Preface

The Actinides-93 International Conference was held in Santa Fe, New Mexico, USA, September 19–24, 1993, at the Eldorado and Hilton Hotels. Actinides-93 followed the tradition of Actinides-89 (Tashkent, USSR), Actinides-85 (Aix-en-Provence, France) and Actinides-81 (Asilomar, CA, USA) in providing a forum for the communication of recent research results on the physics, chemistry, and technology of the actinide elements. Furthermore, the scope of the Actinides-93 Conference was extended to include the heaviest elements, the transactinides.

With more than 295 abstracts submitted from more that 23 nations, the technical program was both fascinating and informative. The conference program included a series of invited plenary and keynote lectures, followed by presentations of invited and contributed papers in both oral and poster sessions. The program covered a broad spectrum of special topic symposia organized by some of the most prominent and distinguished experts in their fields. The oral presentations were organized into nine symposia, one panel discussion, and corresponding poster sessions. The conference included reports of recent developments in: (1) actinide and transactinide research; (2) actinofullerenes: (3) organoactinide-centered catalytic processes; (4) environmental impacts of the Chernobyl accident; (5) geochemical studies of naturally-occurring plutonium; (6) actinides and the environment; (7) new developments in theory and spectroscopy; and (8) independent confirmation of the discovery of element number 106, that provided for the subsequent naming of the element. At the time of this printing, the element's co-discoverers proposed that element 106 be named "seaborgium" (Sg) in honor of Nobel Laureate Professor Glenn T. Seaborg, the Plenary speaker of the Actinides-93 Conference.

Conference papers appearing in the Proceedings of the Actinides-93 International Conference and special issue of the *Journal of Alloys and Compounds* are typeset, resulting in a quality appearance of the proceedings. Papers appearing in these proceedings are grouped into nine major subject headings as given in the table of Contents, reflecting the major themes of the conference. This will place the proceedings in a refereed archival journal of broad distribution and interest to researchers in the field of actinide science.

The Conference logo and border designs were adapted from pottery patterns of the prehistoric Mimbres Indians (Native Americans). The Mimbres were famous for their exquisitely detailed and complex designs and their artistry was unequalled by any of their contemporaries. The Mimbres lived in Southwest New Mexico between 550 and 1150 AD. The occurrence of large deposits of uranium in this region makes the use of this design seem quite appropriate for the conference.

The success of this conference was the result of dedicated efforts by a great number of people. The Conference Chairman and Co-editors of these proceedings wish to express sincere appreciation to the Executive, International Advisory, and US Committees for organizing a very successful conference. Gratitude is extended to the symposia organizers who were instrumental in assembling an outstanding scientific program. Financial support by the sponsors listed below is graciously acknowledged. Although it is impossible to thank everyone who contributed to the success of the conference individually, some persons made outstanding efforts. Sincere appreciation is extended to Ms. Jan C. Hull, Ms. L. Kim Nguyen, Ms. C. Elaine Roybal, and numerous others of the Los Alamos National Laboratory for their dedication, before, during, and after the conference. A very special thank you to "Mrs. Chairman," Melanie, for her loving support and understanding during the entire course of the conference planning and execution.

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Elsevier Science S.A.
SSDI 0925-8388