PREFACE

ANNIE-LAURE PECQUET and CHRISTIAN GRISOLIA

CEA Cadarache

The tenth occurrence of the International Conference on Tritium Science and Technology (TRITIUM 2013) brought together from all over the world experts in tritium and related areas. Tritium has become a key aspect in the development of fission and fusion reactors, pharmaceutical and biomedical applications, and other technologies. As a result, recently, new challenges have been appearing in these fields, and so TRITIUM 2013 sought to cover the entire scope of tritium science and technology.

The International Conference on Tritium Science and Technology was first held in Dayton, Ohio, in 1980 and was followed by conferences in Dayton, Ohio (1985); Toronto, Canada (1988); Albuquerque, New Mexico (1991); Belgirate, Italy (1995); Tsukuba, Japan (2001); Baden-Baden, Germany (2004); Rochester, New York (2007); and Nara, Japan (2010). TRITIUM 2013 was held in Nice, France, at the Nice Acropolis Congress Centre and was inaugurated by Scott Willms, chair of the international steering committee; Alain Becoulet, head of the CEA Institute for Research on Magnetic Fusion; and Christian Estrosi, mayor of Nice.

During TRITIUM 2013, visits to the ITER site and to the Tore Supra CEA fusion device were organized. In parallel, the guests were also able to visit Nice, Villefranche, and Eze during a wonderful tour organized in these exceptional surroundings.

TRITIUM 2013 continued the long tradition of the precedent meetings. Its objective was to provide a forum for an exchange of information to science, technology, engineering, and general experience in safe tritium handling for fusion as well as ITER, fission, pharmaceutical, and other isotopic applications for peaceful uses. TRITIUM 2013 also offered a timely opportunity to discuss several recent international developments, commitments to incorporate tritium in large-scale magnetic and inertial confinement fusion machines, renewed interest to mitigate tritium emissions in the fission power industry, and the expansion of the tritium handling industry.

At TRITIUM 2013, 236 contributions (11 invited papers, 45 oral presentations, and 180 posters) were presented, and 3 industrial exhibitors were present as well. Additionally, a special lecture was devoted in honor of Professor M. Nishikawa.

In this special two-part issue of *Fusion Science and Technology*, 109 papers are published after peer review. The vast majority of these papers address fusion-related research and development activities associated with the ITER fusion program.

The next occurrence in this conference series, TRITIUM 2016, will be organized for the spring of 2016 and will be hosted by the Savannah River National Laboratory at Charleston, South Carolina.

Special thanks must be given to the local organizing committee members for their efforts throughout TRITIUM 2013, to the program committee members for establishing the scientific program, and to the international steering committee members and chair for their continuing support and help. Special thanks are due also to Atout Organisation for their professional support before and during the conference. We are also grateful to all the reviewers who have spent time to ensure the high quality of the publication. Additionally, we want to thank all the participants of TRITIUM 2013 for their high-level scientific contributions. Finally, we wish to thank all of our sponsors: CEA, ITER, MBRAUN, Premium Analyse, SDEC, and the city of Nice.