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Collana	Advances in photosynthesis ; ; v. 9
Altri autori (Persone)	LeegoodRichard C SharkeyThomas D. <1946-> Von CaemmererS (Susanna)
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Nota di contenuto	The Calvin Cycle and Its Regulation -- Rubisco: Assembly and Mechanism -- Rubisco: Physiology in Vivo -- Photorespiration -- Metabolite Transport Across the Chloroplast Envelope of C3-Plants -- Photosynthesis, Carbohydrate Metabolism and Respiration in Leaves of Higher Plants -- Regulation of Carbon Fluxes in the Cytosol: Coordination of Sucrose Synthesis, Nitrate Reduction and Organic Acid and Amino Acid Biosynthesis -- Starch Metabolism in Leaves -- Control of Photosynthesis, Allocation and Partitioning by Sugar Regulated Gene Expression -- Intercellular Transport and Phloem Loading of Sucrose, Oligosaccharides and Amino Acids -- Regulation of Sugar Alcohol Biosynthesis -- Fructans: Synthesis and Regulation -- Acquisition and Diffusion of CO ₂ in Higher Plant Leaves -- Carbonic Anhydrase and Its Role in Photosynthesis -- CO ₂ Acquisition, Concentration and Fixation in Cyanobacteria and Algae -- Photosynthetic Fractionation of Carbon Isotopes -- C ₄ Photosynthesis: Mechanism and Regulation -- Transport During C ₄ Photosynthesis -- Developmental Aspects of C ₄ Photosynthesis -- The Physiological Ecology of C ₄ Photosynthesis -- CO ₂ Assimilation in C ₃ -C ₄ Intermediate Plants -- Induction of Crassulacean Acid Metabolism—Molecular Aspects -- Ecophysiology of Plants with Crassulacean Acid Metabolism.

Photosynthesis: Physiology and Metabolism is the we have concentrated on the acquisition and ninth volume in the series Advances in Photosynthesis metabolism of carbon. However, a full understanding (Series Editor, Govindjee). Several volumes in this of reactions involved in the conversion of to series have dealt with molecular and biophysical sugars requires an integrated view of metabolism. aspects of photosynthesis in the bacteria, algae and We have, therefore, commissioned international cyanobacteria, focussing largely on what have been authorities to write chapters on, for example, traditionally, though inaccurately, termed the 'light interactions between carbon and nitrogen metabolism, reactions' (Volume 1, The Molecular Biology of on respiration in photosynthetic tissues and on the Cyanobacteria; Volume 2, Anoxygenic Photosynthetic control of gene expression by metabolism. Photo- Bacteria, Volume 3, Biophysical Techniques in synthetic carbon assimilation is also one of the most Photosynthesis and Volume 7, The Molecular Biology rapid metabolic processes that occurs in plant cells, of the Chloroplasts and Mitochondria in Chlamy- and therefore has to be considered in relation to domonas). Volume 4 dealt with Oxygenic Photo- transport, whether it be the initial uptake of carbon, synthesis: The Light Reactions, and volume 5 with intracellular transport between organelles, inter- Photosynthesis and the Environment, whereas the cellular transport, as occurs in plants, or transport structure and function of lipids in photosynthesis of photosynthates through and out of the leaf. All was covered in Volume 6 of this series: Lipids in these aspects of transport are also covered in the Photosynthesis: Structure, Function and Genetics, book.
