

Subject index

Analytical Instruments and Methods *(not listed elsewhere)*

- Uranium oxide weathering: spectroscopy and kinetics, R.A. Schueneman, A.I. Khaskelis, D. Eastwood, W.J. van Ooij and L.W. Burggraf 323 (2003) 8
- Behavior of molybdenum in pyrochemical reprocessing: A spectroscopic study of the chlorination of molybdenum and its oxides in chloride melts, V.A. Volkovich, T.R. Griffiths, R.C. Thied and B. Lewin 323 (2003) 93

Chemical Reactions *(includes Electrochemical and Thermochemical Reactions)*

- Uranium oxide weathering: spectroscopy and kinetics, R.A. Schueneman, A.I. Khaskelis, D. Eastwood, W.J. van Ooij and L.W. Burggraf 323 (2003) 8
- Luminescence properties of zirconium oxide films, H.K. Yue and B. Cox 323 (2003) 57
- Isotope exchange reaction between tritiated water and hydrogen on SiC, K. Katayama, M. Nishikawa and T. Takeishi 323 (2003) 138

Cladding Materials

- Luminescence properties of zirconium oxide films, H.K. Yue and B. Cox 323 (2003) 57

Compatibility and Corrosion *(includes Stress Corrosion Cracking)*

- Characterisation of secondary products of uranium–aluminium material test reactor fuel element corrosion in repository-relevant brine, L. Mazeina, H. Curtius, J. Fachinger and R. Odoj 323 (2003) 1
- Influence of Nb concentration in the α -matrix on the corrosion behavior of Zr–xNb binary alloys, Y.H. Jeong, H.G. Kim, D.J. Kim, B.K. Choi and J.H. Kim 323 (2003) 72

Diffusion

- Characterization of the reaction layer in U–7wt%Mo/Al diffusion couples, M.I. Mirandou, S.N. Balart, M. Ortiz and M.S. Granovsky 323 (2003) 29

Electron Microscopy

- Characterization of the reaction layer in U–7wt%Mo/Al diffusion couples, M.I. Mirandou, S.N. Balart, M. Ortiz and M.S. Granovsky 323 (2003) 29
- Characterization of zirconia–thoria–uranium ceramics by X-ray and electron interactions, G. Curran, Y. Sevestre, W. Rattray, P. Allen and K.R. Czerwinski 323 (2003) 41
- Influence of Nb concentration in the α -matrix on the corrosion behavior of Zr–xNb binary alloys, Y.H. Jeong, H.G. Kim, D.J. Kim, B.K. Choi and J.H. Kim 323 (2003) 72
- Host phases for actinides in simulated metallic waste forms, D.E. Janney 323 (2003) 81

Embrittlement

- Mechanisms of stress relief cracking in titanium stabilised austenitic stainless steel, M. Chabaud-Reytier, L. Allais, C. Caes, P. Dubuisson and A. Pineau 323 (2003) 123

Fabrication

- Combustion synthesis of 5 and 10 mol% YO_{1.5} doped ThO₂ powders, R.D. Purohit, S. Saha and A.K. Tyagi 323 (2003) 36

Fast Reactor Materials

- Power-to-melts of uranium–plutonium oxide fuel pins at a beginning-of-life condition in the experimental fast reactor JOYO, M. Inoue, K. Yamamoto, T. Sekine, M. Osaka, N. Kushida and T. Asaga 323 (2003) 108

Fission Products

- Treatment of molten salt wastes by phosphate precipitation: removal of fission product elements after pyrochemical reprocessing of spent nuclear fuels in chloride melts, V.A. Volkovich, T.R. Griffiths and R.C. Thied 323 (2003) 49
- Vaporization behavior and Gibbs energy of formation of Rb₂ThO₃, M. Ali (Basu), A.N. Shirsat, S.C. Kumar, S.R. Bharadwaj and D. Das 323 (2003) 68

