



ELSEVIER

Available online at www.sciencedirect.com

Journal of Nuclear Materials 321 (2003) 338–344

**journal of
nuclear
materials**www.elsevier.com/locate/jnucmat

Subject index

Absorber Materials

Study on solid solubility of Gd in UO₂ using X-ray diffraction, K. Kapoor, S.V. Ramana Rao, Sheela, T. Sanyal and A. Singh

321 (2003) 331

Aluminum, Aluminum Alloys and Compounds

The response of a chromium doped alumina screen to keV and MeV ions, K.J. McCarthy, J. García López, F. Martín Hernández, B. Zurro, A. Baciero and M.A. Respaldiza

321 (2003) 78

Reaction layer growth and reaction heat of U-Mo/Al dispersion fuels using centrifugally atomized powders, H.J. Ryu, Y.S. Han, J.M. Park, S.D. Park and C.K. Kim

321 (2003) 210

Amorphization and Amorphous Materials

Nature and role of natural alteration gels formed on the surface of ancient volcanic glasses (Natural analogs of waste containment glasses), J.-L. Crovisier, T. Advocat and J.-L. Dussossoy

321 (2003) 91

Structural aspects of PbO-P₂O₅ glasses containing ThO₂, C.G.S. Pillai, V. Sudarsan, M. Roy and A.K. Dua

321 (2003) 313

Analytical Instruments and Methods (not listed elsewhere)

In situ study of the oxidation of Zircaloy-4 by ESEM, S. Abolhassani, M. Dadras, M. Leboeuf and D. Gavillet

321 (2003) 70

Helium behavior in UO₂ polycrystalline disks, S. Guibert, T. Sauvage, H. Erramli, M.-F. Barthe, P. Desgardin, G. Blondiaux, C. Corbel and J.P. Piron

321 (2003) 121

Nuclear reaction analysis of helium migration in zirconia, J.-M. Costantini, J.-J. Grob, J. Haussy, P. Trocellier and Ph. Trouslard

321 (2003) 281

Beryllium, Beryllium Alloys and Compounds

Compatibility studies in the Li₁₇Pb₈₃-SiC, Be-SiC and Be-Mo systems, H. Kleykamp

321 (2003) 170

Breeding Materials for Fusion

Compatibility studies in the Li₁₇Pb₈₃-SiC, Be-SiC and Be-Mo systems, H. Kleykamp

321 (2003) 170

Carbon

Light emission from carbon-based materials under ITER relevant thermal shock loads, T. Hirai, J. Linke, W. Kühlein, G. Sergienko and S. Brezinsek

321 (2003) 110

Strength of neutron-irradiated high-quality 3D carbon fiber composite, L.L. Snead, T.D. Burchell and A.L. Qualls

321 (2003) 165

Density functional study of chemical erosion mechanisms in carbon and boron-doped carbon as plasma facing material in tokamaks, Y. Ferro, F. Marinelli, A. Allouche and C. Brosset

321 (2003) 294

Cavities (includes Voids, Holes)

The effect of irradiation-induced gas-atom re-solution on grain-boundary bubble growth, J. Rest

321 (2003) 305

Ceramics (not listed elsewhere)

Measured displacement energies of oxygen ions in titanates and zirconates, K.L. Smith, M. Colella, R. Cooper and E.R. Vance

321 (2003) 19

Optical absorption and luminescence of 14-MeV neutron-irradiated CaF₂ single crystals, D.W. Cooke and B.L. Bennett

321 (2003) 158

Cladding Materials

Cyclic stress-strain response of textured Zircaloy-4, C. Li, S. Ying, B. Shen, S. Qiu, X. Ling, Y. Wang and Q. Peng

321 (2003) 60

In situ study of the oxidation of Zircaloy-4 by ESEM, S. Abolhassani, M. Dadras, M. Leboeuf and D. Gavillet

321 (2003) 70

Layer formation on metal surfaces in lead-bismuth at high temperatures in presence of zirconium, E.P. Loewen, H.J. Yount, K. Volk and A. Kumar

321 (2003) 269

Compatibility and Corrosion (includes Stress Corrosion Cracking)

In situ study of the oxidation of Zircaloy-4 by ESEM, S. Abolhassani, M. Dadras, M. Leboeuf and D. Gavillet

