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Biosynthesis, Function, and Application of Plant Volatiles

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Message from the Guest Editors

Dear Colleagues,

Plants synthesize a large number of volatile compounds. These small, chemically diverse metabolites give plants fragrance and serve multiple functions in the reproduction of plants and the protection of plants from environmental stress. They also repel herbivores and pathogens, protect plants from abiotic stress, and activate resistance traits in neighboring plants via airborne plant–plant signaling. Besides their functions in ecosystems, plant volatiles play important roles in many aspects of human behavior, as they are widely applied in pharmaceuticals, nutrition, and industries. Although tremendous progress has been made in elucidating the functions of volatiles in plant physiology and ecology, the biosynthesis, functions, bioactivities, and development of plant volatiles remain worthy of study. The goal of this Special Issue is to provide insightful and critical advances in the field of biosynthesis, functions, and applications of plant volatiles. We welcome the submission of original research articles and reviews.

Prof. Dr. Sheng-Yang Wang

Dr. K.J. Senthil Kumar

Guest Editors



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Special Issue



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Message from the Editor-in-Chief

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