Thin Film Transistors 12 (TFT 12)

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Sponsoring Division:

Electronics and Photonics

Published by
The Electrochemical Society
65 South Main Street, Building D
Pennington, NJ 08534-2839, USA
tel 609 737 1902
fax 609 737 2743
www.electrochem.org

ECS transactions ™

Vol. 64, No. 10

Published by:

The Electrochemical Society
65 South Main Street
Pennington, New Jersey 08534-2839, USA

Telephone 609.737.1902
Fax 609.737.2743
e-mail: ecs@electrochem.org
Web: www.electrochem.org

ISSN 1938-6737 (online)
ISSN 1938-5862 (print)
ISSN 2151-2051 (cd-rom)

ISBN 978-1-62332-190-1 (Hard Cover)
ISBN 978-1-60768-547-0 (PDF)

Printed in the United States of America.

PREFACE

This issue of *ECS Transactions* contains papers presented at the 12th Symposium on Thin Film Transistor Technologies (TFT 12) held in Cancun, Mexico, October 6-8, 2014. These papers are divided into 4 chapters. This symposium was sponsored by the Electronics and Photonics Division (EPD) of The Electrochemical Society.

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

The TFT 11 symposium includes 8 oral presentation sessions: Silicon-based TFTs I, Silicon-based TFTs II, Organic and New Material Based TFTs, Oxide TFT Processes I, Oxide TFT Processes II, Oxide TFT Stability, Applications I, and Applications II. In addition, a Poster section is held in the evening of October 7. A total of 34 papers are presented by authors from industry, research institutes and universities of 8 countries or regions, *i.e.*, France, Netherland, Italy, Hong Kong, Japan, Korea, UK, and USA. All papers are published as received, without alteration of their technical contents, except for formatting.

The following is an observation of the general trend on the TFT technology development judged from this symposium:

- There are continuous interests in Si-based TFTs. The studies are focused on new device designs beyond the n-type TFT applications, high speeds, and improved fabrication processes
- There are strong interests on oxide TFTs. The studies are aimed at understanding and solving the limitations on the performance and stability of the device through using new materials, structures, and processes. In addition to sputtering, there are reports on the solution based fabrication processes.
- TFTs based on new inorganic and organic semiconductors are being developed for various applications.
- New applications on various types of TFTs for sensing and memories have been explored. Limitations of TFTs on various applications have been investigated. The higher education in microelectronics and nanotechnologies related to TFTs in France has been reviewed.

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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.

Journal of Solid State Science and Technology — (JSS) is one of the newest peer-reviewed journals from ECS launched in 2012. JSS covers fundamental and applied areas of solid state science and technology including experimental and theoretical aspects of the chemistry and physics of materials and devices. 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.

Electrochemistry Letters — (EEL) is one of the newest journals from ECS launched in 2012. It is dedicated to the rapid dissemination of peer-reviewed and concise research reports in fundamental and applied areas of electrochemical science and technology. 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.

Solid State Letters — (SSL) is one of the newest journals from ECS launched in 2012. It is dedicated to the rapid dissemination of peer-reviewed and concise research reports in fundamental and applied areas of solid state science and technology. 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.

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.

Interface— *Interface* is an authoritative yet accessible publication for those in the field of solid-state and electrochemical science and technology. Published quarterly, this four-color magazine contains technical articles about the latest developments in the field, and presents news and information about and for members of ECS.

ECS Meeting Abstracts— *ECS Meeting Abstracts* contain extended abstracts of the technical papers presented at the ECS biannual meetings and ECS-sponsored meetings. This publication offers a first look into the current research in the field. ECS Meeting Abstracts are freely available to all visitors to the ECS Digital Library.

ECS Transactions— (ECST) is the online database containing full-text content of proceedings from ECS meetings and ECS-sponsored meetings. ECST is a high-quality venue for authors and an excellent resource for researchers. The papers appearing in ECST are reviewed to ensure that submissions meet generally-accepted scientific standards. Each meeting is represented by a volume and each symposium by an issue.

Monograph Volumes — The Society sponsors the publication of hardbound monograph volumes, which provide authoritative accounts of specific topics in electrochemistry, solid-state science, and related disciplines.

For more information on these and other Society activities, visit the ECS website:

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