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# Thin Film Transistors 13 (TFT 13)

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**Editor:**

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**Electronics and Photonics**



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## Preface

This issue of *ECS Transactions* contains papers presented at the 13<sup>th</sup> Symposium on Thin Film Transistor Technologies (TFT 13) held in Honolulu, Hawaii, October 3-5, 2016. This symposium was sponsored by the Electronics and Photonics Division (EPD) of the Electrochemical Society. This is the 26<sup>th</sup> year of the symposium, which makes it the longest continuous held TFT conference in the world.

The editor wishes to express his sincere appreciation to the following people for their involvement in organizing and conducting the symposium: the authors and presenters of papers, symposium co-organizers, section chairs, my graduate assistants, and ECS staff.

There are 63 papers presented in the TFT 13 symposium. They are divided into 9 sessions: 1) Poly- and  $\mu\text{-Si}$  TFTs, 2) Organic and Other Materials Based TFTs I, 3) Organic and Other Materials Based TFTs II, 4) Ge Materials Based TFTs, 5) Oxide TFT Processes, 6) Oxide TFT Devices, 7) Beyond Display Applications I, 8) Beyond Display Applications II, 9) Posters. Presenters are from universities, industry, and research institutes located in 9 countries or regions, *i.e.*, China, France, Hong Kong, Japan, Korea, Sweden, Taiwan, UK, and USA.

Papers in this issue of *ECS Transactions* are divided into 5 chapters. All papers are published as received, without alteration of their technical contents.

This symposium clearly shows the progress of the TFT science and technology:

- There are still strong R&D activities on the Si-based TFT technology from academia and industry. The main focus is on the development of the manufacturable, high-mobility, crystalline TFTs on the glass or flexible substrate.
- Organic and Ge-related materials for TFTs have been continuously explored.
- Currently, oxide TFTs have attracted most studies. The hottest topics are: new materials for better device performance or reliability, low temperature processes, influences of processes or structures on device characteristics, etc.,
- There are a large number of activities on TFT applications beyond displays. This trend was first forecasted at the beginning of the TFT symposium in 1992. Since TFTs are substrate-independent, low-cost devices, the range of applications is unmatched by other solid state devices.

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## Facts about ECS

The Electrochemical Society (ECS) is an international, nonprofit, scientific, educational organization founded for the advancement of the theory and practice of electrochemistry, electronics, and allied subjects. The Society was founded in Philadelphia in 1902 and incorporated in 1930. There are currently over 7,000 scientists and engineers from more than 70 countries who hold individual membership; the Society is also supported by more than 100 corporations through Corporate Memberships.

The technical activities of the Society are carried on by Divisions. Sections of the Society have been organized in a number of cities and regions. Major international meetings of the Society are held in the spring and fall of each year. At these meetings, the Divisions and Groups hold general sessions and sponsor symposia on specialized subjects.

The Society has an active publication program that includes the following:

*Journal of The Electrochemical Society* — (JES) is the leader in the field of electrochemical science and technology. This peer-reviewed journal publishes an average of 550 pages of 85 articles each month. Articles are published online as soon as possible after undergoing the peer-review process. The online version is considered the final version and is fully citable with articles assigned specific page numbers within specific issues. The date of online publication is the official publication date of record.

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*Electrochemical and Solid-State Letters* — (ESL) was the first rapid-publication electronic journal dedicated to covering the leading edge of research and development in the field of solid-state and electrochemical science and technology. ESL was a joint publication of ECS and IEEE Electron Devices Society. Volume 1 began July 1998 and contained six issues, thereafter new volumes began with the January issue and contained 12 issues. The final issue of ESL was Volume 16, Number 6, 2012. Preserved as an archive, ESL has since been replaced by SSL and EEL.

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