Analytical models for the interactions between a gas mixture and Quartz Micro Balance Sensor array based on polymers

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Abstract : The aim of this work is to develop analytical models for the thermodynamic equilibrium at the interfaces (gas mixture / Quarz Micro Balance sensor arrays based on conducting polymers). Differential equations, which describe the change in the partial sensitivities of the sensor array elements depending on the gas mixture components concentrations, and the sensor array parameters, have been developed. Moreover, the responses of the sensor array as a function of the concentrations of the gas mixture components have been modeled

Keywords : thermodynamic equilibrium, analytical models, gas mixture, Quartz Micro Balance Sensor array, polymers