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材料物理和化学

# 氮化硅在触摸屏中的应用分析

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摘要： 本文研究了氮化硅材料在触摸屏领域中的应用，利用等离子体化学气相沉积（PECVD）技术，在一定厚度的玻璃表面沉积不同厚度的氮化硅薄膜。通过理论分析和试验测试的方法得到了氮化硅膜层厚度和折射率对触摸屏透过率以及表面宏观颜色的影响。分析结果表明，氮化硅膜层折射率对触摸屏的平均透过率影响明显，而膜层厚度对触摸屏的平均透过率影响很小，但是膜层厚度的改变对触摸屏特定波长处透过率和膜层宏观颜色影响很明显。在实际生产中可以通过改变沉积条件获得合适折射率及厚度的氮化硅薄膜材料。

关键词：

## Silicon Nitride Materials Applied in Touch Sensor

Abstract: The use of silicon nitride (SiNx) in the field of touch sensor has been investigated in this paper. Silicon Nitride (SiNx) with different thickness is deposited on the surface of bare glass by plasma-enhanced chemical vapor deposition (PECVD) technology. Using theoretical analysis and experimental test method, this article illuminates the impact on the touch sensor of transmittance and macro-color caused by film thickness and the refractive index. The results show that the refractive index of SiNx has great impact on the average transmittance, while the film thickness has no obvious effect on it. The film thickness has great impact on transmittance at fixed-wavelength and the macro-color, and it is crucial to the process control.

Keywords:

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