Neuartiges Verfahren zur selektiven Gasdetektion mittels Lambdasonden

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Zusammenfassung

In the scope of this diploma thesis, a measurement approach to obtain increased differentiation of exhaust gas components using a standard zirconia-based potentiometric lambda probe was investigated. The self-discharge characteristic after different voltage pulses applied to the sensor is used as a measured parameter which depends on gas type and concentration. The detection of NO in the lower ppm range is demonstrated. In addition, this approach allows to improve the response and selectivity to NO significantly compared to other investigated gases as NO₂, NH₃, H₂ and a mixture of hydrocarbons.

This technique seems to be capable to enable NO sensing in exhaust gas with standard lambda probes. Details of the experiment can be obtained from the Figures (from [1]).


Kontakt

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