1. Record Nr. UNISALENTO991003233999707536

Autore	Khomchenko, Alexander V.
Titolo	Waveguide spectroscopy of thin films [e-book] / Alexander V. Khomchenko
Pubbl/distr/stampa	Amsterdam : Elsevier, 2005
ISBN	9780120885152 0120885158
Descrizione fisica	xv, 220 p. : ill. ; 24 cm
Collana	Thin films and nanostructures ; v. 33
Disciplina	530.4175
Soggetti	Thin films - Spectra Thin films - Optical properties Couches minces - Spectre Couches minces - Propriétés optiques Electronic books.
Lingua di pubblicazione	Inglese
Formato	Risorsa elettronica
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references (p. 207-217) and index
Nota di contenuto	Foreword -- -- Acknowledgements -- -- Contents -- -- Introduction -- -- 1. Interaction of light with matter -- -- 2. Spectroscopy of optical guided modes -- -- 3. New applications of the m-line technique for thin-film structure studying -- -- 4. Spatial Fourier spectroscopy of guided modes: measuring the thin-film parameters -- -- 5. Characterizations of thin films by prism coupling of leaky modes -- -- 6. Measurements of absorption spectra of thin films -- -- 7. Applications of waveguide spectroscopy techniques in sensor systems -- -- 8. Optical nonlinearity in thin films at low-intensity light -- -- 9. Optical nonlinearity in multilayer structures -- -- Bibliography -- -- Index
Sommario/riassunto	In this book new methods of study of the linear and nonlinear optical properties of thin films are presented. These techniques are based on the principles of the spatial Fourier spectroscopy of the light beam reflected from a prism-coupling device with the tunnel excitation of guided lightmodes in thin-film structures. Measurement techniques of determination of the absorption coefficient, refractive index and thickness of the dielectric, semiconductor or metallic films are

considered. This book is highly recommended for specialists in the fields of integrated and thin film optics and for graduated students in related specialties. There are new techniques of measurement of thin-film parameters stated