

Contents

1. Chemical gas sensors	6
2. Electrical properties of chemical gas sensors	7
2.1 Measurement of impedance as a tool for characterization of CGS	7
2.2 Equivalent circuit of sensor	8
2.3 Nyquist diagrams, determination of equivalent circuit parameters	10
2.4 Definition of phase-angle sensitivity	12
3. Experimental	14
4. Results	15
4.1 Nyquist diagrams of sensors with single-component active layer	15
4.2 Phase-angle sensitivity in dependence on active layer composition	17
4.3 Phase-angle sensitivity related to different reference atmospheres	18
4.4 Phase-angle sensitivity in dependence on parameters of activation process	20
5. Conclusions	20
6. Application of results in education	21
References	22