

## Preface

This conference is the fifth in a series of international conferences devoted to advanced materials and processing. The conference, which is held every three years, is jointly sponsored by the Chinese Society for Metals (CSM), the Japan Institute of Metals (JIM), the Korean Institute of Metals and Materials (KIM), and the Minerals, Metals and Materials Society (TMS) and organized in rotation. The purpose of this international conference PRICM is to provide a forum for the exchange of technical and scientific information, which is beneficial to researchers, producers, and users. The first conference was held in Hangzhou, China, in June 1992, followed by the second in Kyongju, Korea, in June 1995 and the third in Hawaii, USA, in July 1998. The PRICM-4 Proceedings were printed and distributed by JIM, but the conference was cancelled because of the world events.

The conference organizing committee has received about 1100 technical papers from 25 countries and areas, which is more than the received paper numbers of the all previous four conferences. Due to the size of the Proceedings and the technical reasons, only 988 papers have been accepted for publishing in these Proceedings, among them 510 from China, 169 from Japan, 209 from Korea, 38 from USA, and 62 from the rest of the countries and areas. The partial received qualified papers will be published in the *Journal of Nonferrous Metals*. The 988 papers from 20 symposia cover 4 main fields of Structure Materials, Functional Materials, Materials Processing and Materials Characterization. The present Proceedings are divided into 5 Volumes: Volume 1 includes 3 symposia of A (Advanced Ferrous Alloys & Processing), C (Light Metals) and E (Intermetallics & High Temperature Alloys); Volume 2 includes 4 symposia of B (Composite Materials), D (Advanced Ceramics), F (Advanced Nuclear Materials) and T (Layered and Graded Materials; Combustion Synthesis); Volume 3 includes 5 symposia of H (Electronic Materials), I (Smart Materials & Systems), J (Magnetic Materials), K (Biomaterials) and L (Hydrogen Absorbing Materials); Volume 4 includes 4 symposia of M (Advanced Melt Processing, Casting & Joining), N (Spray Forming & Rapid Prototyping), O (Superplasticity & Superplastic Forming) and R (Modeling and Simulation of Materials and Processes); and Volume 5 includes 4 symposia of G (Amorphous, Quasicrystalline and Nanocrystalline Materials), P (Thin Film Materials & Processing), Q (Grain Boundary, Interface & Surface Engineering) and S (Materials Characterization & Evaluation). We believe that this conference will play a significant role in promoting the progress of advanced materials and processing.

The organizers of the 20 symposia are greatly appreciated. They devoted their expertise, experience and time to this conference, making the conference success and the Proceedings publication work smooth and effective.

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Editors

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