“凝聚态物理-北京大学周二论坛”

2007-11

时 间： **2007 年 6 月 5 日（星期二）下午 15:00－16:40**

地 点： **北京大学物理大楼中 212 教室**

报告题目： **Thin Film Oxide on Silicon Carbide**

报告简介：

Silicon carbide (SiC), with more than 200 polytypes, is a wide bandgap semiconducting material is having superb electrical and mechanical properties. These enable SiC to be used as a substrate for high-temperature, high-power, high-frequency, and non-volatile memory metal-oxide -semiconductor (MOS) devices. The quality of thin film oxide (or gate oxide) sandwiched between the semiconductor (SiC) and metal electrode determines the feasibility of making a function MOS-based device. In this seminar, various types of thin film oxides or gate oxides on SiC will be reviewed. This includes physical, electrical, and chemical properties of the films. Firstly, the beneficial of using thermal nitrided SiO_2 compared with others thermally grown dry and wet SiO_2 will be discussed. This follows by a brief review on the effect of nitrided oxide thickness on MOS characteristics. The second part of the seminar will be concentrated on high-dielectric constant (k) thin film on SiC. The importance of using this type of oxide will be presented.

报告人： **Dr. Cheong Kuan Yew**

报告人简介： **1997–1999: Working in Project Management and Semiconductor industry; 1997-2001–B. Eng. (1st Hons.)& M. Sc. –Materials Engineering (Universiti Sains; 2004–Ph. D. –Microelectronic Engineering (Griffith University, Australia); 2006-Professional Engineer (Board of Engineers, Malaysia)。2001–2004：Fellow of Universiti Sains Malaysia - Academic Staff Training Scheme; 2004 – to date: Lecturer at The School of Materials & Mineral Resources Engineering, Engineering Campus, Universiti Sains Malaysia。**

研究方向：

- **SiC- and Si-based metal-oxide-semiconductor device fabrication.**
- **Charge conduction mechanisms through thin film oxide.**
- **Synthesis and characterization of SiC nanostructure.**

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