



an Open Access Journal by MDPI

# Design and Simulation of Electrostatic Protection Device on Semiconductors

Guest Editors:	Message from the Guest Editors
Dr. Zhiwei Liu	Dear Colleagues,
Prof. Dr. Chun-Yu Lin	Electrostatic discharge (ESD) is one
Dr. Wei Liang	threats to the reliability of electr involves the transfer of a finite amo
Prof. Dr. Hei Wong	object to another, and accounts for catastrophic chip damage due to result in a very high current passing
Deadline for manuscript submissions: closed (10 August 2023)	in a very short period of time. H increasingly difficult to meet th stringent ESD protection requ electronic applications. Latchup

Electrostatic discharge (ESD) is one of the most prevalent threats to the reliability of electronic components. ESD involves the transfer of a finite amount of charge from one object to another, and accounts for more than 35% of all catastrophic chip damage due to single events, as it can result in a very high current passing through the microchip in a very short period of time. However, it is becoming increasingly difficult to meet the progressively more stringent ESD protection requirements for various electronic applications. Latchup also poses a reliability threat, as it may occur during normal chip operation and lead to a runaway event that causes the chip to be destroyed. Therefore, Latchup mitigation solutions are also urgently needed in the semiconductor industry.

The main objective of this dedicated Special Issue is to engage the global ESD and Latchup community in a serious discussion through scholarly contributions specifically focused on solving major challenges in the board area of ESD and Latchup solutions for semiconductor technologies.



**Special**sue





an Open Access Journal by MDPI

# **Editor-in-Chief**

#### Prof. Dr. Maryam Tabrizian

 Department of Biomedical Engineering, Faculty of Medicine and Health Sciences, McGill University, Montreal, QC H3A 2B6, Canada
Faculty of Dentistry and Oral Health Sciences, McGill University, 3640 Rue University, Montreal, QC H3A 0C7, Canada

### Message from the Editor-in-Chief

Materials (ISSN 1996-1944) was launched in 2008. The iournal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites. advanced materials characterization, porous materials, manufacturing processes and svstems. advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials. materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. Materials provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

# **Author Benefits**

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

**High Visibility:** indexed within Scopus, SCIE (Web of Science), PubMed, PMC, Ei Compendex, CaPlus / SciFinder, Inspec, Astrophysics Data System, and other databases.

**Journal Rank:** JCR - Q2 (*Metallurgy & Metallurgical Engineering*) / CiteScore - Q2 (*Condensed Matter Physics*)

# **Contact Us**

*Materials* Editorial Office MDPI, St. Alban-Anlage 66 4052 Basel, Switzerland Tel: +41 61 683 77 34 www.mdpi.com mdpi.com/journal/materials materials@mdpi.com X@Materials\_Mdpi