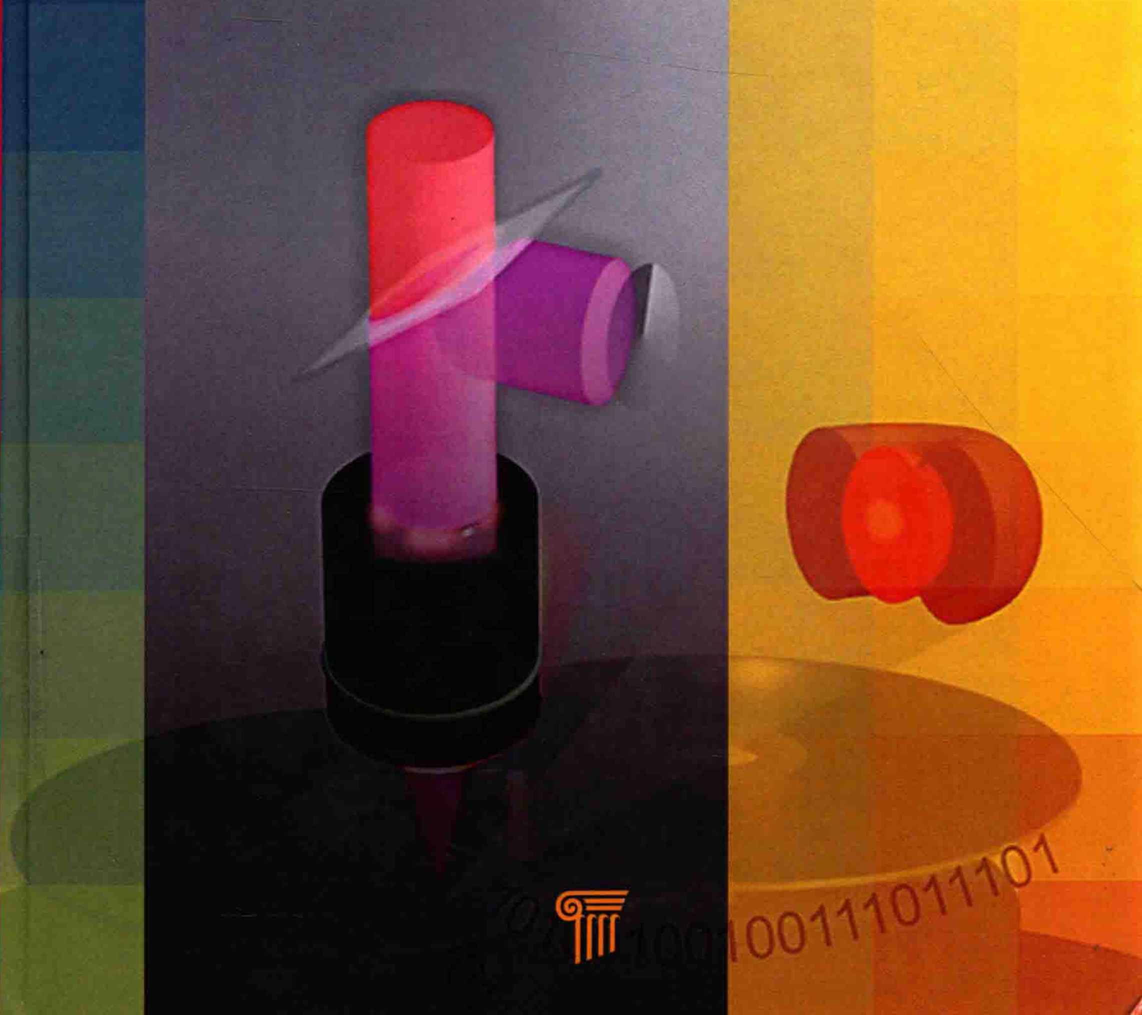
Data Storage at the Nanoscale

Advances and Applications

edited by

Gan Fuxi | Wang Yang



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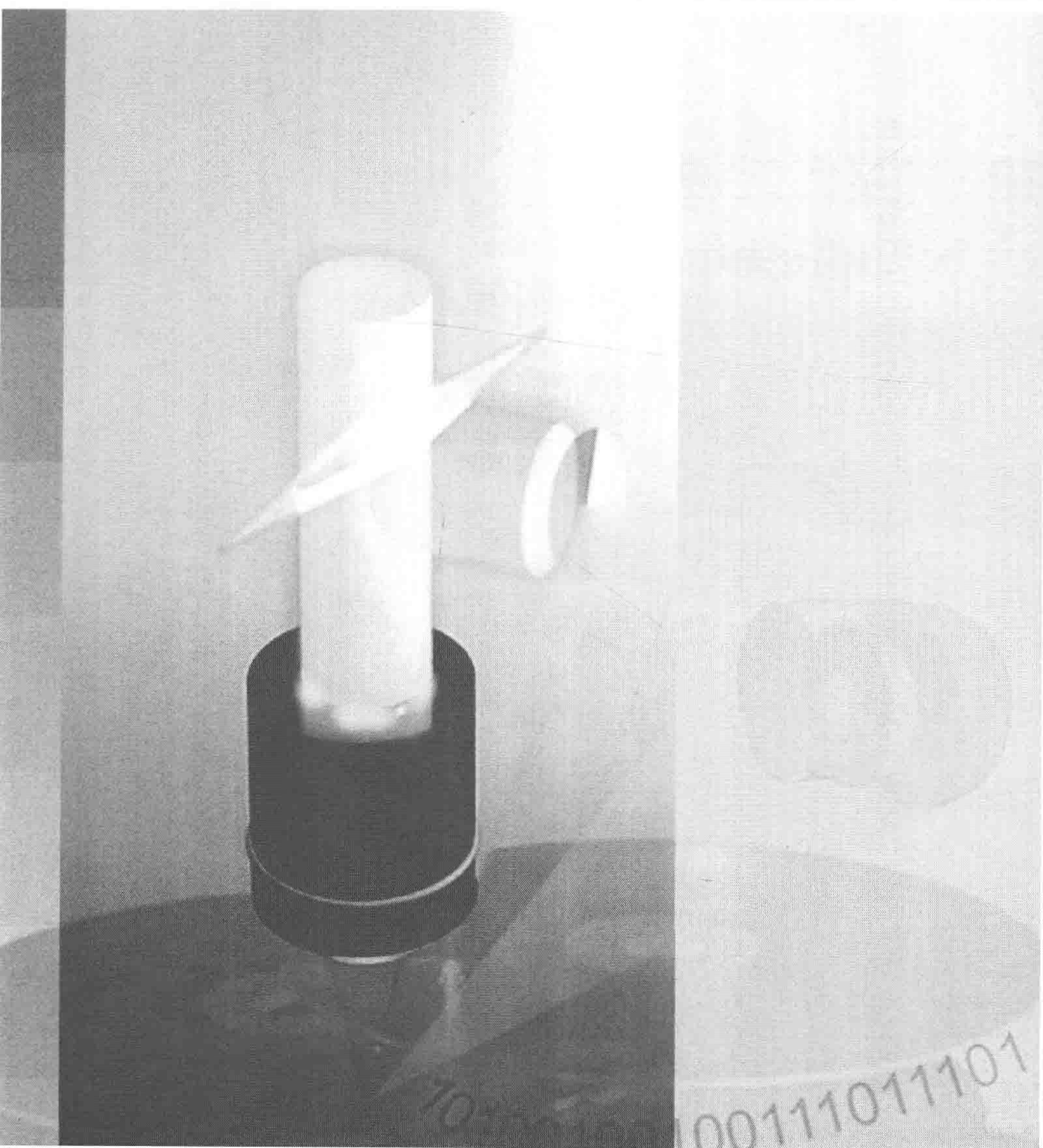

Preface

Since the mid-1980s, when I got involved in the field of information data storage, I was most interested in optical data storage. I held the International Symposium on Optical Storage (ISOS) in China nine times since 1988 and the International Workshop on Information Storage two times since 2008, and the proceedings were published in SPIE Proceedings, Washington.

New ideas and experiments related to advanced data storage have emerged in recent years, such as quantum storage, atomic storage, and biomolecular storage, which should be encouraged further. I did some work in the field of information data storage in past 10 years, and I am still involved in it. Owing to the requirement of high storage density, the data storage device should work in the nanoscale region. High-density data storage should be green, safe, and long life in the "big data era."

In this book, I invited several scientists of China to present their research in the field. The book emphasizes more practical methods for data storage development and application. The authors share with the readers their thoughts concerning information data storage at present and in the future.

I thank the authors of this book for their contributions. Also, thanks are due to my colleagues at the Shanghai Institute of Optics and Fine Mechanics, CAS, for their assistance and cooperation, especially to Prof. Wang Yang, the coeditor, for checking and editing all the manuscripts. The editing and publication of this book were also supported under the research grants of the National Natural Science Foundation of China, the National Basic Research Program of China, and the Intellectual Innovation Project of the Chinese Academy of Sciences.

Gan Fuxi

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