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Nota di contenuto	Frontmatter -- Preface -- List of contributing authors -- Contents -- 1. Optical spectroscopy and calorimetry / Klostermeier, Dagmar / Hammann, Christian -- 2. Footprinting methods for mapping RNA-protein and RNA-RNA interactions / Duval, Mélodie / Romilly, Cedric / Helfer, Anne-Catherine / Fuchsbauer, Olivier / Romby, Pascale / Marzi, Stefano -- 3. Chemical approaches to the structural investigation of RNA in solution / Helm, Mark -- 4. Bioorthogonal modifications and cycloaddition reactions for RNA chemical biology / Höbartner, Claudia / Büttner, Lea / Javadi-Zarnaghi, Fatemeh -- 5. Analysis of RNA conformation using comparative gel electrophoresis / Lilley, David M. J. -- 6. Virus RNA structure deduced by combining X-ray diffraction and atomic force microscopy / McPherson, Alexander -- 7. Investigating RNA structure and folding with optical tweezers / Bercy, Mathilde / Mangeol, Pierre / Bizebard, Thierry / Tanner, N. Kyle / Banroques, Josette / Bockelmann, Ulrich -- 8. Fluorescence resonance energy transfer as a tool to investigate RNA structure and folding / Gubaev, Airat / Klostermeier, Dagmar -- 9. RNA studies by small angle X-ray scattering in solution / Kikhney, Alexey G. / Doniach, Sebastian / Svergun, Dmitri I. -- 10 Integrative structure-function analysis of large nucleoprotein complexes / Ménétret, Jean-François / Khatter, Heena / Simonetti, Angelita / Orlov, Igor / Myasnikov, Alexander G. /

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## Sommario/riassunto

While structure-function relationships of proteins have been studied for a long time, structural studies of RNA face additional challenges. Nevertheless, with the continuous discovery of novel RNA molecules with key cellular functions and of novel pathways and interaction networks, the need for structural information of RNA is still increasing. This volume provides an introduction into techniques to assess structure and folding of RNA. Each chapter explains the theoretical background of one technique, and illustrates possibilities and limitations in selected application examples.

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