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*Special Issue Reprint*

## Progress in Volatile Organic Compounds Research

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Edited by  
Igor Jerković

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Volatile organic compounds (VOCs) have been intensively investigated in the last few decades. Their origins differ: plant secondary metabolites, food/beverages aromas, fungal/bacterial volatiles, and others. VOCs typically occur as complex mixtures of compounds (e.g., monoterpenes, sesquiterpenes, norisoprenoids, aliphatic/aromatic compounds, sulfur containing compounds, and others). They form through different biochemical pathways and can be modified or created during drying or maturation, thermal treatment, and others. Different conventional or modern methods of VOCs isolation, followed by the analysis with chromatographic and spectroscopic techniques, usually provide different chemical profiles and have been under constant modification and upgrading. The ecological interactions are mediated by VOCs (inter- and intra-organismic communication) and they can act as pheromones, attractants, or alleochemicals. Among them, chemical biomarkers of botanical origin or chemotaxonomic markers may be found. Many VOCs possess different biological activities, such as antioxidant, antimicrobial, antiviral, anticancer, and other activities. VOCs research from different sources is required to report their distribution and chemical profiles, and to discover new compounds. This Special Issue aims to attract up-to-date contributions on all aspects of VOCs chemistry, from challenges in their isolation to analysis, and on unlocking their biological activities or other useful properties



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