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| 1. Record Nr. | UNINA9910745584303321 |
| Titolo | Bio-Inspired Information Pathways : From Neuroscience to Neurotronics // edited by Martin Ziegler, Thomas Mussenbrock, Hermann Kohlstedt |
| Pubbl/distr/stampa | Cham : , : Springer International Publishing : , : Imprint : Springer, , 2024 |
| ISBN | 3-031-36705-7 |
| Edizione | [1st ed. 2024.] |
| Descrizione fisica | 1 online resource (XIII, 433 p. 226 illus., 187 illus. in color.) |
| Collana | Springer Series on Bio- and Neurosystems, , 2520-8543 ; ; 16 |
| Disciplina | 610.28 |
| Soggetti | Neurotechnology (Bioengineering) Electronics Nanoelectromechanical systems Neuroengineering Electronics and Microelectronics, Instrumentation Nanoscale Devices |
| Lingua di pubblicazione | Inglese |
| Formato | Materiale a stampa |
| Livello bibliografico | Monografia |
| Nota di contenuto | Matter & Mind Matter -- Neuromorphic circuits with redox-based memristive devices -- Redox-based bi-layer oxide metal memristive devices -- MemFlash – Floating Gate Transistors as Memristors -- Critical discussion of ex situ and in situ TEM measurements of memristive devices -- Modeling and Simulation of of Silver-based Filamentary Memristive Devices -- Bio-inspired, neuromorphic acoustic sensing. |
| Sommario/riassunto | This open access book offers a timely and comprehensive review of the field of neurotronics. Gathering cutting-edge contributions from neuroscientists, biologists, psychologists, as well as physicists, microelectronics engineers and information scientists, it gives extensive information on fundamental information pathways in selected nervous systems. It also highlights their relevance as building blocks for novel computing architectures, such as bio-inspired electronic devices, neuromorphic architectures, memristive devices, adaptive sensors and emergent, pulsed-coupled oscillatory networks. All in all, this book offers a unique bridge between fundamental research in |

neuroscience, neural information processing, nonlinear dynamics, and self-organization, and advanced practical applications concerning the fabrication of hardware-oriented computing.
