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	Materials for Proton Conducting Solid Oxide Fuel Cells (PC-SOFCs); 2.5 Summary; References; 3 Solar Energy Materials; 3.1 Introduction; 3.1.1 The Solar Spectrum; 3.1.2 The Photovoltaics Industry; 3.1.3 Terminology; 3.2 Development of PV Technology 3.2.1 First Generation: Crystalline Silicon (c-Si)3.2.2 Second Generation: Thin-Film Technologies; 3.2.3 Third Generation: Nanotechnology/Electrochemical PVs; 3.3 Summary; Acknowledgements; References; 4 Hydrogen Adsorption on Metal Organic Framework Materials for Storage Applications; 4.1 Introduction; 4.2 Hydrogen Adsorption Experimental Methods; 4.3 Activation of MOFs; 4.4 Hydrogen Adsorption on MOFs; 4.4.1 Hydrogen Adsorption Capacity Studies; 4.4.2 Temperature Dependence of Hydrogen Physisorption; 4.4.3 Hydrogen Surface Interactions in Pores 4.4.4 Framework Flexibility and Hysteretic Adsorption4.4.5 Comparison of Hydrogen and Deuterium Adsorption; 4.5 Conclusions; Acknowledgements: References: Index
Sommario/riassunto	In an age of global industrialisation and population growth, the area of energy is one that is very much in the public consciousness. Fundamental scientific research is recognised as being crucial to delivering solutions to these issues, particularly to yield novel means of providing efficient, ideally recyclable, ways of converting, transporting and delivering energy. This volume considers a selection of the state- of-the-art materials that are being designed to meet some of the energy challenges we face today. Topics are carefully chosen that show how the skill of the synthetic chemist can