Workshop on Technology of Silicon-based Nanodevices

Jointly organized by Pall Filtration Private Limited & the Microelectronics Center, School of EEE, Nanyang Technological University (NTU) and the Singapore IEEE Rel/CPMT/ED Chapter, a workshop on “Technology of Silicon-based Nanodevices” was successfully held on 24 February 2006 in NTU. Pall Filtration Private Limited sponsored the workshop. Four overseas speakers and six local speakers presented talks on topics ranging from new filtration technologies on defectivity reduction to advanced sub-30nm transistor technologies. The details of the talks are as follows:

- **Effectiveness of New Filtration Technologies on Defectivity Reduction in Advanced Microlithographic Processes**, Dr Barry Gottling, Pall Corp Scientific and Laboratory Services, USA
- **Sub-30 nm Transistors: Material and Device Structure Innovations for Enhanced Performance**, Dr Y.C. Yeo, National University of Singapore
- **Towards Nano Purification with Selective Ion Removal Technology in Wet Chemistry**, Dr Fumitomo Kunimoto, Nihon Pall, Japan
- **Challenges, Issues and Solutions to low-k Implementation in Future Technology Nodes**, Mr Sanjeev Jain, Applied Materials, USA
- **Reliability Issues and Challenges in Cu/low-k Interconnects**, Mr Y.K. Lim, Chartered Semiconductor Manufacturing
- **Cu-based Nano Interconnects, Dr C.M. Tan, Nanyang Technological University**
- **Three-dimensional Interconnects, Mr N. Ranganathan, Institute of Microelectronics**
- **Silicon Based 3-D Multi-layer CMOS Integrated Circuits, Dr Mansun Chan, Hong Kong University of Science & Technology, Hong Kong**
- **Negative-bias Temperature Instability of p-MOSFETs: The Role of Nitrogen, Dr D.S. Ang, Nanyang Technological University**
- **Si Technology for Nano and Bioelectronics, Dr Patrick Lo, Institute of Microelectronics**
- **Silicon Front-End Junction Formation - Physics and Advanced Technology, Dr Benjamin Colombeau, Chartered Semiconductor Manufacturing**

The workshop attracted more than 180 participants from the industry, research institutions and universities. The center plans to organize similar workshop annually.