Spectroscopic Ellipsometry: Principles and Applications

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DESCRIPTION

Ellipsometry is a powerful tool used for the characterization of thin films and multi-layer semiconductor structures. This book deals with fundamental principles and applications of spectroscopic ellipsometry (SE). Beginning with an overview of SE technologies the text moves on to focus on the data analysis of results obtained from SE. Fundamental data analyses, principles and physical backgrounds and the various materials used in different fields from LSI industry to biotechnology are described. The final chapter describes the latest developments of real-time monitoring and process control which have attracted significant attention in various scientific and industrial fields.

ABOUT THE AUTHOR

Dr Hiroyuki Fujiwara is based at the National Institute of Advanced Industrial Science and Technology, Ibaraki, Japan. He received his PhD at the Tokyo Institute of Technology in 1996 and carried out post-doctoral research with Professor R.W. Collins at Penn State University. From 1998 to present he has been working as a senior research scientist at the Research Center for Photovoltaics at NIAIST. He received the 'Most Promising Young Scientist Award' from the Japan Society of Applied Physics and the 'Young Researcher Award' at the World Conference on Photovoltaic Energy Conversion in 2003.