- Behavior of molybdenum in pyrochemical reprocessing: A spectroscopic study of the chlorination of molybdenum and its oxides in chloride melts, V.A. Volkovich, T.R. Griffiths, R.C. Thied and B. Lewin 323 (2003) 93
- Fracture and Fracture Toughness**
Mechanisms of stress relief cracking in titanium stabilised austenitic stainless steel, M. Chabaud-Reytier, L. Allais, C. Caes, P. Dubuisson and A. Pineau 323 (2003) 123
- Fuels and Fuel Elements**
Uranium oxide weathering: spectroscopy and kinetics, R.A. Schueneman, A.I. Khaskelis, D. Eastwood, W.J. van Ooij and L.W. Burggraf 323 (2003) 8
Characterization of the reaction layer in U-7wt%Mo/Al diffusion couples, M.I. Mirandou, S.N. Balart, M. Ortiz and M.S. Granovsky 323 (2003) 29
Characterization of zirconia-thoria-uranium ceramics by X-ray and electron interactions, G. Curran, Y. Sevestre, W. Rattray, P. Allen and K.R. Czerwinski 323 (2003) 41
Power-to-melts of uranium-plutonium oxide fuel pins at a beginning-of-life condition in the experimental fast reactor JOYO, M. Inoue, K. Yamamoto, T. Sekine, M. Osaka, N. Kushida and T. Asaga 323 (2003) 108
- Heat Treatment**
Mechanisms of stress relief cracking in titanium stabilised austenitic stainless steel, M. Chabaud-Reytier, L. Allais, C. Caes, P. Dubuisson and A. Pineau 323 (2003) 123
- Helium**
Proton irradiation emulation of PWR neutron damage microstructures in solution annealed 304 and cold-worked 316 stainless steels, B.H. Sencer, G.S. Was, M. Sagisaka, Y. Isobe, G.M. Bond and F.A. Garner 323 (2003) 18
- Hydrogen and Hydrides** (*includes Deuterium and Deuterides*)
Heat capacity of hydrogenated Zircaloy-2 and high Fe Zircaloy, K. Une and S. Ishimoto 323 (2003) 101
Isotope exchange reaction between tritiated water and hydrogen on SiC, K. Katayama, M. Nishikawa and T. Takeishi 323 (2003) 138
- Joining** (*includes Welding, Brazing, Soldering*)
Mechanisms of stress relief cracking in titanium stabilised austenitic stainless steel, M. Chabaud-Reytier, L. Allais, C. Caes, P. Dubuisson and A. Pineau 323 (2003) 123
- Molybdenum, Molybdenum Alloys and Compounds**
Characterization of the reaction layer in U-7wt%Mo/Al diffusion couples, M.I. Mirandou, S.N. Balart, M. Ortiz and M.S. Granovsky 323 (2003) 29
Behavior of molybdenum in pyrochemical reprocessing: A spectroscopic study of the chlorination of molybdenum and its oxides in chloride melts, V.A. Volkovich, T.R. Griffiths, R.C. Thied and B. Lewin 323 (2003) 93
- Neutron Irradiation**
Power-to-melts of uranium-plutonium oxide fuel pins at a beginning-of-life condition in the experimental fast reactor JOYO, M. Inoue, K. Yamamoto, T. Sekine, M. Osaka, N. Kushida and T. Asaga 323 (2003) 108
- Physical Properties** (*not listed elsewhere*)
Luminescence properties of zirconium oxide films, H.K. Yue and B. Cox 323 (2003) 57
- Plutonium, Plutonium Alloys and Compounds**
Host phases for actinides in simulated metallic waste forms, D.E. Janney 323 (2003) 81
- Powder Processes and Products**
Combustion synthesis of 5 and 10 mol% YO_{1.5} doped ThO₂ powders, R.D. Purohit, S. Saha and A.K. Tyagi 323 (2003) 36
- Precipitates and Precipitation**
Treatment of molten salt wastes by phosphate precipitation: removal of fission product elements after pyrochemical reprocessing of spent nuclear fuels in chloride melts, V.A. Volkovich, T.R. Griffiths and R.C. Thied 323 (2003) 49
Influence of Nb concentration in the α -matrix on the corrosion behavior of Zr-xNb binary alloys, Y.H. Jeong, H.G. Kim, D.J. Kim, B.K. Choi and J.H. Kim 323 (2003) 72
Host phases for actinides in simulated metallic waste forms, D.E. Janney 323 (2003) 81
- Proton Irradiation**
Proton irradiation emulation of PWR neutron damage microstructures in solution annealed 304 and cold-worked 316 stainless steels, B.H. Sencer, G.S. Was, M. Sagisaka, Y. Isobe, G.M. Bond and F.A. Garner 323 (2003) 18

Radiation Effects: Extended Defects, Microstructures

- Proton irradiation emulsion of PWR neutron damage microstructures in solution annealed 304 and cold-worked 316 stainless steels, B.H. Sencer, G.S. Was, M. Sagisaka, Y. Isobe, G.M. Bond and F.A. Garner 323 (2003) 18

Reprocessing

- Treatment of molten salt wastes by phosphate precipitation: removal of fission product elements after pyrochemical reprocessing of spent nuclear fuels in chloride melts, V.A. Volkovich, T.R. Griffiths and R.C. Thied 323 (2003) 49
- Behavior of molybdenum in pyrochemical reprocessing: A spectroscopic study of the chlorination of molybdenum and its oxides in chloride melts, V.A. Volkovich, T.R. Griffiths, R.C. Thied and B. Lewin 323 (2003) 93

Safety of Nuclear Reactors and Components

- Power-to-melts of uranium-plutonium oxide fuel pins at a beginning-of-life condition in the experimental fast reactor JOYO, M. Inoue, K. Yamamoto, T. Sekine, M. Osaka, N. Kushida and T. Asaga 323 (2003) 108

