



## Contents

## Proceedings of the Symposium on Particle Beam Induced Radiation Effects in Materials

## Preface

**Metals, multilayers and nanostructures**

- Dynamic observations of heavy-ion damage in Fe and Fe–Cr alloys, *M.L. Jenkins, Z. Yao, M. Hernández-Mayoral and M.A. Kirk*  
A description of stress driven bubble growth of helium implanted tungsten, *S. Sharafat, A. Takahashi, K. Nagasawa and N. Ghoniem*  
High temperature surface effects of He<sup>+</sup> implantation in ICF fusion first wall materials, *S.J. Zenobia, R.F. Radel, B.B. Cipiti and G.L. Kulcinski*  
Grain refinement of T91 alloy by equal channel angular pressing, *D.C. Foley, K.T. Hartwig, S.A. Maloy, P. Hosemann and X. Zhang*  
Irradiation-induced precipitation modelling of ferritic steels, *Y.F. Yin, R.G. Faulkner and Z. Lu*  
He ion irradiation damage in Fe/W nanolayer films, *N. Li, E.G. Fu, H. Wang, J.J. Carter, L. Shao, S.A. Maloy, A. Misra and X. Zhang*  
Nanoindentation on ion irradiated steels, *P. Hosemann, C. Vieh, R.R. Greco, S. Kabra, J.A. Valdez, M.J. Cappiello and S.A. Maloy*  
Characterization of high energy ion implantation into Ti-6Al-4V, *M.P. Carroll, K. Stephenson and K.O. Findley*  
Displacement rate effects in void formation, *K.C. Russell*  
Experimental atomic scale investigation of irradiation effects in CW 316SS and UFG-CW 316SS, *P. Pareige, A. Etienne and B. Radiguet*  
Effects of oversized solutes on radiation-induced segregation in austenitic stainless steels, *M.J. Hackett, J.T. Busby, M.K. Miller and G.S. Was*

vii	Modeling solute-vacancy trapping at oversized solutes and its effect on radiation-induced segregation in Fe–Cr–Ni alloys, <i>M.J. Hackett, R. Najafabadi and G.S. Was</i>	279
197	Materials researches at the Paul Scherrer Institute for developing high power spallation targets, <i>Y. Dai and W. Wagner</i>	288
203	<b>Ceramics, carbides and graphite</b>	
213	Radiation effects in cubic zirconia: A model system for ceramic oxides, <i>L. Thomé, S. Moll, G. Sattonnay, L. Vincent, F. Garrido and J. Jagielski</i>	297
221	Response of strontium titanate to ion and electron irradiation, <i>Y. Zhang, J. Lian, Z. Zhu, W.D. Bennett, L.V. Saraf, J.L. Rausch, C.A. Hendricks, R.C. Ewing and W.J. Weber</i>	303
225	Comparison of the damage in sapphire due to implantation of boron, nitrogen, and iron, <i>C.J. McHargue, E. Alves, C. Marques and L.C. Ononye</i>	311
233	Proton irradiation study of GFR candidate ceramics, <i>J. Gan, Y. Yang, C. Dickson and T. Allen</i>	317
239	Study of silver diffusion in silicon carbide, <i>E. Friedland, J.B. Malherbe, N.G. van der Berg, T. Hlatshwayo, A.J. Botha, E. Wendler and W. Wesch</i>	326
248	Anisotropy of disorder accumulation and recovery in 6H-SiC irradiated with Au <sup>2+</sup> ions at 140 K, <i>W. Jiang and W.J. Weber</i>	332
254	Magnetic order in proton irradiated graphite: Curie temperatures and magnetoresistance effect, <i>J. Barzola-Quiquia, P. Esquinazi, M. Rothermel, D. Spemann and T. Butz</i>	336
265		