1. Record Nr. UNISALENTO991002784889707536

Autore	Demtröder, Wolfgang
Titolo	Laser spectroscopy 2 : experimental techniques / Wolfgang Demtröder
Pubbl/distr/stampa	New York : Springer, 2014
ISBN	9783662446409 (hbk.)
Edizione	[5th ed.]
Descrizione fisica	xxii, 757 p. : ill. ; 24 cm
Classificazione	LC QC454.L3 53.5.44
Disciplina	621.366
Soggetti	Laser spectroscopy
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and indexes
Nota di contenuto	Doppler-Limited Absorption and Fluorescence Spectroscopy with Lasers -- Nonlinear Spectroscopy -- Laser Raman Spectroscopy -- Laser Spectroscopy in Molecular Beams -- Optical Pumping and Double-Resonance Techniques -- Time-Resolved Laser Spectroscopy -- Coherent Spectroscopy -- Laser Spectroscopy of Collision Processes -- New Developments in Laser Spectroscopy -- Applications of Laser Spectroscopy -- Solutions.
Sommario/riassunto	Keeping abreast of the latest techniques and applications, this new edition of the standard reference and graduate text on laser spectroscopy has been completely revised and expanded. While the general concept is unchanged, the new edition features a broad array of new material, e.g., ultrafast lasers (atto- and femto-second lasers), coherent matter waves, Doppler-free Fourier spectroscopy, interference spectroscopy, quantum optics and gravitational waves and still more applications in chemical analysis, medical diagnostics, and engineering.

2. Record Nr. UNINA9910350294303321

Autore	Song Seo Woo
Titolo	One-Step Generation of a Drug-Releasing Microarray for High-Throughput Small-Volume Bioassays / / by Seo Woo Song
Pubbl/distr/stampa	Singapore : , : Springer Singapore : , : Imprint : Springer, , 2019
ISBN	981-13-8094-5
Edizione	[1st ed. 2019.]
Descrizione fisica	1 online resource (XXI, 52 p. 46 illus., 40 illus. in color.)
Collana	Springer Theses, Recognizing Outstanding Ph.D. Research, , 2190-5053
Disciplina	610.28
Soggetti	Biomedical engineering Microarrays Amorphous substances Complex fluids Nanotechnology Microbiology Biotechnology Biomedical Engineering and Bioengineering Soft and Granular Matter, Complex Fluids and Microfluidics Nanotechnology and Microengineering Applied Microbiology Microengineering
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Abstract -- Table of Contents -- List of Tables -- List of Figures -- Chapter 1. Introduction -- 1.1. High-Throughput Small-Volume Bioassays -- 1.2. Developmental Goal for the ‘Pipetting-Free’ HTS Platforms -- 1.3. Main Concept: One-Step Generation of a Drug-Releasing Microarray-on-a-Chip by Self-Assembly of Drug-Laden Microparticles (DLPs) -- Chapter 2. System Development -- 2.1. Sealing-Film Assisted Seeding Method for Saving Cell Consumptions -- 2.2. Chip and Jig Development -- 2.3. Preparation of DLPs Library -- 2.4. Decoding Microparticles -- 2.5. Statistical Analysis for Duplications -- Chapter 3. Application: Screening of Sequential Drug Combinations

	-- 3.1. Therapeutic Benefit of Sequential Drug Combination Based on Rewiring of Intracellular Pathways -- 3.2. Screening of Sequential Drug Combination Using a Partipetting Platform -- 3.3. Proof-of-Concept: Sequential Combinatorial Cell Staining Assay by Replacement of the Drug Chip -- 3.4. Screening of Sequential Combinatorial Drugs with EGFR Inhibitor Followed by Genotoxin against Triple Negative Breast Cancer (TNBC) -- Chapter 4. Conclusion and Discussion -- Bibliography.
Sommario/riassunto	This thesis demonstrates a technology that enables pipetting-free high-throughput screening (HTS) on a miniaturized platform, eliminating the need for thousands of one-by-one pipetting and conventional liquid handling systems. This platform enhances accessibility to HTS and enables HTS to be used in small-to-medium scale laboratories. In addition, it allows large-scale combinatorial screening with a small number of valuable cells, such as patients' primary cancer cells. This technique will have a high impact for widespread use of HTS in the era of personalized medicine. In this thesis, the author firstly describes the need and concept of 'partipetting' for pipetting-free HTS platform. It is realized by the one-step pipetting and self-assembly of encoded drug-laden microparticles (DLPs) on the microwells. Next, the technical implementations required for the platform demonstration are described. It includes preparation of encoded DLPs, plastic chip fabrication, and realization of automated system. Lastly, screening of sequential drug combinations using this platform is demonstrated. This shows the potential of the proposed technology for various applications.