

Book Review

High Temperature Structural Silicides

Proceedings of the First High Temperature Structural Silicides Workshop, Gaithersburg, MD, USA, November 4–6, 1991, edited by A. K. Vasudevan and J. J. Petrovic, 1991, 288 pp., US\$ 128.50.

In the Preface, organisers and guest editors A. K. Vasudevan and J. J. Petrovic stated the aims of the Conference and book: “Firstly, it was designed to assess the current status of research results on silicide-based structural materials, and identify important and promising future research directions. Secondly, it was meant to serve as a catalyst for the expansion of research and development activities in this new field of materials science, and to promote rapid technology transfer to private industry”.

Amongst the more than 30 contributions about 90% concern molybdenum silicide. Are we sure that there is no other silicide just as fascinating or is there just a problem funding fashions? Editing and printing are well done, illustrations are nicely balanced and photos are of excellent quality so reading even for the non-specialist is easy and attractive.

The book is divided into six chapters of about equal length, containing everything one might expect from the title: Silicide Materials, Processing, Relationship between Processing and Mechanical Properties, Oxidation, Creep and Micromechanics. The book begins with a very fine introduction by the editors and “stops playing with models” with Modelling of Transformation Toughening in Brittle Materials (Lessar, Rollet, Srolovitz).

The chapters are well written, and/or edited. Why do all authors – with one Canadian exception – come from the USA? Are silicide structure materials boring to Europeans and Japanese? The famous O. Hönigschmidt discovered molybdenum silicide in 1907, and in 1979 Umakoshi and Hirano from Japan took over from Germans, Austrians and Swedes.

The book should be read more by materials scientists from non-American countries – to obtain and promote ideas of their own. We are looking forward to realization of the influence of this Conference volume on the Conference book of the Proceedings of the 2nd Workshop, possibly in Europe.

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