

# Sensor Monitoring of the Concentrations of Different Gases Present in Synthesis of Ammonia Based On Multi-Scale Entropy and Multivariate Statistics

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**Abstract:** This paper presents powerful techniques for the development of a new monitoring method based on multi-scale entropy (MSE) in order to characterize the behaviour of the concentrations of different gases present in the synthesis of Ammonia and soft-sensor based on Principal Component Analysis (PCA).

**Keywords :** Ammonia synthesis, Concentrations of different gases, Soft sensor, Multi-scale entropy, multivariate statistics.