

固体电解质电位型CO气体传感器的研究

作者：钟铁钢，梁喜双，刘奎学，全宝富

单位：（集成光电子国家重点实验室吉林大学实验区 吉林大学电子科学与工程学院 长春 130012）

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摘要：

以NASICON(钠超离子导体)固体电解质为离子导电层，Y2O3为敏感电极研制了一种用于测定CO的电化学气体传感器。结果表明，器件对 $(5-50) \times 10^{-6}$ 范围内的CO具有较好的敏感特性。在400° C下，器件对CO的灵敏度为-45mV/decade。并且器件对CO具有较高的选择性和良好的响应恢复特性。

关键词：气体传感器；一氧化碳；固体电解质；氧化钇

A Study on Solid Electrolyte Potentiometric CO Gas Sensor

Author's Name: ZHONG Tie-gang , LIANG Xi-shuang , LIU Kui-xue , QUAN Bao-fu

Institution: (State Key Laboratory on Integrated Optoelectronics, College of Electronic Science and Engineering, Jilin University, Changchun 130012)

Abstract:

An electrochemical gas sensor was investigated for measuring CO using NASICON(sodium super ionic conductor) solid electrolyte as the ion conductive layer and Y2O3 as the sensing electrode. The results showed that the sensor exhibited well sensing characteristics to $(5-50) \times 10^{-6}$ CO. The sensitivity of the sensor to CO was -45mV/decade at 400° C. Also the sensor exhibited high selectivity and response-recovery performance to CO.

Keywords: Gas sensor; CO; Solid electrolyte; Y2O3

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