



## Surface and Thin Film Analysis by Spectroscopic Reflectometry with Extreme Ultraviolet Emitting Laboratory Sources

By Matus Banyay

Apprimus Wissenschaftsver Jul 2011, 2011. Taschenbuch. Book Condition: Neu. 208x146x10 mm. Neuware - Methods to investigate thin-films or surfaces using electromagnetic radiation can be traced back many decades. Some methods are even more than a hundred years old, such as ellipsometry or reflectometry. Their potential has been recognized by the industry and remained one of the main workhorses for many applications. With the invention of the laser in the 60s, more sophisticated metrology methods became available and known optical, non-destructive, techniques could be improved. Probably the worlds economically and technologically most important material so far, silicon, has created an enormous industry that is ever more in the need for laboratory based tools to characterize e.g. wafers, masks or thin-films. As the downsizing of devices continues even further, classical techniques in the visible range are reaching their limit. Hence, it becomes necessary to push some of the known methods towards shorter wavelengths well below 100 nm. The use of extreme ultraviolet radiation (XUV) enables a variety of new optical and analytical techniques, e.g. in lithography, microscopy and reflectometry. Although this radiation has been a strong domain of synchrotron sources so far, there is an increasing industrial and scientific progress in the...



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