

PREFACE

ELEVENTH TOPICAL MEETING ON THE TECHNOLOGY OF FUSION ENERGY

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The topical meeting on the technology of fusion energy is the premier fusion meeting sponsored by the American Nuclear Society (ANS). The papers published in this volume of *Fusion Technology (FT)* represent the contributions from the Eleventh Topical Meeting on the Technology of Fusion Energy held in New Orleans in June 1994. The topical was embedded in the ANS annual meeting (of which the theme was "Achieving Competitive Excellence"); consequently, participants had a unique opportunity to interact and exchange information with colleagues in other areas of nuclear energy. The purpose of the fusion topical is to provide an international forum for presentation and discussion of critical scientific and technical information in all areas of fusion engineering and technology, including recent developments in inertial confinement fusion (ICF) and magnetic fusion energy (MFE) programs.

In the program, we tried to capture and amplify the changing complexion of fusion research by both emphasizing the current new results and pointing to the future development of commercial fusion. Scientific and technical leaders from around the United States and the world presented a variety of results and perspectives. About 190 papers were presented over the four-day period of the meeting with about one-half of the papers presented in poster format on Wednesday. Oral sessions were presented on all four days. The fusion plenary on Monday afternoon was entitled "New Developments in the U.S. Fusion Program" and summarized exciting results in MFE and ICF research and

the effect of ICF declassification on productive research. Talks were also given on fusion-relevant nuclear testing facilities and near-term applications of fusion technology. Two special discussion forums were featured. The first focused on increased industry involvement in the fusion program (Monday evening), and the second discussed alternative pathways for the future development of fusion power (Wednesday evening). Results from most major fusion facilities in the world are found in the program, and significant emphasis has been put on future projects [i.e., International Thermonuclear Experimental Reactor (ITER), Tokamak Physics Experiment (TPX), National Ignition Facility (NIF), etc.] as well.

Papers were reviewed for presentation at the conference based on a two-page summary. Full papers were to be submitted by June 1 for review and subsequent journal publication in this issue of *FT*. We would like to thank all the reviewers and the Technical Program Committee who worked so painstakingly on both the summary and the full paper reviews for making the papers such an excellent contribution to the literature.

We would like to acknowledge the ANS Fusion Energy Division, the other ANS cosponsoring divisions, the U.S. Department of Energy Office of Fusion Energy, Oak Ridge National Laboratory, and North Carolina State University for direct sponsorship of the fusion topical meeting. We also thank the many industrial sponsors, the ANS staff, and all the participants for making this such a successful meeting.