Silicon and Silicon Compounds

- Isotope exchange reaction between tritiated water and hydrogen on SiC, K. Katayama, M. Nishikawa and T. Takeishi 323 (2003) 138

Steels, Austenitic

- Proton irradiation emulsion of PWR neutron damage microstructures in solution annealed 304 and cold-worked 316 stainless steels, B.H. Sencer, G.S. Was, M. Sagisaka, Y. Isobe, G.M. Bond and F.A. Garner 323 (2003) 18

Steels, Austenitic, Stabilized

- Mechanisms of stress relief cracking in titanium stabilised austenitic stainless steel, M. Chabaud-Reytier, L. Allais, C. Caes, P. Dubuisson and A. Pineau 323 (2003) 123

Surface Effects

- Isotope exchange reaction between tritiated water and hydrogen on SiC, K. Katayama, M. Nishikawa and T. Takeishi 323 (2003) 138

Thermodynamic Properties

- Vaporization behavior and Gibbs energy of formation of Rb_2ThO_3 , M. Ali

- (Basu), A.N. Shirsat, S.C. Kumar, S.R. Bharadwaj and D. Das 323 (2003) 68

Thermophysical Properties

- Heat capacity of hydrogenated Zircaloy-2 and high Fe Zircaloy, K. Une and S. Ishimoto 323 (2003) 101

Thorium, Thorium Alloys and Compounds

- Combustion synthesis of 5 and 10 mol% $\text{YO}_{1.5}$ doped ThO_2 powders, R.D. Purohit, S. Saha and A.K. Tyagi 323 (2003) 36
- Characterization of zirconia-thoria-urania ceramics by X-ray and electron interactions, G. Curran, Y. Sevestre, W. Rattray, P. Allen and K.R. Czerwinski 323 (2003) 41
- Vaporization behavior and Gibbs energy of formation of Rb_2ThO_3 , M. Ali (Basu), A.N. Shirsat, S.C. Kumar, S.R. Bharadwaj and D. Das 323 (2003) 68

Tritium and Tritides

- Isotope exchange reaction between tritiated water and hydrogen on SiC, K. Katayama, M. Nishikawa and T. Takeishi 323 (2003) 138

Uranium, Uranium Alloys

- Characterisation of secondary products of uranium-aluminium material test reactor fuel element corrosion in repository-relevant brine, L. Mazeina, H. Curtius, J. Fachinger and R. Odoj 323 (2003) 1
- Characterization of the reaction layer in U-7wt%Mo/Al diffusion couples, M.I. Mirandou, S.N. Balart, M. Ortiz and M.S. Granovsky 323 (2003) 29
- Host phases for actinides in simulated metallic waste forms, D.E. Janney 323 (2003) 81

Uranium Oxides and Compounds

- Uranium oxide weathering: spectroscopy and kinetics, R.A. Schueneman, A.I. Khaskelis, D. Eastwood, W.J. van Ooij and L.W. Burggraf 323 (2003) 8
- Characterization of zirconia-thoria-urania ceramics by X-ray and electron interactions, G. Curran, Y. Sevestre, W. Rattray, P. Allen and K.R. Czerwinski 323 (2003) 41

Waste Materials

- Treatment of molten salt wastes by phosphate precipitation: removal of fission product elements after pyrochemical reprocessing of spent nuclear fuels in chloride melts, V.A. Volkovich, T.R. Griffiths and R.C. Thied 323 (2003) 49

- Host phases for actinides in simulated metallic waste forms, D.E. Janney 323 (2003) 81
- Waste: Behavior in Storage**
- Characterisation of secondary products of uranium–aluminium material test reactor fuel element corrosion in repository-relevant brine, L. Mazeina, H. Curtius, J. Fachinger and R. Odoj 323 (2003) 1
- Zirconium, Zirconium Alloys**
- Influence of Nb concentration in the α -matrix on the corrosion behavior of Zr–xNb binary alloys, Y.H. Jeong, H.G. Kim, D.J. Kim, B.K. Choi and J.H. Kim 323 (2003) 72
- Heat capacity of hydrogenated Zircaloy-2 and high Fe Zircaloy, K. Une and S. Ishimoto 323 (2003) 101
- Zirconium Hydrides and Compounds**
- Characterization of zirconia–thoria–urania ceramics by X-ray and electron interactions, G. Curran, Y. Sevestre, W. Rattray, P. Allen and K.R. Czerwinski 323 (2003) 41
- Luminescence properties of zirconium oxide films, H.K. Yue and B. Cox 323 (2003) 57
- Heat capacity of hydrogenated Zircaloy-2 and high Fe Zircaloy, K. Une and S. Ishimoto 323 (2003) 101