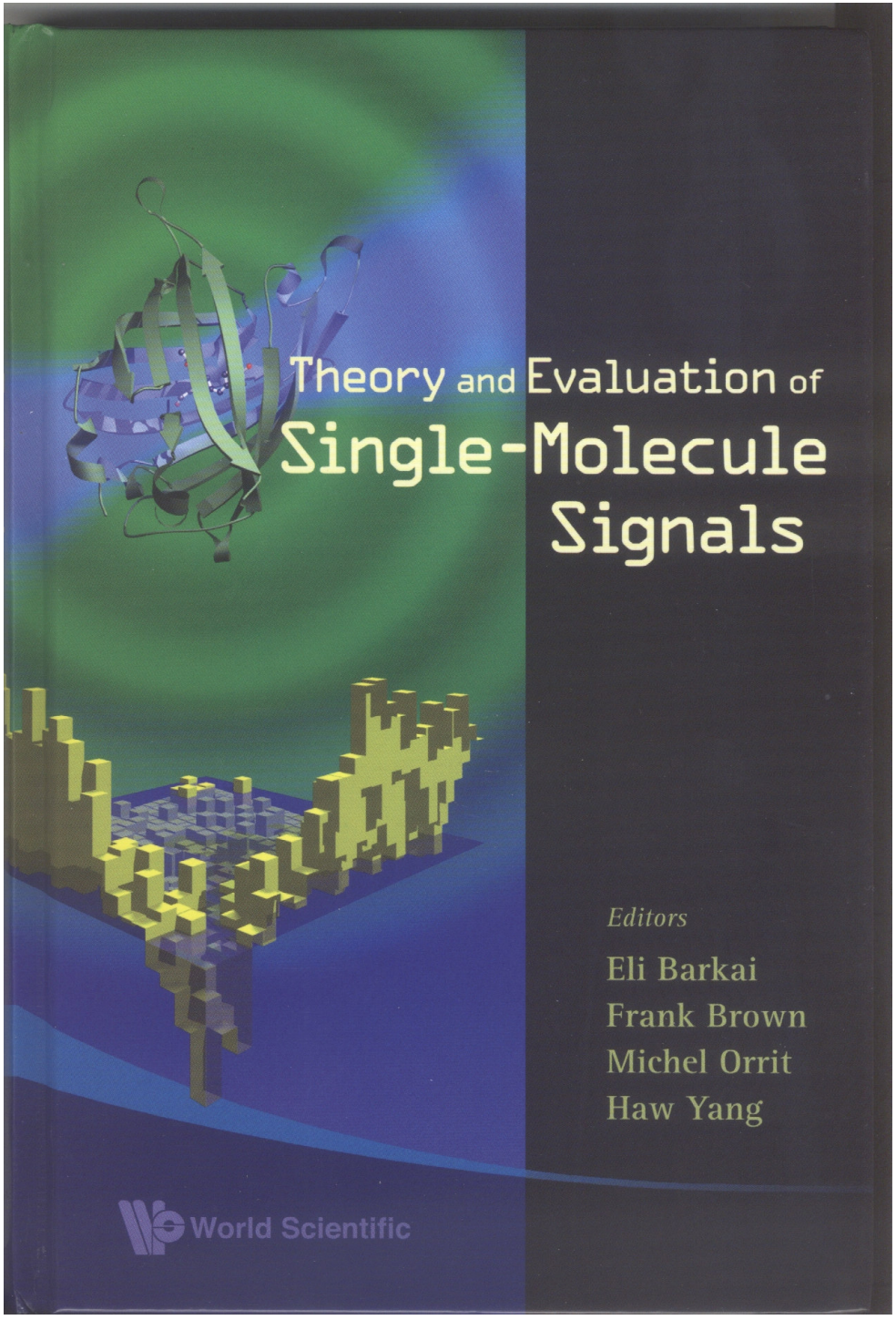
Theory and Evaluation of
Single-Molecule
Signals
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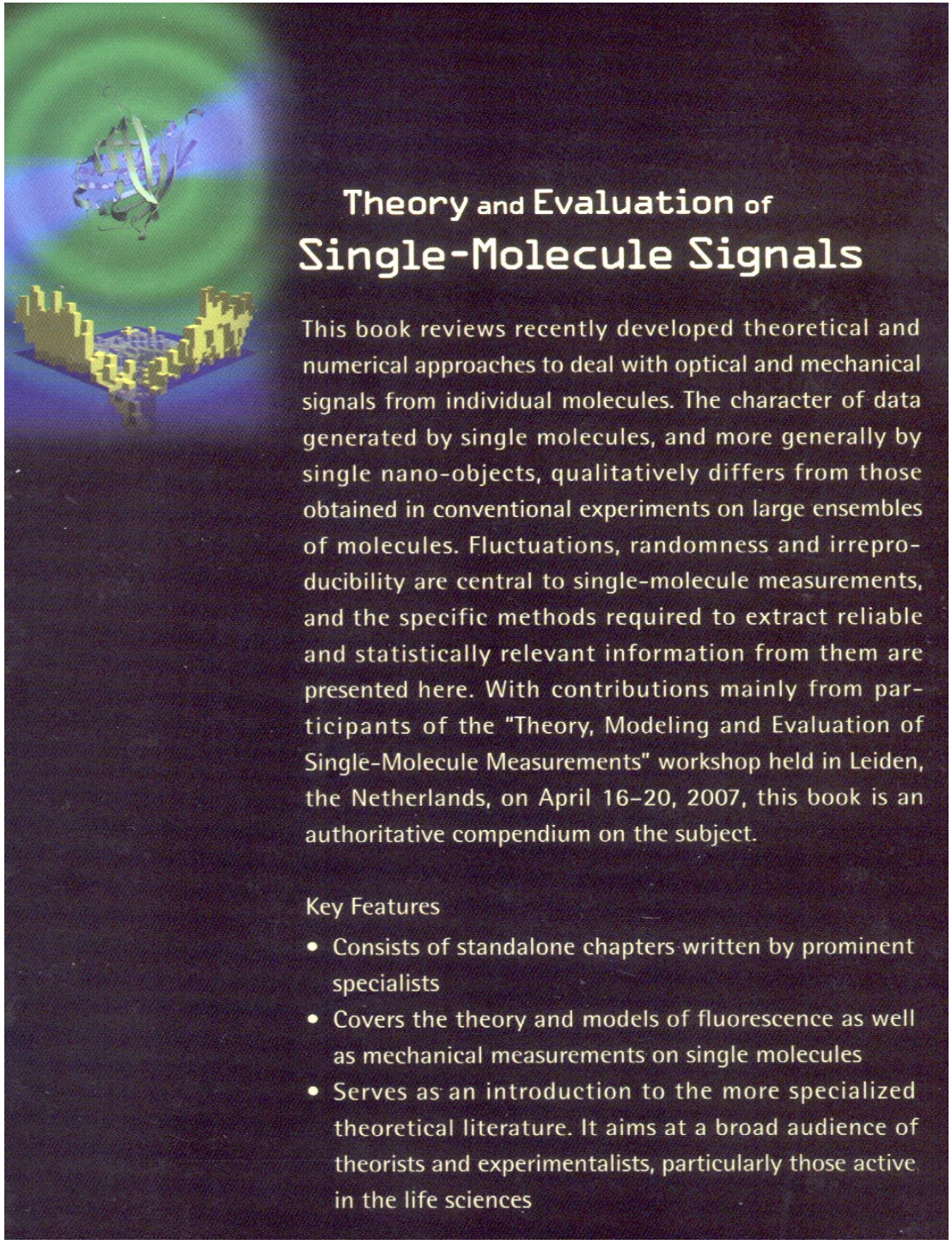
Theory and Evaluation of
Single-Molecule Signals
This book reviews recently developed theoretical and numerical approaches to deal with optical and mechanical signals from individual molecules. The character of data generated by single molecules, and more generally by single nano-objects, qualitatively differs from those obtained in conventional experiments on large ensembles of molecules. Fluctuations, randomness and irreproducibility are central to single-molecule measurements, and the specific methods required to extract reliable and statistically relevant information from them are presented here. With contributions mainly from participants of the "Theory, Modeling and Evaluation of Single-Molecule Measurements" workshop held in Leiden, the Netherlands, on April 16–20, 2007, this book is an authoritative compendium on the subject.
Key Features
• Consists of standalone chapters written by prominent specialists
• Covers the theory and models of fluorescence as well as mechanical measurements on single molecules
• Serves as an introduction to the more specialized theoretical literature. It aims at a broad audience of theorists and experimentalists, particularly those active in the life sciences