Magnetic Nano- and Microwires
Design, Synthesis, Properties and Applications
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The most comprehensive reference available on magnetic nanowires and microwires

A Volume in the Woodhead Publishing Series in Electronic and Optical Materials

KEY FEATURES

• Details the multiple key techniques for the growth, processing and characterization of nanowires and microwires
• Discusses magnetism and transport in nanowires, skyrmions and domain walls in nano and microwires and the latest innovations in magnetic imaging
• Reviews the principles and difficulties involved in applying magnetic nano- and microwires to a wide range of technologies, including biomedical and sensing applications

DESCRIPTION

Magnetic Nano-and Microwires: Design, Synthesis, Properties and Applications, Second Edition, reviews the growth and processing of nanowires and nanowire heterostructures using such methods as electrodeposition and sol-gel, focused-electron/ion-beam-induced deposition, epitaxial growth by chemical vapor transport, and ultrafast solidification. Other sections cover engineering nanoporous anodic alumina, discuss magnetic and transport properties, domains, domain walls in nano-and microwires, and provide updates on skyrmions, domain walls, magnetism and transport, and the latest techniques to characterize and analyze these effects.

Final sections cover applications, both current and emerging, and new chapters on memory, sensor, thermoelectric and nanorobotics applications. This book will be an ideal resource for academics and industry professionals working in the disciplines of materials science, physics, chemistry, electrical and electronic engineering and nanoscience.

ENGINEERING
Materials
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