



Contents

Proceedings of the First Symposium on Nuclear Fuels and Structural Materials for Next Generation Nuclear Reactors (NFSM-1)

Contents	vii	
Foreword	ix	
Oxidation of ferritic-martensitic alloys T91, HCM12A and HT-9 in supercritical water, <i>P. Ampornrat and G.S. Was</i>	1	129
The effect of neutron irradiation damage on the properties of grade NBG-10 graphite, <i>T.D. Burchell and L.L. Snead</i>	18	134
Modelling of advanced structural materials for GEN IV reactors, <i>M. Samaras, W. Hoffelner and M. Victoria</i>	28	145
Ferritic/martensitic steels for next-generation reactors, <i>R.L. Klueh and A.T. Nelson</i>	37	151
The temperature dependence of the yield stress for neutron-irradiated molybdenum, <i>M. Li, T.S. Byun, N. Hashimoto, L.L. Snead and S.J. Zinkle</i>	53	161
Zirconium alloys for supercritical water reactor applications: Challenges and possibilities, <i>A.T. Motta, A. Yilmazbayhan, M.J.G. da Silva, R.J. Comstock, G.S. Was, J.T. Busby, E. Gartner, Q. Peng, Y.H. Jeong and J.Y. Park</i>	61	171
Evaluation of neutron irradiated silicon carbide and silicon carbide composites, <i>G. Newsome, L.L. Snead, T. Hinoki, Y. Katoh and D. Peters</i>	76	176
An EBSD investigation on flow localization and microstructure evolution of 316L stainless steel for Gen IV reactor applications, <i>X. Wu, X. Pan, J.C. Mabon, M. Li and J.F. Stubbins</i>	90	202
Facility for stress corrosion cracking of irradiated specimens in supercritical water, <i>S. Teyssyre, Q. Peng, C. Becker and G.S. Was</i>	98	232
Effect of irradiation on stress corrosion cracking in supercritical water, <i>S. Teyssyre, Z. Jiao, E. West and G.S. Was</i>	107	243
Oxidation of 9Cr oxide dispersion strengthened steel exposed in supercritical water, <i>Y. Chen, K. Sridharan, S. Ukai and T.R. Allen</i>	118	250
Thermophysical characterization of nitrides inert matrices: Preliminary results on zirconium nitride, <i>A. Ciriello, V.V. Rondinella, D. Staicu and J. Somers</i>		270
Time dependence of corrosion in steels for use in lead-alloy cooled reactors, <i>M. Machut, K. Sridharan, N. Li, S. Ukai and T. Allen</i>		281
Embrittlement of RPV steels: An atom probe tomography perspective, <i>M.K. Miller and K.F. Russell</i>		288
Corrosion behavior of a ferritic/martensitic steel HCM12A exposed to harsh environments, <i>L. Tan, M.T. Machut, K. Sridharan and T.R. Allen</i>		304
Effect of thermomechanical processing on grain boundary character distribution of a Ni-based superalloy, <i>L. Tan, K. Sridharan and T.R. Allen</i>		314

Handbook of SiC properties for fuel performance modeling, <i>L.L. Snead, T. Nozawa, Y. Katoh, T.-S. Byun, S. Kondo and D.A. Petti</i>	329	Author index	378
		Subject index	381