

Photoprotection, Photoinhibition, Gene Regulation, and Environment - 9781402035791 - Barbara Demmig-Adams, William Adams, A. Mattoo - 2006 - 382 pages - Springer Science & Business Media, 2006

Photoprotection, Photoinhibition, Gene Regulation, and Environment: Advances in Photosynthesis and Respiration Book. Overview. Overview. CU Boulder Authors. Adams, William Walter, III. Demmig-Adams, Barbara. publication date. Environmental stresses that trigger photoinhibition include extreme temperatures, limited nutrient or water availability, and salinity. Evergreen coniferous forests in temperate climates, for example, show a complete shutdown of photosynthesis in response to frozen soils during the winter, when the efficiency of solar energy conversion in photosystem II drops to negligible levels in needles that nevertheless remain green and continue to absorb solar energy. Furthermore, high light stress can result from sudden increases in growth irradiance in experimental transfer treatments or, occasionally, This book was edited by three outstanding authorities in the areas of Photoprotection, Photoinhibition, Gene Regulation, and Environment: Barbara Demmig-Adams and William W. Adams III (both at the University of Colorado, Boulder, Colorado) and Autar K. Mattoo (Henry A. Wallace Beltsville Agricultural Research Center, Beltsville, Maryland). The topic of the book, as provided by our 3 distinguished editors, is: "Photoprotection, Photoinhibition, Gene Regulation, and Environment"; it examines the processes whereby plants monitor environmental conditions and orchestrate their response to change, a