



chips



an Open Access Journal by MDPI

New Advances in Memristors: Design and Applications

Guest Editor:

Dr. Arindam Bala

Institute of Electrical and
Microengineering, École
Polytechnique Fédérale de
Lausanne (EPFL), Lausanne,
Switzerland

Deadline for manuscript
submissions:

closed (30 June 2025)

Message from the Guest Editor

Dear Colleagues,

Advances in memory technology, covering materials, device structures, and applications, signify a crucial shift in the landscape of modern computing. Material breakthroughs, including the development of innovative compounds and structures, have paved the way for next-generation memory devices.

Simultaneously, improvements in memristor device architectures, such as crossbar arrays and 3D stacking, have expanded storage capacities and processing speeds. By vertically integrating multiple memory layers and emulating neural connections, these architectures optimize spatial efficiency, enhancing not only storage but also computation paradigms. These advancements have wide-ranging applications across industries, revolutionizing data storage and processing. As research continues to push the boundaries of possibilities, the future promises even more transformative innovations, reshaping the technological landscape and unlocking the frontiers of computing.



mdpi.com/si/203579

Special Issue



chips

CITESCORE
2.8

an Open Access Journal by MDPI

Editor-in-Chief

Prof. Dr. Gaetano Palumbo

Dipartimento di Ingegneria
Elettrica Elettronica e
Informatica, Università di
Catania, I-95125 Catania, Italy

Message from the Editor-in-Chief

Chips is a new journal with the aim to become a leading reference on all aspects of the IC domain. The journal is devoted to publishing rigorously peer-reviewed articles (such as original research, reviews, and communications) with the specific target to disseminate novelties in terms of research and knowledge as well as the most advanced state of the art on IC technologies, design, testing, and production. The journal offers the opportunity to actively spread new concepts and advancements in the IC domain and its increasing interrelated and multidisciplinary areas in a timely manner. More specifically, the journal will cover chip design, including CAD tools, chip production, and their wide spectrum of applications.

Author Benefits

Open Access: free for readers, with [article processing charges \(APC\)](#) paid by authors or their institutions.

High Visibility: indexed within [Scopus](#) and [other databases](#).

Journal Rank: CiteScore - Q2 (Engineering (miscellaneous))

Contact Us

Chips Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/chips
chips@mdpi.com
[X@Chips_MDPI](#)