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	the quantities of adsorption from a series of experimental physisorption isotherms: the isosteric method; 2.7. Derivation of the adsorption quantities from calorimetric data; 2.8. Methods for the determination of differential enthalpies of adsorption; References; Chapter 3. Methodology of Adsorption at the Gas-Solid Interface 3.1. Introduction3.2. Basic aspects of methodology; 3.3. Operational procedures; 3.4. Details of the operational stages; References; Chapter 4. Interpretation of Physisorption Isotherms at the Gas-Solid Interface; 4.1. Introduction; 4.2. Physisorption isotherms on non-microporous solids; 4.3. Phase changes in physisorbed layers; 4.4. Physisorption by microporous solids; 4.5. Conclusions; References; Chapter 5. Adsorption at the Liquid-Solid Interface: Thermodynamics and Methodology; 5.1. Introduction; 5.2. Energetics of immersion of solid in pure liquid; 5.3. Adsorption from liquid solution References/Chapter 6. Assessment of Surface Area; 6.1. Introduction; 6.2. The BET method; 6.3. Empirical methods of isotherm analysis; 6.4. Adsorption from solution; 6.5. Immersion microcalorimetry; 6.6. The fractal approach; References; Chapter 7. Assessment of Mesoporosity; 7.1. Introduction; 7.2. Capillary condensation and the Kelvin equation; 7.3. Mesopore volume, porosity and mean pore size; 7.4. Computation of the mesopore size distribution; 7.5. Hysteresis loops; 7.6. Density functional formulation; References; Chapter 8. Assessment of Microporosity; 8.1. Introduction 8.2. Isotherm analysis8.3. Microcalorimetric methods; 8.4. Modelling micropore filling: theory and simulation; References; Chapter 9. Adsorption by Active Carbons; 9.1. Introduction; 9.2. Formation and structure of carbon blacks; 9.3. Physisorption of gases by carbon black and graphite; 9.4. Carbonization and activatio; 9.5. Physisorption of gases by activated carbons; 9.6. Immersion microcalorimetry and adsorption from solution; References; Chapter 10. Adsorption by Metal Oxides; 10.1. Introduction; 10.2. Physisorption of gases by
Sommario/riassunto	The declared objective of this book is to provide an introductory review of the various theoretical and practical aspects of adsorption by powders and porous solids with particular reference to materials of technological importance. The primary aim is to meet the needs of students and non-specialists, who are new to surface science or who wish to use the advanced techniques now available for the determination of surface area, pore size and surface characterization. In addition, a critical account is given of recent work on the adsorptive properties of activated carbons, oxides, clays and zeoli