

1. Record Nr.	UNINA9910829907503321
Autore	Goure Jean
Titolo	Optics in instruments
Pubbl/distr/stampa	[Place of publication not identified], : ISTE, 2011
ISBN	1-118-74432-2 1-118-74446-2 1-118-74439-X
Edizione	[1st edition]
Descrizione fisica	1 online resource (1 v.) : ill
Disciplina	681/.4
Soggetti	Optical instruments - Equipment and supplies Optoelectronic devices Optics Mechanical Engineering Engineering & Applied Sciences Industrial & Management Engineering
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Optics and instruments -- Formation of images -- A revision of photometry and radiometry -- Light sources for optical instruments -- Colorimetry -- Bases for image analysis -- Optics for imaging : definition, manufacturing, applications -- Optics for images at low light levels -- From the classic microscope to the tunnel effect microscope.
Sommario/riassunto	The role of optical instruments is very important and affects all areas of human activity, from scientific analysis (such as spectrometry) to recreation and leisure pursuits like photography and television. Optical components are often an essential part of the instrument, but are not always visible. It is therefore useful and important to understand how they work. In this book the reader will find both a review of the most important components currently used, the theoretical foundation for their application, and an example of evolution. To do this, we first supply the basic knowledge in optics necessary for the understanding of the instruments: geometrical optics, photometry, colorimetry, image analysis and processing, as well as a short description of the sources

used: lamps, lasers and semiconductor sources. Optical systems such as zoom lens under different illuminations are discussed. As a first example of application, the evolution of microscopy, up to the most recent technological progress, are given.
