Journal of Nuclear Materials 386–388 (2009) xv

Contents lists available at ScienceDirect

Journal of Nuclear Materials

journal homepage: www.elsevier.com/locate/jnucmat

Preface

The 13th International Conference on Fusion Reactor Materials (ICFRM-13) was held at the Acropolis Palais des Congrès in Nice, France from 10 to 14 of December 2007. This conference in the series held every two years marked a special milestone. It was indeed the first major materials conference held after the ITER site decision and its location, the city of Nice, was chosen to be near the CEA/Cadarache center, the home of ITER. The conference was associated for the first time with a major industrial event, ITER Business Forum.

The two events brought together about 1500 scientists and industry experts from 27 countries to create a favorable environment for the exchange of opinions between the two parties. The scientific content of the two events was marked by over 150 oral presentations, 600 posters, 100 industrial exhibitions, and 15 workshops.

The number of abstracts received per conference topics reflected the evolution of the fusion program. The number of R&D papers on conventional stainless steels and copper alloys was reduced and more emphasis was placed on manufacturing of their components and licensing. In contrast, the need for materials properties data for qualification of Test Blanket Modules resulted in a higher number of papers on the reduced activation ferritic/martensitic steels. Likewise, the need for development of higher temperature grades of these steels resulted in a high number of ODS steel papers.

The effect of radiation on the behavior of functional and structural materials continued to be of concern to the fusion materials community and the conference dedicated several sessions to these important issues. With the increasing availability of powerful computational tools, multiscale modeling of materials behavior took an increasing role at these sessions. Undoubtedly when such modeling work is combined with experimental data from facilities such as IFMIF (International Fusion Materials Irradiation Facility) and JANNUS (Joint Accelerators for Nanosciences and Nuclear Simulation), a better understanding of radiation damage under fusion environment will be achieved.

Another important topic of the conference was the development of high temperature materials for viable plasma facing components, in particular in the divertor region and for the future power reactors. A number of papers treated long term aspects with the development of advanced materials, such as tungsten alloys and SiC ceramic composites.

Finally, the conference dedicated special sessions to the synergy between fusion and fission materials research, taking advantage of important Generation IV fission reactor activities in France and other GEN-IV partners.

Organisation of such an important event was not possible without the support of the ICFRM-13 local and international committees and the IBF teams. Special thanks also go to the chairs of the program and the publication committees and their teams.

We look forward to see all of you at the ICFRM-14 in Sapporo, Japan from 7 to 11 of September 2009.

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ICFRM-13 Chairman

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0022-3115/$ - see front matter
doi:10.1016/j.jnucmat.2008.12.328