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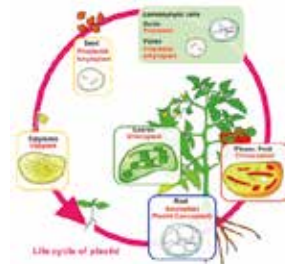


Photosynthesis and chloroplast biogenesis: Understanding to innovation

Plants perform photosynthesis in chloroplasts, where light energy is converted into chemical energy by a series of electrochemical reactions. In contrast, sessile land plants are exposed incessantly to excess light energy or harsh atmospheric environments that engender 'photodamage'. How do plants cope with such photosynthetic inactivation? What are the key elements to maintaining or even maximizing chloroplast functions?



Our group studies various aspects of chloroplast development and photosynthesis. Through understanding of the factors involved in photoprotection and chloroplast function, we aim at improving crop productivity against atmospheric stress over the long term.



Ongoing projects in Plant Light Acclimation Research Group

1. Proteolytic machineries in chloroplasts
2. Photooxidative stress and quality control of photosynthetic proteins
3. Maintenance of chloroplast envelope through protection mechanism through VIPP1
4. Behavior of chloroplast DNAs during leaf maturation and senescence
5. Quantitative trait locus (QTL) controlling stay green in sorghum