321 (2003) 70

- Compatibility studies in the Li₁₇Pb₈₃–SiC, Be–SiC and Be–Mo systems, H. Kleykamp
321 (2003) 170
- Influences of laser surface alloying with niobium (Nb) on the corrosion resistance of Zircaloy-4, S.J. Lee, C.J. Park, Y.S. Lim and H.S. Kwon
321 (2003) 177
- Parametric study of a corrosion model applied to lead–bismuth flow systems, J. Zhang and N. Li
321 (2003) 184
- The influence of oversized solute additions on radiation-induced changes and post-irradiation intergranular stress corrosion cracking behavior in high-purity 316 stainless steels, L. Fournier, B.H. Sencer, G.S. Was, E.P. Simonen and S.M. Bruemmer
321 (2003) 192
- Effect of Mo addition on the corrosion resistance of Zr-based alloy in water containing LiOH, J.H. Lee and S.K. Hwang
321 (2003) 238
- Layer formation on metal surfaces in lead–bismuth at high temperatures in presence of zirconium, E.P. Loewen, H.J. Yount, K. Volk and A. Kumar
321 (2003) 269
- Composite Materials**
- Light emission from carbon-based materials under ITER relevant thermal shock loads, T. Hirai, J. Linke, W. Kühnlein, G. Sergienko and S. Brezinsek
321 (2003) 110
- Crystallographic Properties**
- Study on solid solubility of Gd in UO₂ using X-ray diffraction, K. Kapoor, S.V. Ramana Rao, Sheela, T. Sanyal and A. Singh
321 (2003) 331
- Defects and Defect Structures (excludes by Irradiation)**
- Ab initio formation energies of Fe–Cr alloys, P. Olsson, I.A. Abrikosov, L. Vitos and J. Wallenius
321 (2003) 84
- Deformation**
- Plastic deformation in 316LN stainless steel – characterization of deformation microstructures, T.S. Byun, E.H. Lee and J.D. Hunn
321 (2003) 29
- Diffusion**
- Strength proof evaluation of diffusion-jointed W/Ta interfaces by small punch test, J.-F. Li, M. Kawai, K. Kikuchi, T. Igarashi, H. Kurishita, R. Watanabe and A. Kawasaki
321 (2003) 129
- Reaction layer growth and reaction heat of U–Mo/Al dispersion fuels using centrifugally atomized powders, H.J. Ryu, Y.S. Han, J.M. Park, S.D. Park and C.K. Kim
321 (2003) 210
- Nuclear reaction analysis of helium migration in zirconia, J.-M. Costantini, J.-J. Grob, J. Haussy, P. Trocellier and Ph. Trouslard
321 (2003) 281
- Behaviour of fission gases in an irradiated nuclear fuel under α external irradiation, L. Desgranges, M. Ripert, J.P. Piron, H. Kodja and J.P. Gallier
321 (2003) 324
- Dislocations**
- Plastic deformation in 316LN stainless steel – characterization of deformation microstructures, T.S. Byun, E.H. Lee and J.D. Hunn
321 (2003) 29
- Electrical Properties**
- Influence of humidity on the permittivity and conductivity of thin zirconium alloy oxide films, H. Frank
321 (2003) 115
- Electron Irradiation**
- Measured displacement energies of oxygen ions in titanates and zirconates, K.L. Smith, M. Colella, R. Cooper and E.R. Vance
321 (2003) 19
- Electron Microscopy**
- Dissolution of synthetic brannerite in acidic and alkaline fluids, Y. Zhang, B.S. Thomas, G.R. Lumpkin, M. Blackford, Z. Zhang, M. Colella and Z. Aly
321 (2003) 1
- Determination of the alloying content in the matrix of Zr alloys using synchrotron radiation microprobe X-ray fluorescence, A. Yilmazbayhan, O. Delaire, A.T. Motta, R.C. Birtcher, J.M. Maser and B. Lai
321 (2003) 221
- Embrittlement**
- Embrittlement behaviour of low-activation alloys with reduced boron content after neutron irradiation, H.-C. Schneider, B. Dafferner and J. Aktaa
321 (2003) 135
- Fabrication**
- Comparative study of thermal decomposition of the sol–gel products of U and Ce by external and internal gelation processes, K. Suresh Kumar, H.P. Nawada and N.P. Bhat
321 (2003) 263
- Fatigue**
- Cyclic stress-strain response of textured Zircaloy-4, C. Li, S. Ying, B. Shen, S. Qiu, X. Ling, Y. Wang and Q. Peng
321 (2003) 60
- First Wall Materials**
- Study in chemical bonding states of SiC films before and after hydrogen ion irradiation, N.K. Huang, Q. Xiong and D.Z. Wang
321 (2003) 152

Fission Products

Three-dimensional simulation of threshold porosity for fission gas release in the rim region of LWR UO₂ fuel, Y.-H. Koo, J.-Y. Oh, B.-H. Lee and D.-S. Sohn

321 (2003) 249

Comparative study of thermal decomposition of the sol-gel products of U and Ce by external and internal gelation processes, K. Suresh Kumar, H.P. Nawada and N.P. Bhat

321 (2003) 263

The effect of irradiation-induced gas-atom re-solution on grain-boundary bubble growth, J. Rest

321 (2003) 305

Gibbs energy of formation of the Rh-Te intermetallic compounds Rh₃Te₂ and RhTe_{0.9}, R. Mishra, M. Ali, S.R. Bharadwaj and D. Das

321 (2003) 318

Behaviour of fission gases in an irradiated nuclear fuel under α external irradiation, L. Desgranges, M. Ripert, J.P. Piron, H. Kodja and J.P. Gallier

321 (2003) 324

Fracture and Fracture Toughness

Strength proof evaluation of diffusion-jointed W/Ta interfaces by small punch test, J.-F. Li, M. Kawai, K. Kikuchi, T. Igarashi, H. Kurishita, R. Watanabe and A. Kawasaki

321 (2003) 129

Fuels and Fuel Elements

Reaction layer growth and reaction heat of U-Mo/Al dispersion fuels using centrifugally atomized powders, H.J. Ryu, Y.S. Han, J.M. Park, S.D. