

Special Issue

Silicon and Metal Oxide Thin Film Transistors: Materials, Process Technology, Device Physics, and Reliability

Message from the Guest Editor

The flat panel display (FPD) market is expected to further expand at a higher growth rate in upcoming years, due to the demand for high-resolution, compact, lightweight, and flexible displays. The thin film transistor (TFT) is a key component for controlling picture quality of FPDs. TFT is a type of field-effect-transistor (FET), which is commonly used for large-area electronics. These transistors are produced by depositing different types of thin films, such as active semiconductors, dielectrics and metals, over a non-conducting substrate. The significant advantage of the TFT is a low fabrication temperature. The main application of TFTs is in active-matrix liquid-crystal displays (AM-LCDs) or organic light emitting diode (AM-OLED) displays, in which each pixel is controlled by one or several TFTs. In addition to AM-LCDs and OLED displays, TFTs are also used in X-ray imaging devices, various sensors (e.g., fingerprint, biomedical, pH, temperature sensors), and radio-frequency identification (RFID) chips. For more information, please click the following link:

https://www.mdpi.com/journal/materials/special_issues/thin_film_transistors

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Message from the Editorial Board

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.

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