

PREFACE

The International Materials Research Congress (IMRC) is held annually in Mexico and gathers together more than 1400 attendees from more than 40 countries. The 23rd IMRC, held August 17–21, 2014, included for the very first time a symposium exclusively dedicated to materials for nuclear applications. Thirty speakers and poster presenters from the US, France, Brazil and Mexico participated in this symposium, which provided a forum for presentations and discussion of the state-of-the-art and future trends in nuclear materials and dosimetry.

The “Materials for Nuclear Applications” symposium has its origin in not only the continuous importance of nuclear energy as part of the energy mix for a sustainable energy supply, but also in the importance of nuclear technology in our everyday lives, many times without us realizing it. The symposium showed the importance of continuing R&D in materials and fuels not only for future GenIV systems, but also for current reactors in order to maintain their safety and competitiveness. The combination of experimental and modeling work presented stressed the need and complexity of studying materials under extreme conditions of temperature and irradiation. Several researchers in the area of dosimetry participated in the symposium, during which fierce but respectful debates arose during discussion of new materials, techniques or applications.

Overall, as symposium organizers, we are grateful to all the participants and those whose work is presented in this Proceedings for making this first “Materials for Nuclear Applications” symposium a success. We will work towards becoming a reference symposium and congress for the field of nuclear materials, and hope to welcome new researchers who are already asking for next year’s congress.

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