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Nota di contenuto	Numerical and Experimental Investigation of Hollow Sphere Structures in Sandwich Panels; Preface; Table of Contents; List of symbols; List of abbreviations; Table of Contents; 1 Introduction; 1.1 Cellular Metals; 1.2 Potential for Cellular Lightweight Structures; 1.3 Sandwich Structures; 1.4 State of the Research; 2 Theoretical Foundation; 2.1 Mechanics; 2.2 Heat Transfer; 3 Methodology; 3.1 Finite Element Method; 3.2 Experimental Testing; 4 Results; 4.1 Hollow Sphere Structures; 4.2 Sandwich Structures; 5 Conclusions; Appendix A; Appendix B; Appendix C; Appendix D; Appendix E; References
Sommario/riassunto	This work addresses the performance of novel metallic hollow-sphere structures (MHSS) in sandwich panels. Numerical finite-element analyses and experimental tests are described. The first part of the book focuses on the various types of metallic hollow-sphere structure. The influence of morphology, topology, joining technology and material composition upon their mechanical properties is investigated numerically. Uniaxial compressive tests, with adhesively-bonded MHSS, are performed in order to confirm the numerical findings. In addition, the effective thermal conductivities of MHSS