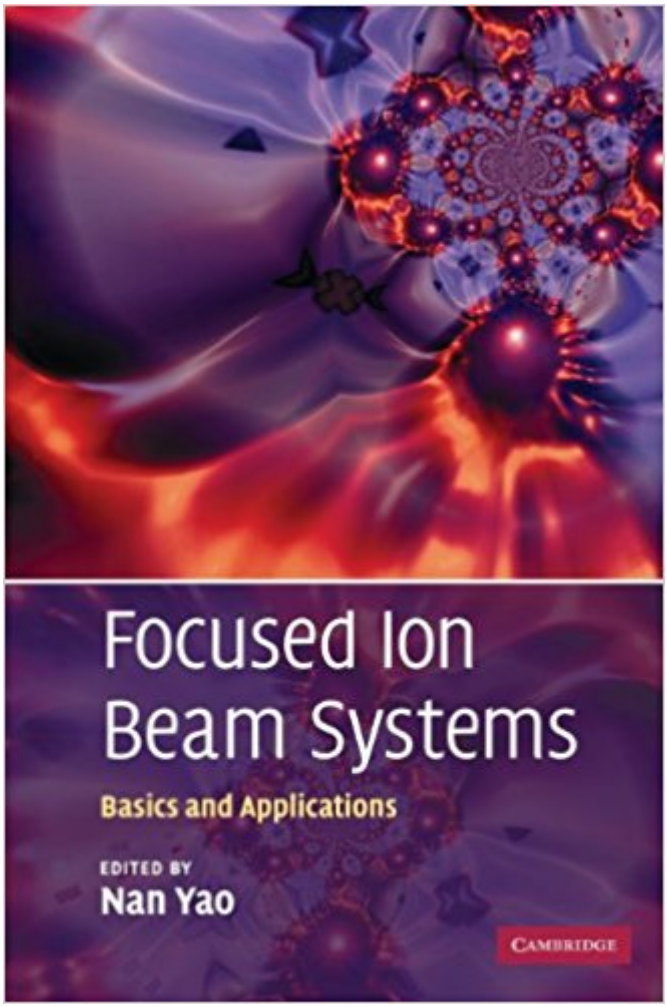
Focused Ion Beam Systems: Basics And Applications



Synopsis

The focused ion beam (FIB) system is an important tool for understanding and manipulating the structure of materials at the nanoscale. Combining this system with an electron beam creates a DualBeam - a single system that can function as an imaging, analytical and sample modification tool. Presenting the principles, capabilities, challenges and applications of the FIB technique, this edited volume, first published in 2007, comprehensively covers the ion beam technology including the DualBeam. The basic principles of ion beam and two-beam systems, their interaction with materials, etching and deposition are all covered, as well as in situ materials characterization, sample preparation, three-dimensional reconstruction and applications in biomaterials and nanotechnology. With nanostructured materials becoming increasingly important in micromechanical, electronic and magnetic devices, this self-contained review of the range of ion beam methods, their advantages, and when best to implement them is a valuable resource for researchers in materials science, electrical engineering and nanotechnology.

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Customer Reviews

This edited volume comprehensively covers the focused ion beam and two beam technology. Presenting the basic principles, capabilities, challenges, advantages, applications and when best to implement the technology, this is a valuable resource for researchers in materials science, electrical engineering and nanotechnology.

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I know people will think me nuts raving about a book on Focused Ion Beam Systems. But! Hey! This technology is the wave of the future. Editing and saving a wafer that would cost $100K to respin is a game changer. If you are new to the FIB technology than this is the first book for you. Bought my first FIB this year, this book is always close by.