1. Record Nr. UNINA9910789064203321 Autore Tishko Tatyana Titolo Holographic microscopy of phase microscopic objects [[electronic resource]]: theory and practice / / Tatyana Tishko, Tishko Dmitry, Titar Vladimir Singapore, : World Scientific, 2011 Pubbl/distr/stampa **ISBN** 1-283-43334-6 9786613433343 981-4289-55-8 Descrizione fisica 1 online resource (109 p.) Altri autori (Persone) **TishkoDmitry** TitarV. P (Vladimir Petrovich) Disciplina 502.82 502.825 Soggetti Electron microscopes Microscopy Microscopy - Technique Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Description based upon print version of record. Note generali Nota di bibliografia Includes bibliographical references and index. Nota di contenuto Preface: Contents: Introduction: Chapter 1 Classical Microscopy and Methods of Phase Microscopic Objects Visualization; 1.1 The theory of object imaging by microscope; 1.2 Phase microscopic objects; 1.3 Interference phenomenon; 1.4 F. Zernike's phase-contrast method; 1.5

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The book presents a clear and comprehensive review of the current status of the holographic microscopy with discussion of the positive and negative features of classical and holographic methods for solving the problem of three-dimesional (3D) imaging of phase microscopic objects. Classical and holographic methods of phase, interference and polarization contrast are discussed. Combination of the developed holographic methods with the methods of digital image processing allowed creating the digital holographic interference microscope (DHIM). The first 3D images of native phase microscopic object