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Descrizione fisica	1 online resource (347 p.)
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Altri autori (Persone)	PiramanayagamS. N ChongTow C
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Nota di contenuto	Preface. -- Acknowledgments. -- 1. Introduction. -- 2.Fundamentals of Magnetism. -- 3. Longitudinal Recording Media. -- 4. Perpendicular Recording Medium. -- 5. Writer heads - Fundamentals. -- 6. Magneto-resistive Read Heads: Fundamentals and Functionality. -- 7. Read sensors for over 1 Terabits per square inch. -- 8. Thin film media Lubricants: Structure, Characterization and Performance. -- 9. Overcoat Materials for Magnetic Recording Media. -- 10. Heat Assisted Magnetic Recording. -- 11. L lo FePt for Magnetic Recording Media Applications. -- 12. Patterned Magnetic Recording Media: Progress and Prospects. -- 13. Phase Change Random Access Memory. -- 14. Non-volatile Solid State Magnetic Memory.
Sommario/riassunto	"The book covers the recent developments in the field of materials for

advancing recording technology by experts worldwide. Chapters that provide sufficient information on the fundamentals will be also included, so that the book can be followed by graduate students or a beginner in the field of magnetic recording. The book also would have a few chapters related to optical data storage. In addition to helping a graduate student to quickly grasp the subject, the book also will serve as a useful reference material for the advanced researcher. The field of materials science related to data storage applications (especially hard disk drives) is rapidly growing. Several innovations take place every year in order to keep the growth trend in the capacity of the hard disk drives. Moreover, magnetic recording is very complicated that it is quite difficult for new engineers and graduate students in the field of materials science or electrical engineering to grasp the subject with a good understanding. There are no competing books in this area, considering that a book that may look 50% similar to the proposed book was published in 2001. A span of 6 years is too long gap, considering the progress this field makes every year"--