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Nota di contenuto	Cover; Title Page; Copyright Page; TABLE OF CONTENTS; FOREWORD; Overview and Titanium Alloys I; Cost Effective Synthesis, Processing and Applications of Light-Weight Metallic Materials; Prospects for Cost Reduction of Titanium Via Electrolysis; Implementation of Advanced Metal Technologies to Reduce the Cost of Aerospace Systems; Recent Developments in the Manufacturing of Low Cost Titanium Alloys; Lightweight Metals; Ale-Finite Element Simulation of ""U"" Shape Aluminum Profile Extrusion; Effect of Reinforcement in Mg Alloy

Fabricated by Powder Metallurgy Method; Titanium Alloys
Using Superplastic Forming as a Means of Achieving Cost Benefits as Well as Enhancing Aircraft Performance
Superplastic Behavior of Fine Grained Ti-6Al-4V; Experimental Study on Titanium Alloy
Superplasticity Performance and Processing Parameters; Enhanced Superplastic Forming of Ti-6Al-4V; Microstructure Evolution in Hydrogenated Ti-6Al-4V Alloys; Kinetics of Decomposition of Martensite in Ti-6Al-4V-xH Alloys; Fabrication of Cost Affordable Components for US Army Systems; High Integrity, Low Cost Titanium Powder Metallurgy Components
Titanium Powder Injection Molding - A Cost Effective Alternative
Cold Spray Process for Cost-Sensitive Applications; Laser Induced In-Situ Formation of Ti/TiN Composite; Intermetallics; Dispersion Strengthening of Ti-48Al-2Cr-2Nb Alloy with Al₂Y₄O₉ Particles; Processing and Properties of Titanium Aluminide-Ceramic Particulate Composite Materials; Fabrication of TiNiCu Shape Memory Alloy from Elemental Powders; Thermal Stability of Alumina Mold Against Molten Ti-Al Alloys; In-Situ Synthesis of Al-Ti-C Master Alloy Grain Refiners by Different Methods
Fabrication of Cu-Based Functional Parts by Direct Laser Sintering
Synthesis of Ti₅Si₃ and Ti₅Si₃-2Mo Alloys; Light Magnesium Constructions for Transportation Applications; Author Index; Subject Index

Sommario/riassunto

These proceedings examine the most recent advances and best practices in structural materials selection, design, and manufacturing for producing affordable components, with a focus on titanium, aluminum, and other advanced metallic materials. This volume discusses melting, casting, powder metallurgy, forging, forming, extrusion, and machining, as well as processing advances, innovative processing techniques, process modeling and materials by design, and new alloys, as well as related processing-microstructure-properties-performance-cost studies. This book can be purchased either on CD-ROM, or
