

Contents

Part I Requirements on Sensing

Future Building Gas Sensing Applications	3
O. Ahmed	
Requirements for Gas Sensors in Automotive Air Quality Applications ..	13
T. Tille	
Automotive Hydrogen Sensors: Current and Future Requirements	35
C. Kübel	
Requirements for Fire Detectors	39
Hubert Scherzinger	

Part II Sensor Principles

The Power of Nanomaterial Approaches in Gas Sensors	53
Camilla Baratto, Elisabetta Comini, Guido Faglia, and Giorgio Sberveglieri	
Theory and Application of Suspended Gate FET Gas Sensors	79
C. Senft, P. Iskra, and I. Eisele	
Chromium Titanium Oxide-Based Ammonia Sensors	113
K. Schmitt, C. Peter, and J. Wöllenstein	

Part III Applications

Combined Humidity- and Temperature Sensor	139
T. Bürgler, F. Krogmann, and J. Polak	

Gas Sensor Investigations in Characterizing Textile Fibres 151
N. Felde and D. Kohl

New Approaches for Exhaust Gas Sensing 173
R. Moos

Technology and Application Opportunities for SiC-FET Gas Sensors .. 189
A. Lloyd Spetz and M. Andersson

Development of Planar Potentiometric Gas Sensors for Automotive Exhaust Application 215
C. Pijolat and J.P. Viricelle

Atmospheric Humidity Measurements Using Gas Sensors 255
R. Philipona

Concluding Remarks 265

Index 267