Record Nr. UNINA9910799220703321 Wearable Biosensing in Medicine and Healthcare [[electronic resource] /] **Titolo** / edited by Kohji Mitsubayashi Pubbl/distr/stampa Singapore:,: Springer Nature Singapore:,: Imprint: Springer,, 2024 **ISBN** 981-9981-22-0 Edizione [1st ed. 2024.] Descrizione fisica 1 online resource (VIII, 489 p. 206 illus., 194 illus. in color.) 620.19 Disciplina Soggetti Materials **Detectors** Molecular probes **Biomaterials** Biomedical engineering Sensors and biosensors **Biological Sensors and Probes Biomedical Materials** Biomedical Devices and Instrumentation Biomedical Engineering and Bioengineering Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di contenuto Part I: Wearable biomedical sensors -- Chapter 1. Cavitas biosensors (Body cavity sensors) -- Chapter 2. Wearable sensors in the medical field -- Chapter 3. Wearable Electrochemical Biosensors for Glucose Monitoring -- Chapter 4. Smart textile hitoe and its application --Chapter 5. Biosensors on Contact Lens -- Chapter 6. Wearable Device for Blood Pressure Estimation Based on Pulse Rate Measurement --Chapter 7. Wearable non-invasive sensors for transdermal monitoring -- Part II: Novel approaches for wearable biosensing -- Chapter 8. Wearable microneedle sensors: Journey towards Lab under the Skin --Chapter 9. Wireless biosensors for smart contact lenses -- Chapter 10. Wearable Biosensors on Sutures and Threads -- Chapter 11.

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## Sommario/riassunto

This book contains chapters on wearable biomedical sensors and their assistive technologies for promoting behavioral change in medical and health care. Part I reviews several wearable biomedical sensors based on biocompatible materials and nano and micro-electromechanical systems (MEMS) technologies in the medical and dental fields. Part II introduces the latest approaches to wearable biosensing using unique devices for various skin targets such as sweat, interstitial fluid, and transcutaneous gases. Part III presents technologies supporting wearable sensors, including soft and flexible materials, manufacturing methods, skin volatile-marker imaging, and energy harvesting devices. This book is intended for graduate students, academic researchers, and professors that work in medical and healthcare research fields, as well as industry professionals involved in the development of wearable and flexible sensing devices and measurement systems for human bio/chemical sensing, medical monitoring, and healthcare services, and for medical professionals and government officials who are driving behavior change in health care.