1. Record Nr. UNINA9910299695703321

Titolo	Failure and Damage Analysis of Advanced Materials / / edited by Holm Altenbach, Tomasz Sadowski
Pubbl/distr/stampa	Vienna : , : Springer Vienna : , : Imprint : Springer, , 2015
ISBN	3-7091-1835-2
Edizione	[1st ed. 2015.]
Descrizione fisica	1 online resource (291 p.)
Collana	CISM International Centre for Mechanical Sciences, Courses and Lectures, , 0254-1971 ; ; 560
Disciplina	620 620.1 620.11 690.24
Soggetti	Mechanics Mechanics, Applied Materials science Buildings - Repair and reconstruction Buildings—Repair and reconstruction Solid Mechanics Characterization and Evaluation of Materials Building Repair and Maintenance
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	Classical and non-classical failure criteria -- Constitutive description of isotropic and anisotropic plasticity for metals -- Failure and damage in cellular materials -- Analytical methods of predicting performance of composite materials -- Analysis of failure in composite structures.
Sommario/riassunto	The papers in this volume present basic concepts and new developments in failure and damage analysis with focus on advanced materials such as composites, laminates, sandwiches and foams, and also new metallic materials. Starting from some mathematical foundations (limit surfaces, symmetry considerations, invariants) new experimental results and their analysis are shown. Finally, new concepts for failure prediction and analysis will be introduced and

discussed as well as new methods of failure and damage prediction for advanced metallic and non-metallic materials. Based on experimental results the traditional methods will be revised.