

## Special Issue

# Postharvest Treatment and Physicochemical Dynamics in Fruits

### Message from the Guest Editors

Postharvest treatment and the physicochemical dynamics in fruits represent a crucial intersection of plant physiology, biochemistry, and applied technology. After harvest, fruits remain metabolically active, undergoing respiration, ethylene synthesis, enzymatic degradation, and moisture loss, which collectively influence texture, flavor, nutritional value, and marketability. To mitigate rapid senescence and quality decline, interventions such as refrigeration, controlled-atmosphere storage, chemical regulators, and biotechnological innovations are employed to slow metabolic activity and extend shelf life. Recent research emphasizes sustainable and non-destructive approaches, reflecting global priorities in food security and environmental stewardship. Understanding the interplay between intrinsic physiological processes and external treatments is essential for optimizing storage protocols, reducing postharvest losses, and ensuring consumer satisfaction. By integrating knowledge of physicochemical dynamics with emerging technologies, this field advances strategies that preserve fruit quality, minimize waste, and contribute to resilient fruit production systems.

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