arylidiazonium ions in acidic mixtures [13] and a review article on electrophilic iodination of organic compounds using elemental iodine or iodides [14].

Therefore, a review article presents several illustrative crystal structures from various crystal structure databases (CSD and ICSD), proving that imide nitrogen is not the only case where nitrogen can act as an electrophilic agent. It is shown that covalently bound nitrogen presents a σ -hole or even a π -hole, with the ability to establish attractive compromises with negative sites that allow for both intramolecular and intermolecular interactions [15].

To close this Special Issue, Malyskhina and Novikov [16] compiled the most popular modern programs for quantum chemistry and molecular dynamics calculations (classical, ab initio and QM/MM). The authors place special emphasis on those with applicability to nanotubes, surfaces and films, polymers, and crystalline solids.

3. Conclusions and Outlook

In conclusion, we must state that this Special Issue compiles interesting contributions that illustrate the transversal vocation of *Compounds*, as well as its interdisciplinary nature within pure and applied chemistry. At the end of the process, we must indicate that 14 contributions have been published that have accumulated 13,000 views and 15 citations, which demonstrates the interest that *Compounds* is beginning to arouse in the scientific community. This success allows us to face the challenge of a new Special Issue under the title “Feature Papers in Compounds (2022–2023)” [17], in which we hope to incorporate new and valuable contributions of interest to *Compounds* readers.

Conflicts of Interest: The author declares no conflict of interest.

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