

Preface

The first conference on laser and accelerator neutron sources and applications (LANSA 2013) was held on April 23rd to 25th, 2013, at the Conference Center of Pacifico Yokohama, as one of 10 specialists' meetings of the Optics and Photonics International congress (OPIC2013). The purpose of LANSA was to provide a forum to present and discuss physics and engineering aspects of laser-driven and accelerator-driven neutron sources and their applications to science and technology. 29 abstracts were submitted, and more than 50 persons from 7 countries attended the conference. This proceeding book contains 15 papers which passed the peer review process of the Plasma and Fusion Research of the Japan Society of Plasma Science and Nuclear Fusion Research.

Recent advancement of high power laser technologies enables us to open a new horizon of neutron sources along with conventional ones based on accelerators and nuclear reactors. Various types of short-pulse, high-fluence neutron sources have been developed including laser-driven fusion, laser accelerated ion beams, and cluster-explosions. And, these neutrons are used in a wide variety of applications for such as electricity generation, transmutation for nuclear wastes, biomedical care, and material science. Upon these backgrounds, this forum was held, setting laser-assisted neutron sources and applications as key terms, in order to overview the present status and future prospects of relevant fields. This forum also provided an opportunity for participants to exchange mutual information and activate their own researches.

Finally, we would like to thank all of the participants for fruitful discussions and the IFE Forum for financial support.

Conference Chair

Hiroshi Azechi

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