Special Issue

Advanced Technologies in High Resolution Plant Phenotyping

Message from the Guest Editor

Plant phenotyping systems generally imply a large amount of data to be acquired, processed and managed to provide adequate information to breeders and biotechnologists in order to obtain crops suitable for facing the expected environmental and social challenges. Non-invasive imaging techniques in three dimensions are increasingly used and are continuously developing to reach high spatial resolution of morphological traits at any plant organization level, from cells to canopy, by enhancing sensors, technologies, and acquisition configurations. This Special Issue of Plants will highlight the most recent applications of high-resolution phenotyping performed with the lab technologies of X-ray microCT (XRM), nuclear magnetic resonance imaging (MRI), and positron emission tomography (PET), which provide 3D high-resolution images of the internal structure, water content, and functional properties of the plant organs and tissues (roots, seeds, stems, etc.), thus allowing new insights into plant phenotyping based on novel traits not obtainable with the standard high-throughput phenotyping platforms.

Guest Editor

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Message from the Editor-in-Chief

Plants is an open access journal which provides an advanced forum for research findings in areas related to plant function, its physiology, biology, taxonomy, stresses, and its interactions with other organisms. It publishes original research articles, reviews, reports, conference proceedings (peer reviewed full articles) and communications. In original research papers, it is important that full experimental details are provided. We also encourage timely reviews and commentaries on topics of interest to the plant research community.

Editor-in-Chief

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