

# FIBER-STRENGTHENED METALLIC COMPOSITES

## Introduction

---

The tremendous interest in composite materials is evident from the number of researchers in this field, from the number of papers and articles on the subject appearing in the literature, and from the large attendance at each of the many symposia on composite materials. The justification of this interest and the importance of composite materials is due to their very attractive mechanical properties and to the ability to tailor these materials to meet specific design requirements. A number of composite materials are already in production. Many more are in the development stage. Truly, we are in the age of composite materials.

Metal matrix composite materials are of particular interest because of their inherent shear capability, their attractive mechanical properties from cryogenic to very high temperatures, and their ability to be formed and joined into hardware.

The primary objectives of this symposium were to disseminate present knowledge, to promote interchange of ideas, and to stimulate additional studies on the development, evaluation and application of fiber strengthened, metal matrix composite materials. The symposium papers were presented in three sessions: on whisker, wire, and boron reinforced composites. Most of these papers, including discussion questions and answers, and a summary are printed here as an STP, which is the first book specifically concerned with the development and evaluation of metal matrix, fiber strengthened composite materials. It is hoped that the symposium presentation and discussions and the publication of this volume will achieve the above objectives.

All those who participated in the symposium and helped to make it a success, particularly the authors and fellow members of the Aerospace Panel who worked on the committee, served as session chairmen and reviewed the papers, are gratefully acknowledged.

*J. L. Christian*

*Staff scientist, General Dynamics Convair,  
San Diego, Calif.; symposium chairman.*