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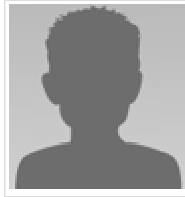

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职称: 副教授

研究方向: 集成电路芯片测试、可靠性和失效分析

所属学科: 测试计量技术及仪器

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高立明，工学博士、副教授，硕士生指导教师

### 教育背景

2004年10月 德国慕尼黑工业大学 电子工程系 工学博士 (Dr.-Ing.)

### 工作背景

2004年11月-2009年5月 英飞凌科技公司德国慕尼黑总部 项目负责人 (Project Leader)
2009年6月 回国， 上海交通大学电信学院仪器系引进人才

### 研究方向

大规模集成电路芯片和MEMS的测试、可靠性和失效分析

### 研究工作重点领域

1. 复杂半导体芯片的测试和失效分析。
2. 纳米CMOS器件和纳米电子器件的系统工艺和测试。
3. 大规模集成电路器件可靠性测试和故障诊断。
4. 基于CMOS工艺MEMS的系统测试和可靠性研究。
5. 军用及空天专用微电子器件和微系统的可靠性和失效分析研究。

### 学术兼职

德国电子电气工程师协会 (VDE) 会员
国际电子电气工程师协会 (IEEE) 会员

### 论文和专著

德国出版学术专著一部，国内外发表论文30余篇，其中多篇SCI国际期刊论文。

### 著作

Silver Metal Organic Chemical Vapor Deposition for Microelectronic Metallization，2005，Shaker Verlag 出版社（德国）（独立完成）ISBN 3-8322-3895-6

### 主要论文

1. L. Gao, C. Burmer: PLL soft functional failure analysis in advanced logic product using fault based analogue simulation and soft defect localization. Microelectronics Reliability 48 (2008) 1349-1353. SCI 影响因子1.290

2. L. Gao, C. Burmer and F. Siegelin: ATPG scan logic failure analysis: a case study of logic ICs: fault isolation, defect mechanism identification and yield improvement. Microelectronics Reliability 46 (2006) 1458-1463. ISS 0026-2714,SCI 影响因子0.815,IDS Number: 087XM

3. L. Gao, P. Haerter, Ch. Linsmeier, A. Wiltner, R. Emling and D. Schmitt-Landsiedel: Silver metal organic chemical vapor deposition for advanced silver metallization. Microelectronic Engineering 82 (2005) 296-300. ISSN: 0167-9317. SCI影响因子：1.398. IDS Number: 997HM

4. L. Gao, P. Haerter, Ch. Linsmeier, J. Gstoettner, R. Emling and D. Schmitt-Landsiedel: Metalorganic Chemical Vapor Deposition of Silver Thin Films for Future Interconnects by Direct Liquid Injection System. Materials Science

in Semiconductor Processing, Vol. 7, 2004, 331-335. ISSN: 1369-8001, SCI影响因子：1.038. IDS Number: 881HY

5. L. Gao, J. Gstoettner, R. Emling, M. Balden, Ch. Linsmeier, A. Wiltner, W. Hansch, and D. Schmitt-Landsiedel: Thermal stability of titanium nitride diffusion barrier films for advanced silver interconnects. Microelectronic Engineering, 76 (2004) 76-81. ISSN: 0167-9317, SCI影响因子：1.514. IDS Number: 863LI

6. L. Gao, C. Burmer: A Strategy to Analyze Soft Functional Failures in Advanced Logic Product Using Fault Based Analogue Simulation and Soft Defect Localization. 2008: 19th European Symposium Reliability of Electron Devices, Failure Physics and Analysis; EI

7. L. Gao, C. Burmer and F. Siegelin: ATPG scan logic failure analysis: a case study of logic ICs: fault isolation, defect mechanism identification and yield improvement. 17th European Symposium Reliability of Electron Devices, Failure Physics and Analysis, Wuppertal, Germany, 2.-6.10.2006. EI.: Committee, Conference, 2006 ISSN 0026-2714 EI:

8. L. Gao and C. Burmer: ATPG scan logic failure analysis. Infineon Test Summit, Munich Germany, 06.2006. Ed.: Committee, Conference, 2006.

9. L. Gao, P. Haerter, Ch. Linsmeier, A. Wiltner, R. Emling and D. Schmitt-Landsiedel: Silver metal organic chemical vapor deposition for advanced silver metallization. European Workshop of Materials for advanced Metallization, Dresden, Germany, 6.-9.03.2005. Ed.: Committee, Conference, 2005. ISSN 0272-9172,EI

10. L. Gao, J. Gstoettner, R. Emling, P. Wang, W. Hansch and D. Schmitt-Landsiedel: Silver Patterning by Reactive Ion Beam Etching for Microelectronics Application. Mat. Res. Soc. Symp. Proc. Vol. 812, F3.19, April 12-16 San Francisco, CA, USA 2004. ISSN 0272-9712 EI:

11. L. Gao, J. Gstoettner, R. Emling, Ch. Linsmeier, M. Balden, A. Wiltner, W. Hansch and D. Schmitt-Landsiedel: Silver Metallization With Reactively Sputtered TiN Diffusion Barrier Films. Mat. Res. Soc. Symp. Proc. Vol. 812, F8.3, April 12-16 San Francisco, CA, USA 2004. ISSN 0167-9317 EI:

12. L. Gao, P. Haerter, Ch. Linsmeier, J. Gstoettner, R. Emling and D. Schmitt-Landsiedel: Metalorganic Chemical Vapor Deposition of Silver Thin Films for Future Interconnects by Direct Liquid Injection System. E-MRS Spring Meeting 2004, Strasbourg, France, 24.-28.05.2004. Ed.: Committee, Conference, 2004. ISSN 1369-8001 EI:

13. L. Gao, J. Gstoettner, R. Emling, M. Balden, Ch. Linsmeier, A. Wiltner, W. Hansch and D. Schmitt-Landsiedel: Thermal stability of titanium nitride diffusion barrier films for advanced silver interconnects. European Workshop of Materials for advanced Metallization, Brüssel, Belgium, 8.-10.03.2004. Ed.: Committee, Conference, 2004. ISSN 0167-9317 EI:

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