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Sommario/riassunto	Materials with sound-absorbing or sound-insulating properties have been rapidly evolving in recent years for several reasons. On one side, there is the ever-increasing awareness of the adverse effects that noise and lack of acoustic comfort may have on human health. On the other, the availability of more sophisticated fabrication techniques, calculation methods, and new materials, has stimulated researchers and, more and more frequently, industry to develop customized materials with improved properties.This book collects contributions from different researchers covering several topics. A group of papers investigated the use of 3D printing to obtain perforated panels with extended frequency response, as well as to ideally design an optimized cell distribution to print (when fabrication techniques will make it possible) a porous material with a broader sound absorption. The role of the geometrical and microstructural properties of granular molecular sieves is investigated by another paper. A second group of papers focused its attention on the use of natural or recycled components to create a skeleton of porous materials with good sound-absorbing properties and low environmental impact. Cigarette butts, recycled textile waste, and almond skins have been investigated by different authors.Finally, the last batch of papers included a review of sound insulation properties of innovative concretes and two research papers focussing on a numerical and experimental analysis of wood plastic composite (WPC) panels and on the potential of semi-active solutions employing

compressible constrained layer damping (CCLD).