1. Record Nr. UNISA990000347650203316

Autore	WALTHER, René
Titolo	Cable stayed bridges / Renè Walther ...[et al.]
Pubbl/distr/stampa	London : Telford, copyr.1999
ISBN	0-7277-2773-7
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Descrizione fisica	225 p. : ill. ; 28 cm
Disciplina	624.5
Soggetti	Ponti strallati
Collocazione	624.5 CAB
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia

2. Record Nr. UNINA9910300422303321

Autore	Esseling Michael
Titolo	Photorefractive Optoelectronic Tweezers and Their Applications / / by Michael Esseling
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ISBN	3-319-09318-5
Edizione	[1st ed. 2015.]
Descrizione fisica	1 online resource (133 p.)
Collana	Springer Theses, Recognizing Outstanding Ph.D. Research, , 2190-5053
Disciplina	681.757
Soggetti	Amorphous substances Complex fluids Lasers Photonics Nanotechnology Biophysics Nanoscience Nanostructures Soft and Granular Matter, Complex Fluids and Microfluidics Optics, Lasers, Photonics, Optical Devices Biological and Medical Physics, Biophysics

	Nanoscale Science and Technology
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Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	"Doctoral Thesis accepted by University of Munster, Germany."
Nota di bibliografia	Includes bibliographical references at the end of each chapters.
Nota di contenuto	Introduction -- Electrokinetic Forces in Inhomogeneous Fields -- Electric Fields and Their Detection in Photorefractive Crystals -- Investigation of Photorefractive Substrate Materials -- Optically-Induced Dielectrophoretic Particle Trapping -- Optofluidic Applications for POT -- Summary -- Appendices.
Sommario/riassunto	In the never-ending quest for miniaturization, optically controlled particle trapping has opened up new possibilities for handling microscopic matter non-invasively. This thesis presents the application of photorefractive crystals as active substrate materials for optoelectronic tweezers. In these tweezers, flexible optical patterns are transformed into electrical forces by a photoconductive material, making it possible to handle matter with very high forces and high throughput. Potential substrate materials’ properties are investigated and ways to tune their figures-of-merit are demonstrated. A large part of the thesis is devoted to potential applications in the field of optofluidics, where photorefractive optoelectronic tweezers are used to trap, sort and guide droplets or particles in microfluidic channels, or to shape liquid polymers into optical elements prior to their solidification. Furthermore, a new surface discharge model is employed to discuss the experimental conditions needed for photorefractive optoelectronic tweezers.