

## 多波长边缘电场传感器参数估计算法的研究

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摘要:

多波长边缘电场传感器由于具有单边穿透、多种穿透深度及层析成像等优点, 广泛用于工业过程控制中被测多层样本特性的层特性之间的关系一直是参数估计算法的研究难点。本文以三波长交叉指型边缘电场传感器为例, 基于三维有限元仿真, 建立的多元二次非线性回归模型, 研究参数估计算法, 实验结果表明算法的有效性。

关键词: 多波长 交叉指型 非线性回归

## Parameter Estimation Algorithm Simulation Research of Multi- Wavelength Fringing Electric

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**Abstract:**

Multi-wavelength fringing electric field sensors have been widely used in industry process control for property measurement of the 1 parameter estimation algorithm lies in how the relationship between the sensor output and multilayer properties is constructed. The interdigital sensor. The nonlinear regression model is constructed based on the 3D finite element simulation, which describe the relation dielectric property. The experiments of parameter estimation are done, the results show that the algorithm is effective.

**Keywords:** Multi-wavelength Interdigital Nonlinear Regression

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