

PREFACE

SECOND JOINT IAEA-ITER TECHNICAL MEETING ON ANALYSIS OF ITER MATERIALS AND TECHNOLOGIES

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This special issue of *Fusion Science & Technology (FS&T)* contains papers based on invited talks and contributed oral and poster presentations given at the Second Joint International Atomic Energy Agency (IAEA)-ITER Technical Meeting on Analysis of ITER Materials and Technologies (TM-AIMT). TM-AIMT was held December 11–13, 2012, at the Gateway Hotel Umed, Ahmedabad, India. The IAEA and the ITER International Organization jointly held TM-AIMT, which was hosted by the Institute for Plasma Research, India. The first meeting in the series was held in 2010 in the principality of Monaco, and selected papers were published in *FS&T* Vol. 61, No. 2.

TM-AIMT aimed to contribute to the development of a knowledge base of properties, processes, and technologies relevant to ITER structural and plasma-facing materials and components, and of the effects of energetic particles and radiation on ITER materials. The knowledge base is expected to be useful for future fusion reactors including ITER. Topics of discussion included (a) fabrication technologies of ITER structural and plasma-facing materials and components, (b) irradiation effects on ITER structural and plasma-facing materials, (c) plasma-material interactions in ITER conditions, (d) synergistic effects of plasma-material interactions and irradiation in ITER, (e) modeling of structural and plasma-facing material and component behavior in ITER conditions, (f) simulation experiments of structural and plasma-facing material and component behavior in ITER conditions, (g) development of new fabrication technologies or materials for ITER, (h) databases of material properties for ITER, and (i) DEMO materials and technologies.

The scientific program of TM-AIMT was established with the help of an international program advisory committee and included 5 invited talks, 10 oral presentations, and 30 poster contributions, complemented by discussion and summary sessions.

Contributions and representation have come from the ITER International Organization, France, Germany, The Netherlands, Ukraine, China, and India. The contributions from India were overwhelming, particularly on test blanket modules and DEMO-related technologies.

We would like to thank the international program advisory committee as well as the local organizing committee for their contribution and efforts in successfully organizing TM-AIMT. We would like to acknowledge the fruitful collaboration with the American Nuclear Society and *FS&T* in preparing the publication of this special issue.



Participants in the Second Joint IAEA-ITER Technical Meeting on Analysis of ITER Materials and Technologies