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Nota di contenuto	An Introduction to Synthetic Seeds: Production, Techniques, and Applications -- Synthetic Seeds: Relevance to Endangered Germplasm Conservation in vitro -- Synseed: A New Trend in Seed Technology -- Synthetic Seeds: An Alternative Approach for Clonal Propagation to Avoiding the Heterozygosity Problem of Natural Botanical Seeds -- Insight View of Topical Trends on Synthetic Seeds of Rare and Endangered Plant Species and Its Future Prospects -- Application of Synthetic Seeds in Propagation, Storage, and Preservation of Asteraceae Plant Species -- Synthetic Seeds: a Valuable Adjunct for Conservation of Medicinal Plants -- Cash Crops: Synseed Production, Propagation and Conservation -- Synthetic Seeds of Two Aquatic Plants -- Synthetic Seed Technology in Forest Trees: A Promising Technology for Conservation and Germplasm Exchange -- Medium and Long-Term Conservation of Ornamental Plants Using Synthetic Seed Technology -- Synthetic Seed Production of Flower Bulbs -- Applications of Synthetic

Seed Technology for Propagation, Storage, and Conservation of Orchid Germplasms -- Somatic Embryos Encapsulation for Synthetic Seeds Production of Sugar Palm (Arenga pinnata Wurmb Merr.)) -- Perspectives of Synthetic Seed Technology for Conservation and Mass Propagation of the Medicinal Plant Castilleja tenuiflora Benth -- Encapsulation and Synthetic Seeds of Olive (Olea europaea L.): Experiences and Overview -- Somatic Embryogenesis and Synthetic Seed Technology of Curcuma spp -- Synthetic Seeds of Wild Beet; Basic Concepts and Related Methodologies -- In vitro Conservation Through Slow-Growth Storage -- Synthetic Seeds: Prospects and Advances in Cryopreservation -- Progress and Challenges in the Application of Synthetic Seed Technology for Ex Situ Germplasm Conservation in Grapevine (Vitis spp.) -- Cryopreservation of Grapevine Shoot Tips from in vitro Plants Using Droplet Vitrification and V Cryo-Plate Techniques.

Sommario/riassunto

This book introduces the reader to synthetic or artificial seeds, which refer to alginate encapsulated somatic embryos, vegetative buds or any other micropropagules that can be used as seeds and converted into plantlets after propagating under in vitro or in vivo conditions. Moreover, synthetic seeds retain their potential for regeneration even after low-temperature storage. The production of synthetic or artificial seeds using micropropagules opens up new vistas in agricultural biotechnology. Encapsulated propagules could be used for in vitro regeneration and mass multiplication at reasonable cost. In addition, these propagules may be used for germplasm preservation of elite plant species and the exchange of plant materials between national and international laboratories. This book offers state-of-the-art findings on methods, applications and prospects of synthetic or artificial seeds.