



Mechanisms of Light Stress and Light-Related Acclimation Processes

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Message from the Guest Editors

Light is indispensable for plants as an energy source. However, if the light intensity is too high or too low it acts as a stressor for the plants, and light stress occurs. Thus, high light intensity or even normal intensity under various biotic or abiotic stresses can induce oxidative stress because of the formation of reactive oxygen species in excess. On the other hand, a shorter period under high light intensity can lead to the acclimation of the plants to subsequent stress. During this process, the changes in the cellular redox environment will activate the protective mechanisms through the redox signaling pathways. Besides the changes in the intensity of the light, the modifications of its spectrum can be also stressful for plants and cause disorders in their physiological and biochemical processes. However, certain spatial and temporal alterations in the ratios of blue, red, and far-red components can be also beneficial and help the adaptation of the plants to the changing environmental conditions. This Special Issue will present and discuss the physiological, biochemical, and molecular biological processes during light stress and light-related acclimation in plants.





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