



## Semiconductor Material Growth in Thin Films and Its Model

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### 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.).





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## Editor-in-Chief

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## Message from the Editor-in-Chief

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