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Titolo	Cell motility [[electronic resource] /] / edited by Peter Lenz
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Descrizione fisica	1 online resource (268 p.)
Collana	Biological and medical physics, biomedical engineering
Altri autori (Persone)	LenzPeter <1970->
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Soggetti	Cells - Motility Electronic books.
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Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	The Physics Of Listeria Propulsion -- Biophysical Aspects of Actin-Based Cell Motility in Fish Epithelial Keratocytes -- Directed Motility and Dictyostelium Aggregation -- Microtubule Forces and Organization -- Mechanisms of Molecular Motor Action and Inaction -- Molecular Mechanism of Mycoplasma Gliding - A Novel Cell Motility System -- Hydrodynamics and Rheology of Active Polar Filaments -- Collective Effects in Arrays of Cilia and Rotational Motors.
Sommario/riassunto	Cell motility is a fascinating example of cell behavior which is fundamentally important to a number of biological and pathological processes. It is based on a complex self-organized mechano-chemical machine consisting of cytoskeletal filaments and molecular motors. In general, the cytoskeleton is responsible for the movement of the entire cell and for movements within the cell. The main challenge in the field of cell motility is to develop a complete physical description on how and why cells move. For this purpose new ways of modeling the properties of biological cells have to be found. This long term goal can only be achieved if new experimental techniques are developed to extract physical information from these living systems and if theoretical models are found which bridge the gap between molecular and mesoscopic length scales. Cell Motility gives an authoritative overview of the fundamental biological facts, theoretical models, and current

experimental developments in this fascinating area.
