1. Record Nr. UNINA9910298321603321

Autore	Beilby Mary J
Titolo	The Physiology of Characean Cells / / by Mary J. Beilby, Michelle T. Casanova
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2014
ISBN	3-642-40288-7
Edizione	[1st ed. 2014.]
Descrizione fisica	1 online resource (225 p.)
Disciplina	570.28
Soggetti	Plant physiology Cell biology Biology—Technique Biophysics Biological physics Plant Physiology Cell Biology Biological Techniques Biological and Medical Physics, Biophysics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	The Charophyte Plant -- Detached Cells in Steady-State – Electrophysiology and Transport -- Electrophysiology of the Detached Cell Under Stress -- The Whole Plant and Cell-to-Cell Transport.
Sommario/riassunto	This book describes the unique characean experimental system, which provides a simplified model for many aspects of the physiology, transport and electrophysiology of higher plants. The first chapter offers a thorough grounding in the morphology, taxonomy and ecology of Characeae plants. Research on characean detached cells in steady state is summarised in Chapter 2, and Chapter 3 covers characean detached cells subjected to calibrated and mostly abiotic types of stress: touch, wounding, voltage clamp to depolarised and hyperpolarised potential difference levels, osmotic and saline stress. Chapter 4 highlights cytoplasmic streaming, cell-to-cell transport, gravitropism, cell walls and the role of Characeae in phytoremediation.

The book is intended for researchers and students using the characean system and will also serve as an invaluable reference resource for electrophysiologists working on higher plants.