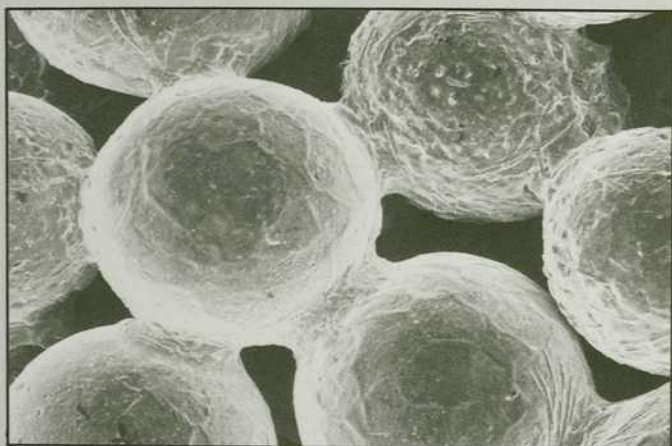
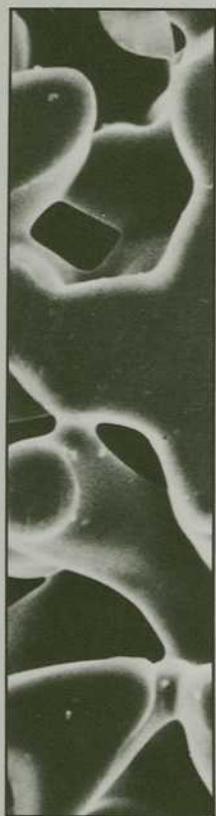


Quantitative Characterization  
and Performance  
of **POROUS**  
**IMPLANTS**  
for **HARD TISSUE**  
**APPLICATIONS**



**Jack E. Lemons,** editor



STP 953

# QUANTITATIVE CHARACTERIZATION AND PERFORMANCE OF POROUS IMPLANTS FOR HARD TISSUE APPLICATIONS

A symposium  
sponsored by ASTM  
Committee F-4 on Medical and  
Surgical Materials and Devices  
Nashville, TN, 18–19 Nov. 1985

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## DEDICATION

*This volume is dedicated to the memory of Emmett M. Lunceford, Jr., M.D.*

*Dr. Lunceford, as a professor of orthopaedic surgery at the University of South Carolina School of Medicine and senior member of the Moore Clinic, fulfilled all aspects of education, research, and service associated with his chosen discipline. His activities in basic, applied, and clinical research earned him the respect of all colleagues. Within ASTM Committee F-4 on Medical and Surgical Materials and Devices, his activities were many, and his last active responsibility was the chairmanship of the Section on Arthroplasty. Most important to all who met Dr. Lunceford, was his nature as a gentleman who always had time to discuss his programs, provide guidance to colleagues on many topics, and provide credit where due and encouragement where indicated. Many of the results presented during the symposium and published in this volume are an outgrowth of his contributions. We will all miss Dr. Lunceford and, with deep appreciation, we dedicate this book to him.*

## FOREWORD

The symposium on Quantitative Characterization and Performance of Porous Implants for Hard Tissue Applications was held 18–19 Nov. 1985, in Nashville, TN. The event was sponsored by ASTM Committee F-4 on Medical and Surgical Materials and Devices, in cooperation with the American Academy of Orthopaedic Surgeons. Jack E. Lemons, of the University of Alabama at Birmingham, presided as chairman of the symposium and also served as editor of this publication.

## **Related ASTM Publications**

**Vascular Graft Update: Safety and Performance, STP 898 (1986), 04-898000-54**

**Corrosion and Degradation of Implant Materials: Second Symposium, STP 859 (1985), 04-859000-27**

**Cell Culture Test Methods, STP 810 (1983), 04-810000-54**

**Medical Devices: Measurements, Quality Assurance, and Standards, STP 800 (1983), 04-800000-54**

**Titanium Alloys in Surgical Implants, STP 796 (1983), 04-796000-54**

**Corrosion and Degradation of Implant Materials, STP 684 (1979), 04-684000-27**

## A Note of Appreciation to Reviewers

The quality of the papers that appear in this publication reflects not only the obvious efforts of the authors but also the unheralded, though essential, work of the reviewers. On behalf of ASTM we acknowledge with appreciation their dedication to high professional standards and their sacrifice of time and effort.

*ASTM Committee on Publications*

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