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Recent Progress of Pulsed Power Technology and its Application to High Energy Density Plasma

Edited by Hiroaki Ito and Tetsuo Ozaki

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Abstract

The papers presented at the symposium on "Recent Progress of Pulsed Power Technology and its Application to High Energy Density Plasma" held on January 7-8, 2016 at National Institute for Fusion Science are collected. The papers in this proceeding reflect the present status and recent progress in the experimental and theoretical works on high power particle beams and high energy density plasmas produced by pulsed power technology.

Keyword: high power particle beam, high energy density plasma, pulsed power technology, z-pinch, EUV, x-ray, pulsed discharge, high power electromagnetic wave, material processing, medical application

Preface

The symposium entitled "Recent Progress of Pulsed Power Technology and its Application to High Energy Density Plasma" was organized as a part of the General Collaborative Research of National Institute for Fusion Science (NIFS) and held on January 7-8, 2016 at NIFS, Toki. During the 2 days of symposium, 33 papers were presented. The total number of participants was 61 including students and researchers from universities and a company.

As the field of high energy density plasma has multidisciplinary mature, the extensive discussion of related subjects is difficult in conventional scientific meeting. The purpose of the symposium has been to provide a forum to discuss important technical developments, important applications, increased understandings, new trends and the future in the field of high energy plasmas and pulsed power technologies. Therefore, the papers in this proceeding reflect the present status and progress in the research fields on high power particle beams and high energy density plasmas produced by pulsed power technology in Japan. It is my pleasure if the symposium was beneficial to the development of the pulsed power technology and could provide some kind of opportunity for all participants, especially for young scientists.

We would like to express our sincere thanks to all of the participants, authors and the staff of NIFS.

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