Special Issue

Thin-Film Transistors: Devices for the Next Generation Large Area Electronics

Message from the Guest Editor

For more than 40 years, thin-film transistors (TFTs) have come a long way from potential electronic devices to being used in our smart phones. TFTs are the mirror of technology improvement with the research and development on materials, processes, and devices. From a material prospect, the semiconductor has been the main focus. amorphous and polycrystalline materials have been investigated: from amorphous silicon, polysilicon, to organic materials, oxide semiconductors, CNTs, and the recent development of perovskite and 2D materials. For the dielectric, SiO2 has been the main choice, but high-k dielectrics have been included. Ferroelectric dielectrics have also opened the way to other advanced applications. Materials used as the substrate have also changed with time, as nowadays, flexible or even stretchable substrates are commonly investigated. In terms of process, vacuum processes like sputtering and plasma enhanced chemical vapor deposition (PECVD) have been mostly used for practical industrial applications. Non-vacuum processes including but not limited to inkjet printing, spin-coating, spray coating, roll-to-roll have lead to the possibility of devices [...]

Guest Editor

Dr. Christophe Avis
Department of Information Display, Kyung Hee University, Seoul, Republic of Korea

Deadline for manuscript submissions

closed (20 August 2023)

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/si/107508

Materials
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
materials@mdpi.com

mdpi.com/journal/materials

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/journal/materials

MDPI

About the Journal

Message from the Editor-in-Chief

Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, 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.

Editor-in-Chief

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

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 and Metallurgical Engineering) / CiteScore - Q1 (Condensed Matter Physics)