

## Scope

The workshop will provide a forum for presenting current research and for discussions on issues related to stress-induced phenomena in metal interconnects. Stresses arising in metal structures and surrounding dielectric materials due to novel process steps and advanced materials can lead to degradation and failure of microelectronic products and therefore, bring new challenges for process integration, design optimization and reliability. Understanding stress-related phenomena in new materials and structures is critical for development and integration of future metal structures in microelectronic products. Following the spirit of previous workshops, new research results and advances in basic understanding are emphasized.

## Call for Papers

One-page abstracts must be received by December 1, 2009. The cover page must include the name, address, telephone and fax numbers, and e-mail address of the contact author. Notice of acceptance of papers will be given by January 15, 2010. Address all typewritten abstracts to the Chair:

[ehrenfried.zschech@izfp-d.fraunhofer.de](mailto:ehrenfried.zschech@izfp-d.fraunhofer.de)

Please note, if your abstract is accepted, it will appear in the workshop program booklet as submitted.

The deadline for submission of camera-ready manuscripts for proceedings is May 31, 2010. It is considered crucial to the success of the workshop that all papers be published in a special Proceedings. The [American Institute of Physics](http://www.amip.org) should again publish the book.

## Topics

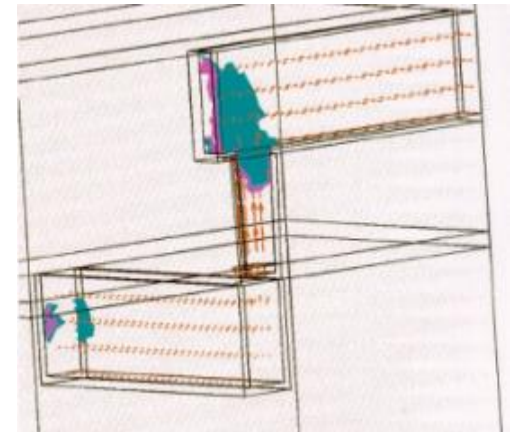
- Scaling effects for sub-100nm metal structures: grain growth and microstructure
  - Cu interconnect integration – Materials and reliability
  - Ultra low-k dielectrics: Materials and reliability
  - 3D integration, TSV and effect on stressed devices
  - Advanced nanoscale materials and structures
  - Synchrotron-radiation based and lab-based X-ray techniques for metal characterization
  - Stress-induced degradation phenomena and failure: Cu stress, EM, SIV
- Strain/stress measurements and modeling/simulation.

## Invited Speakers

Oliver Aubel, Globalfoundries, Dresden/Ger  
Katayun Barmak, CMU, US  
Paul Besser, Unity Semi/CA, US  
Reinhard Dauskardt, Stanford Univ./CA, US  
Michael Feser, Xradia, Concord/CA, US  
Robert Geer, Nanotech Albany/NY, US  
Kaz Hirakawa, University of Tokyo/Japan  
C. K. Hu, IBM Yorktown/NY, US  
Rui Huang, UT Austin/TX, US  
Rene Huebner, Fraunhofer IZFP, Dresden/D  
Junichi Koike, Tohoku Univ. Sendai, Japan  
Armin Klumpp, Fraunhofer IZM Munich/D  
Chien-Neng Liao, Nat. Tsing Hua Univ., Taiwan  
Xiao-Hu Liu, IBM Yorktown/NY, US  
Minhua Lu, IBM Yorktown/NY, US  
Miroslaw Miller, TU Wroclaw/Poland  
Juan J. Pérez-Camacho, Intel, Ireland  
Olivier Perroud, CNRS Marseille/France  
George Pharr, University of Tennessee, US  
Gunther Richter, MPI Stuttgart/D  
Valeriy Sukharev, Mentor Graphics/CA, US  
Di Xu, King-Ning Tu, UCLA, US  
Joost J. Vlassak, Harvard University/MA, US  
Sigurd Wagner, Princeton University, US  
Lijuan Zhang, Paul Ho, UT Austin/TX, US

2<sup>nd</sup> Announcement

# 11<sup>th</sup> International Workshop on Stress-Induced Phenomena in Metallization



Courtesy of Valeriy Sukharev

**April 12 - 14, 2010**

**Dresden, Germany**

[http://www.malab.com/stress\\_workshop\\_2010](http://www.malab.com/stress_workshop_2010)

## Co-Chairs

- Ehrenfried Zschech, Fraunhofer IZFP, Dresden, Germany
- Paul Ho, UT Austin/TX, US
- Shinichi Ogawa, Selete, Tsukuba, Japan

## Program Committee

- Reinhold Dauskardt, Stanford Univ., CA, US
- Martin Gall, Freescale, Fishkill/NY, US
- Hisao Kawasaki, Mitsubishi, Japan
- Oliver Kraft, KIT, Karlsruhe, Germany
- Kazuhiro Ito, Kyoto Univ., Japan
- Young-Chang Joo, NSU Seoul, Korea
- Klaus-Dieter Lang, Fraunhofer IZM, Berlin, Germany
- Jon Molina, IMDEA Materials, Madrid, Spain
- Tomiji Nakamura, Fujitsu, Tokyo, Japan
- Tony Oates, TSMC, Hsinchu, Taiwan
- Young-Bae Park, Andong Nat. Univ., Korea
- Bob Rosenberg, IBM Yorktown Heights/NY, US
- Ralph Spolenak, ETH Zuerich, Switzerland
- Valeriy Sukharev, Mentor Graphics, San Jose/CA, US
- Olivier Thomas, Univ. Marseille, France
- King-Ning Tu, UCLA, Los Angeles/CA, US
- Cynthia Volkert, Univ. Goettingen, Germany
- Shinji Yokogawa, NEC Electronics, Japan

## Workshop Contact

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## Registration

### Registration fee

The registration fee includes technical sessions, 3 days lunches and coffee breaks, a conference dinner, a tour (walk) into the breathtaking Elbe sandstone region, the abstract booklet, and the hardback book containing the workshop proceedings.

• **Advanced registration by December 1, 2009 – Euro 370 (payment must be received by January 15, 2010)**

• Late registration – Euro 400 (payments received after January 15, 2010)

### Form of Payment

After receiving the registration for the 2010 International Workshop on Stress-Induced Phenomena in Metallization, we will provide the detailed payment information.

## Register Now

The number of participants will be limited in order to maintain the intimate atmosphere of the work-shop.

Please provide your registration through the form under the "Registration" heading of our 2010 International Stress Workshop web page [www.malab.com/stress\\_workshop\\_2010](http://www.malab.com/stress_workshop_2010).

## Location

### Conference venue

Hotel Elbresidenz Bad Schandau, near Dresden, Germany:

<http://www.maritim.de/english/index.html>  
<http://www.elbresidenz-bad-schandau.de/>

### Accommodation

A block of rooms is reserved at the conference hotel. There are several other hotels (different price categories) available in walking distance. Reservations must be made by **December 1, 2009**, to guarantee a room. Detailed information and the room rates will be published at the homepage of the workshop. Be sure to identify yourself as being with the **Stress Workshop 2010** to get a room from the reserved block of rooms.



Image:  
Dresden, Frauenkirche  
(Courtesy of Marian Kratina)