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Recommended Resources: Materials in Nuclear Power Systems

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The following are recommended resources for materials in nuclear power systems from an advisory group of TMS subject matter experts

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PAPER TITLE	AUTHOR(S)	SOURCE	LINK
Stability of Ferritic MA/ODS alloys at high temperatures	*M.K. Miller, D.T. Hoelzer, E.A. Kenik, K.F. Russell*	Intermetallics, 13 (2005) 387-392	[View Abstract]
Improvement of Creep Strength of 9CrODS Martensitic Steel by Controlling Excess Oxygen and Titanium Concentrations	*S. Ohtuska, S. Ukai, M. Fujiwara, T. Kaito and T. Narita*	Materials Transactions, 46(3) (2005) 1	[View Abstract]
Plastic instability in polycrystalline metals after low temperature irradiation	*T.S. Byun and K. Farrell*	Acta Materialia, 1597-1608 (2004)	[View Abstract]
The Mechanisms and Modeling of Intergranular Cracking in Ni-Cr-Fe Alloys Exposed to High Purity Water	*G.A. Young, W.W. Wilkening, D.S. Morton, E. Richey, and N. Lewis*	12th Environmental Degradation Conference of Materials in Nuclear Power Systems-Water Reactors, p. 913.	[View Article]
Higher Temperature Reactor Materials Workshop	*T. Allen, S. Bruemmer, M. Kassner, R. Odette, R. Stoller, G. Was, W. Wolfer, S. Zinkle, J. Elmer, and A Motta*	Higher Temperature Reactor Materials Workshop, U. S. DOE - ANL-02/12	[View Report]
High-Resolution Characterizations of Stress-Corrosion Cracks in Austenitic Stainless Steel from Crack Growth Tests in BWR-Simulated Environments	*S. M. Bruemmer and L. E. Thomas*	12th Environmental Degradation Conference of Materials in Nuclear Power Systems-Water Reactors, p. 189.	[View Article]
An Overview of Internal Oxidation as a Possible Explanation of Intergranular Stress Corrosion Cracking of Alloy 600 in PWRS	*P. M. Scott*	9th Environmental Degradation Conference of Materials in Nuclear Power Systems-Water Reactors, p. 3.	[View Article]
Comparison of Swelling and Irradiation Creep Behavior of fcc-Austenitic and bcc-Ferritic/Martensitic Alloys at High Neutron Exposure	*F. A. Garner, et al*	J. of Nuclear Materials, v. 276, 1999, p. 123	[View Abstract]
Oxidation Products of INCONEL Alloys 600 and 690 in Pressurized Water Reactor Environments and Their Role in Intergranular Stress Corrosion Cracking	*J. B. Ferguson and H. F. Lopez*	Met. and Mater. Trans. A, 37A, 2006, 2471	[View Abstract]
Long Term Radiation Effects in Fission and Fusion Reactors	*W. Wolfer, A. Kubota, M. Surh, T. Okita, J. Sturgeon, F. Garner and K. Morishita*	Workshop on Advanced Computational Materials Science for Fusion and Fission Reactors, U. S. Department of Energy, 2004	[View Slides]
Simulation and Modeling for Advanced Nuclear Energy Systems Workshop	*R. Stevens, D. Keyes and P. Finck (Chairs)*	Simulation and Modeling for Advanced Nuclear Energy Systems Workshop, Office of Nuclear Energy and Office of Advanced Scientific Computing Research, U. S. Department of Energy, August 2006.	[View Report]
Nuclear Physics and Related Computational Science R&D for Advanced Fuel Cycles Workshop.	*L. Schroeder and E. Lusk (Chairs)*	Nuclear Physics and Related Computational Science R&D for Advanced Fuel Cycles Workshop, U. S. DOE Office of Science, August 2006.	[View Presentaions]
Basic Research Needs for Advanced Nuclear Energy Systems	*J. Roberto and T. Diaz de la Rubia (Chairs)*	Basic Research Needs for Advanced Nuclear Energy Systems, Office of Basic Energy Science, U. S. Department of Energy, October 2006	[View Report]