THIN FILM TRANSISTOR TECHNOLOGIES II

Edited by

Y. Kuo

The Electrochemical Society
PREFACE

This Proceedings volume contains papers presented at the Second Symposium on Thin Film Transistor Technologies (TFTT II), held in Miami Beach, Florida, USA, October 10-14, 1994. This symposium was sponsored by the Electronics and Dielectric Science and Technologies Divisions of the Electrochemical Society.

This symposium was organized into eight sections: worldwide activities, materials, process I, II, and III, Devices, SRAM/VLSI, and novel applications. Totally, 42 papers were presented in the symposium. Speakers from eight countries, i.e., Belgium, France, Germany, Italy, Japan, Korea, Taiwan, and USA, contributed to this symposium.

A panel discussion on "The Future of TFTs - Limitations and Applications" was included in this symposium. Cross-disciplinary points of view on TFT technologies were given by a group of experts with various backgrounds. In spite of many different opinions on key TFT development, there are common issues in these discussions. Since this panel discussion was meant to be an unofficial exchange of opinions, the content is not included in this proceedings.

The following is a list of all topics presented in the symposium. The order of papers in this proceedings volume is different from that presented in the symposium. This rearrangement is necessary in order to be consistent with the layout of the first TFT proceedings.

1. Activities in Europe, Korea, and Taiwan

2. Processes
   Silicon Crystallization, Dielectric Structure, Hydrogenation, PECVD, RIE, Planarization, Low Mask Count Process, LCD Application Issues;

3. Devices
   Simulation, Switch-on and -off Speeds, Effect of Stress, Charge Pumping, Modeling of CdSe, Interface Effects;

4. Materials
   Organic-Based TFTs, Si_{1-x}Ge_x TFTs, Hydrogen Analysis, Surface Characterization;

5. SRAM/VLSI Applications
   Degradation Mechanisms, Drain-Offset, Thin Gate Oxides, Overgate TFT, Leakage Model;

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6. Novel Applications

Chemical Sensors, Radiation Detector, EEPROM Cells, Thin Film Retina Addressed by TFTs, Circuits on Flexible Substrates.

These papers have been received in a camera-ready format without correction or alteration. The organizers and the editor express their sincere thanks to authors of papers for their participation, section chairmen and co-chairmen for their conduction of the meeting, and staffs of the Electrochemical Society for their administrative assistance in organizing the symposium and in publishing this volume.

Yue Kuo
Thin Film Transistor Technologies II Symposium Organizing Committee

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M. Hack (Xerox Palo Alto Research Center)
Y. Kuo (IBM T. J. Watson Research Center)
M. LeContellec (CNET)
E. Lueder (University of Stuttgart)
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