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Titolo	Semiconductor sensors in physico-chemical studies / / edited by L. Yu. Kupriyanov ; translated from Russian by V. Yu. Vetro
Pubbl/distr/stampa	Amsterdam ; ; New York, : Elsevier, 1996
ISBN	1-281-01918-6 9786611019181 0-08-052417-6
Descrizione fisica	1 online resource (413 p.)
Collana	Handbook of sensors and actuators ; ; v. 4
Altri autori (Persone)	KupriyanovL. Yu
Disciplina	543/.0871
Soggetti	Chemical detectors Semiconductors
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Cover; Copyright Page; Contents; Introduction; Chapter 1. Physical and Chemical Basics of the Method of Semiconductor Sensors; 1.1. What are the Semiconductor Chemical Sensors?; 1.2. The Role of Electronic Theory of Chemisorption in Developing Ideas on Effects of Adsorption on Electrical and Physical Properties of Semiconductor Adsorbents; 1.3. Various Forms of Adsorption; 1.4. Adsorption Isotherms; 1.5. Kinetics of Adsorption; 1.6. Characteristic Temperature Intervals of Gas - Solid Body Interaction; 1.7. Effect of Adsorption on Electrophysical Properties of Semiconductors 1.8. Role of Recharging of Biographic Surface States During Chemisorption Charging of a Semiconductor Surface1.9. The Kinetic of Adsorption Charging of the Surface of Semiconductor under Relaxation of Biographic Surfacing Charge; 1.10. The Effect of Adsorption Surface Charging on Electrophysical Characteristics of Polycrystalline Semiconductor Adsorbents; 1.11. The Effect of Adsorption on Concentration of the Surface and Volume Interstitial Defects in Semiconductor Adsorbent and Resultant Change in Electric Conductivity 1.12. The Effect of the Nature of Adsorbent on Adsorption-Caused Change in its Electrophysical Characteristics. The Nature of Adsorption Centers and their Effect on the Process of Charging of the SurfaceReferences; Chapter 2. The Theory of Adsorption-Induced

Response of Electro-Physical Characteristics in Semiconductor Adsorbent The Methods of Quantitative Detection; 2.1. General Principles of Selection of Semiconductor Adsorbents used as a Operational Sensor Elements; 2.2. Sintered Polycrystalline Adsorbents; 2.3. Electrophysical Properties of Sintered Polycrystalline Semiconductors
2.4. The Effect of Adsorption on Electric Conductivity of Sintered Polycrystalline AdsorbentsReferences; Chapter 3. Experimental Studies of the Effect of Adsorption of Active Particles on the Conductivity of Semiconductor Sensors; 3.1. Production of Sensitive Elements of Sensors. Application of Sensors to Detect Active Particles; 3.2. Donor Particles; 3.3. Acceptor Particles; 3.4. Semiconductor Sensors in Condensed Media; References; Chapter 4. Application of Semiconductor Sensors in Experimental Investigation of Physical-Chemical Processes; 4.1. Recombination of Atoms and Radicals
4.2. Pyrolysis of Simple Molecules on Hot Filaments4.3. Photolysis in Gas Phase; 4.4. Photolysis in Adsorbed Layers; 4.5. Examples of Elementary Processes in Heterogeneous Catalytic Reactions on Metal Oxides; 4.6. Evaporation of Superstechiometric Atoms of Metals from Metal Oxide Surface; 4.7. Surface and Bulk Diffusion of Active Particles; 4.8. Thermo- and Photospillover of Hydrogen Atoms in Multicomponent Systems; 4.9. Adsorption of Atomic, Molecular, and Cluster Particles on Metal Oxides
4.10. Measurement of Concentration Profile of Oxygen in the Lower Thermosphere of the Earth with the Help of Semiconductor Sensors

Sommario/riassunto

The scientific basis of the technique of semiconductor chemical sensors is the main focus of this work. The book concentrates on the usage of semiconductor sensors in precision physico-chemical studies. The physical and chemical principles underlying the semiconductor sensor method are explained in detail. The mechanism of the processes occurring under the interaction of gas with semiconductor adsorbent surfaces are also discussed. Scientists and engineers specializing in the physics/chemistry of heterogeneous and heterogeneous-homogeneous processes and design of semiconductor chemical sen

2. Record Nr. UNINA9910447246703321

Titolo	Machine Learning, Optimization, and Data Science : 6th International Conference, LOD 2020, Siena, Italy, July 19–23, 2020, Revised Selected Papers, Part I / / edited by Giuseppe Nicosia, Varun Ojha, Emanuele La Malfa, Giorgio Jansen, Vincenzo Sciacca, Panos Pardalos, Giovanni Giuffrida, Renato Umeton
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ISBN	3-030-64583-5
Edizione	[1st ed. 2020.]
Descrizione fisica	1 online resource (XXXVII, 740 p. 239 illus., 184 illus. in color.)
Collana	Information Systems and Applications, incl. Internet/Web, and HCI, , 2946-1642 ; ; 12565
Disciplina	006.31
Soggetti	Artificial intelligence Application software Computers Image processing - Digital techniques Computer vision Computer science - Mathematics Artificial Intelligence Computer and Information Systems Applications Computing Milieux Computer Imaging, Vision, Pattern Recognition and Graphics Mathematics of Computing
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Sommario/riassunto	This two-volume set, LNCS 12565 and 12566, constitutes the refereed proceedings of the 6th International Conference on Machine Learning, Optimization, and Data Science, LOD 2020, held in Siena, Italy, in July 2020. The total of 116 full papers presented in this two-volume post-conference proceedings set was carefully reviewed and selected from 209 submissions. These research articles were written by leading

scientists in the fields of machine learning, artificial intelligence, reinforcement learning, computational optimization, and data science presenting a substantial array of ideas, technologies, algorithms, methods, and applications.