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Sommario/riassunto

Giant vesicles are widely used as a model membrane system, both for basic biological systems and for their promising applications in the development of smart materials and cell mimetics, as well as in driving new technologies in synthetic biology and for the cosmetics and pharmaceutical industry. The reader is guided to use giant vesicles, from the formation of simple membrane platforms to advanced membrane and cell system models. It also includes fundamentals for understanding lipid or polymer membrane structure, properties and behavior. Every chapter includes ideas for further applications and discussions on the implications of the observed phenomena towards understanding membrane-related processes. The Giant Vesicle Book is meant to be a road companion, a trusted guide for those making their first steps in this field as well as a source of information required by experts. Key Features A complete summary of the field, covering fundamental concepts, practical methods, core theory, and the most promising applications A start-up package of theoretical and experimental information for newcomers in the field Extensive protocols for establishing the required preparations and assays Tips and instructions for carefully performing and interpreting measurements with giant vesicles or for observing them, including pitfalls Approaches developed for investigating giant vesicles as well as brief overviews of previous studies implementing the described techniques Handy tables with data and structures for ready reference
