1. Record Nr. UNISA990001876910203316

Titolo	Diophantine approximation : lectures given at the C.I.M.E. summer school held in Cetraro, Italy, June 28-July 6, 2000 / D. Masser ... [et al.] ; editors F. Amoroso, U. Zannier
Pubbl/distr/stampa	Berlin [etc.] : Springer, copyr. 2003
ISBN	3-540-40392-2
Descrizione fisica	XI, 351 p. : ill. ; 24 cm.
Collana	Lecture notes in mathematics ; 1819
Disciplina	512.73
Collocazione	510 LNM 1819
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia

2. Record Nr. UNINA9910300374203321

Autore	Wang Yue
Titolo	Low Threshold Organic Semiconductor Lasers : Hybrid Optoelectronics and Applications as Explosive Sensors / / by Yue Wang
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2014
ISBN	3-319-01267-3
Edizione	[1st ed. 2014.]
Descrizione fisica	1 online resource (174 p.)
Collana	Springer Theses, Recognizing Outstanding Ph.D. Research, , 2190-5053
Disciplina	621.36 621.366
Soggetti	Lasers Photonics Nanoscience Nanostructures Semiconductors Microwaves Optical engineering Nanotechnology Optics, Lasers, Photonics, Optical Devices Nanoscale Science and Technology Microwaves, RF and Optical Engineering

Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Introduction -- Theory of organic semiconductor lasers -- Experimental methods -- Low-threshold and broadly tuneable organic lasers based on star-shaped oligofluorene truxenes -- Commercial LED pumped organic semiconductor lasers -- Low threshold nanoimprinted organic lasers integration with micro-LED arrays -- Polymer with intrinsic microporosity used as explosive vapour sensors -- Towards ultra-portable hybrid organic/inorganic explosives sensing devices -- Conclusions and future work.
Sommario/riassunto	This thesis focuses on two areas - the development of miniature plastic lasers that can be powered by LEDs, and the application of these lasers as highly sensitive sensors for vapours of nitroaromatic explosives (e.g. TNT). Polymer lasers are extremely compact visible lasers; the research described in the thesis is groundbreaking, driving forward the technology and physical understanding to allow these lasers to be routinely pumped by a single high-power LED. A notable advance in the work is the demonstration of nanoimprinted polymer lasers, which exhibit the world's lowest pump threshold densities by two orders of magnitude. The thesis also advances the application of these compact, novel lasers as highly sensitive detectors of explosive vapours, demonstrating that rapid detection can be achieved when microporous polymers are used. This work also demonstrates a prototype CMOS-based microsystem sensor for explosive vapours, exploiting a new detection approach.