Special Issue

Semiconductor Material Growth in Thin Films and Its Model

Message from the Guest Editor

Various semiconductor thin-film materials of Si, Si-Ge, compounds, oxides, and organic materials are being investigated and developed for the thin-film transistor (TFT) applications to 3D monolithic integrations, system FPDs, sensors, flexible and wearable electronics, etc. In these applications, material growth at the low-temperature substrate is essential to avoid degradation in the underlying layers. The reliability, low power consumption, higher mobility, and light weight of the devices are important. Growth models will enhance the quality and size of the grains in thin films as well. Topics covered include, but are not limited to, the following:
Materials:

- amorphous semiconductors;
- polycrystalline semiconductors;
- single crystalline semiconductors.

Fabrication methods:

- Growth from vapor (laser CVD, ALD, MOCVD, etc.);
- Growth from melt (laser, lamp, strip-heater, plasma-jet, electron beam, m-CZ, etc.);
- Growth from solid (solid-to-solid growth, etc.);
- Bonding and polishing of the crystals (smart cut, etc.).

Guest Editor

Dr. Nobuo Sasaki
1. Sasaki Consulting, Kawasaki 212-0012, Japan
2. Nara Institute of Science and Technology, Ikoma 630-0192, Japan

Deadline for manuscript submissions

closed (10 September 2023)

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/si/157459

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

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)