

1. Record Nr.	UNISA996202857703316
Titolo	Proceedings of the International Forum on Structural Ceramics Joining : a collection of papers presented at the International Forum on Structural Ceramics Joining, April 26-30, 1987, Pittsburgh, PA // symposium chairs, Ronald E. Loehman, Sylvia M. Johnson, Arthur J. Moorhead ; sponsored by the Engineering Ceramics Division, the American Ceramic Society, Inc
Pubbl/distr/stampa	Westerville, Ohio : , : The American Ceramic Society, Inc., , 1989 ©1989
ISBN	1-282-31481-5 9786612314810 0-470-31256-4 0-470-31547-4
Descrizione fisica	1 online resource (458 p.)
Collana	Ceramic Engineering and Science Proceedings
Disciplina	666
Soggetti	Ceramic to metal bonding Ceramics - Surfaces Metals - Surfaces
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	"ISSN 0196-6219."
Nota di bibliografia	Includes bibliographical references and indexes.
Nota di contenuto	Proceedings of the International Forum on Structural Ceramics Joining; Table of Contents; Model Systems; Ultrahigh Vacuum Diffusion Bonding of Metals to Ceramics; TEM Studies of Pd/Al ₂ O ₃ Interfaces; Spinel Formation in the Nickel-Alumina System; Crystallographic Study of Ceramic-Metal Joints; Material Transport Mechanisms During the Diffusion Bonding of Niobium to Al ₂ O ₃ ; Intrusion Bonding of Nickel and Zirconia; Alumina-Copper Diffusion Bonding; Bonding and Fracture of Titanium-Containing Braze Alloys to Aluminum; Interfacial Reactions; Brazing Ceramics with Alloys Containing Titanium Brazing Alloy Design for Metal/Ceramic Joints Joining Nitride Ceramics; Wetting of Silicon Nitride with Selected Metals and Alloys; An Investigation of Interfacial Microstructure and Bonding in Brazed Silicon Nitride-Silicon Nitride and Silicon Nitride-Ne-Cr-Fe Alloy 600 Joints;

Interfacial Reactions in Metal-Si₃N₄ Bonding; Interface Mixing Between Metals and Ceramics: Classification, Thermochemistry, and Processing; Morphological Development of Zirconia-Metal Interface; Interfacial Reaction Between Zirconia and Carbon Steel; Wetting of Silicon Carbide Surfaces by MgO-Li₂O-Al₂O₃-SiO₂ Glasses
Joining Methods
Joining Between Zirconias Using Platinum Metal; Joining Silicon Carbide Using Nickel- Active Metal (or Hydride) Powder Mixtures; Silicon Nitride Joining with Glasses in the System CaO-SiO₂; Strength and Fracture; The Strength of Ceramics Bonded With Metals; Modeling of Ceramic to Metal Brazed Joints; Boundary Effects on the Interfacial Transient Thermal Fracture of Ceramic-To-Metal Bonds; Mechanical Behavior of Brazed Silicon Nitride; Comparison of Strengths of Active Metal Brazements in Alumina and SiC Whisker- Reinforced Alumina
Mechanical Behavior of Ceramic-Metal Braze Joints
Ultrasonic Characterization of Ceramic Joints; Strength of Silicon Nitride-Silicon Nitride Joints Bonded With Oxynitride Glass; Effect of Testing Atmosphere on Mechanical Properties of Ceramic/Metal Joints; Effect of Surface Grinding Conditions on Strength of Alumina/Niobium Joint; Author Index; Subject Index

Sommario/riassunto

This volume is part of the Ceramic Engineering and Science Proceeding (CESP) series. This series contains a collection of papers dealing with issues in both traditional ceramics (i.e., glass, whitewares, refractories, and porcelain enamel) and advanced ceramics. Topics covered in the area of advanced ceramic include bioceramics, nanomaterials, composites, solid oxide fuel cells, mechanical properties and structural design, advanced ceramic coatings, ceramic armor, porous ceramics, and more.
