

20th International Symposium on the Physical and Failure Analysis of Integrated Circuits

15 - 19 July 2013

Shangri-La Hotel, Suzhou, China



SECOND CALL FOR PAPERS

The **20th International Symposium on the Physical and Failure Analysis of Integrated Circuits (IPFA 2013)** is organized by the IEEE Reliability/CPMT/ED Singapore Chapter, IEEE Nanjing Section ED/SSC Joint Chapter, Soochow University, and Suzhou Institute of Electronics. The Symposium is technically co-sponsored by the IEEE Electron Device Society and IEEE Reliability Society.

SAMPLE PREPARATION, METROLOGY AND MATERIAL CHARACTERIZATION

- Sample Preparation for Analysis
- Ion Beam Sample Preparation Techniques
- FIB & TEM Related Applications
- Material Characterization for Failure Analysis

ADVANCED FAILURE ANALYSIS TECHNIQUES

- Advanced and Novel Techniques for Die and Package Failure Analysis
- Optical, Magnetic, X-ray, SPM Techniques
- Design for Analysis & Test

PRODUCT RELIABILITY EVALUATION AND APPROACHES

- Wafer-level and Design for Reliability
- Chip Package Interactions Reliability
- Built-in Reliability
- Product Reliability
- Stack Die Reliability

NOVEL GATE STACK/DIELECTRICS AND FEOL RELIABILITY AND FAILURE MECHANISMS

- Ultra Thin Gate Dielectrics: Reliability and Models
- Metal Gate/High-k Gate Dielectrics: Reliability, Models, & Failure Mechanisms
- Hot Carrier Reliability, NBTI, etc.

IPFA 2013 will be devoted to the fundamental understanding of the physical mechanisms of semiconductor device failures and issues related to semiconductor device reliability, yield and performance, especially those related to advanced process technologies. The Technical Programme Committee is inviting papers related, but not limited to, the following areas:

DIE-LEVEL/PACKAGE-LEVEL FAILURE ANALYSIS CASE STUDY, RELIABILITY AND FAILURE MECHANISMS

- Die / Package Failure Analysis Process & Sample Preparation
- Die / Packaging Related Failure Mechanisms
- ESD / EOS, CMOS Latch-up
- Flip chip, System-on-chip, SIP

NOVEL DEVICE RELIABILITY AND FAILURE MECHANISMS

- Strained Si, Si/Ge and SOI/SGOI/GOI
- DRAM, FLASH and Memory Devices
- Compound Semiconductor Devices
- Power and Automotive Devices
- Solar and Photovoltaic Devices
- Thin Film and Polymer Electronics
- MEMS and Nano-Devices

ADVANCED INTERCONNECTS AND BEOL RELIABILITY AND FAILURE MECHANISMS

- Cu Electromigration / Stress Migration: Models and Failure Mechanisms
- Mechanical Stress and Adhesion Issues
- Low-k / Ultra Low-k Dielectric Reliability
- 3D interconnects

EXCHANGE PAPERS

In a paper exchange arrangement with ESREF and ISTFA, the Best Papers from ESREF 2012 and ISTFA 2012 will be presented at IPFA 2013, while the best oral papers in reliability and failure analysis from IPFA 2013 will also be presented at the corresponding conferences.

BEST POSTER AWARD

A cash prize will be given to the best poster paper under the Poster Presentation mode.

TUTORIALS

In conjunction with the technical symposium, two days of tutorials will be conducted.

EXHIBITION

A 3-day exhibition of testing and analysis equipments and services will be held concurrently with the Symposium. Please contact the IPFA Secretariat if your company is keen to participate.

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“Art of FA” Photo Contest

Do you have a memorable image during your failure analysis work or feel there is an element of “Art” in it? Join IPFA’s “Art of FA” Photo Contest 2013. For more information, please check the IPFA website: <http://www.ieee.org/ipfa> or contact the IPFA Secretariat.

ABSTRACT SUBMISSION GUIDELINES

▶ **The cover page should contain the following information:**

1. Title of the work.
2. Name, affiliation, and address of each author.
3. Telephone number, fax number and e-mail address of the corresponding author
4. An abstract not exceeding 50 words.
5. The category/categories (FEOL, BEOL, Failure Analysis techniques, etc.) that you would like your submission to be considered under.
6. Presentation mode: Oral or poster presentation or no preference.

▶ **The summary section of the submission should not contain any reference to the authors or their affiliation, and should present the content of the submission according to the following sub-headings:**

1. Brief introduction to the background and motivation/objectives of the work.
2. Experimental results, analysis and discussion.
3. Summary of the findings, highlighting their impact, novelty and importance.
4. Supporting figures, tables, and references.

All submissions must be in English. Please submit your abstract through the IPFA website <http://ieee-ipfa.org> by 31 January 2013. Please limit your submission file size to 2 MB. Hardcopy submissions will not be accepted. For further details please contact the Technical Program Chair.

Authors of papers that have been accepted for presentation will be notified by 25 March 2013. Upon notification of acceptance, authors will be asked to submit a final manuscript (to be submitted by 17 May 2013) such that it can be published in the Symposium Proceedings and presented at the symposium.

IMPORTANT DATES

▶ 31 January 2013
25 March 2013
17 May 2013

Submission of Summary and Abstract
Notification of Paper Acceptance
Submission of Final Manuscript

Late Breaking News Manuscripts

The conference also accepts important findings as late papers. Full-papers, no longer than 4 pages, should be submitted by 3 May 2013 for consideration. The acceptance of such papers is limited to break-through findings and is subject to space availability and scheduling considerations. Accepted late papers will be included in the conference proceedings and in the technical presentations at the conference.

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