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Nota di contenuto	1. Once upon a (length and) time (scale) ... -- 2. The molecules of life-- an idiot's guide -- 3. Making the invisible visible: part 1 -- 4. Making the invisible visible: part 2 -- 5. Measuring forces and manipulating single molecules -- 6. Single molecule biophysics: the case studies that piece together the hidden machinery of the cell -- 7. Molecules from beyond the cell -- 8. Into the membrane -- 9. Inside cells -- 10. Single molecule biophysics beyond the single cell and beyond the single molecule.
Sommario/riassunto	Recent advances in single molecule science have presented a new branch of science: single molecule cellular biophysics, combining classical cell biology with cutting-edge single molecule biophysics. This textbook explains the essential elements of this new discipline, from the state-of-the-art single molecule techniques to real-world applications in unravelling the inner workings of the cell. Every effort has been made to ensure the text can be easily understood by students from both the physical and life sciences. Mathematical derivations are

kept to a minimum whilst unnecessary biological terminology is avoided and text boxes provide readers from either background with additional information. 100 end-of-chapter exercises are divided into those aimed at physical sciences students, those aimed at life science students and those that can be tackled by students from both disciplines. The use of case studies and real research examples make this textbook indispensable for undergraduate students entering this exciting field.
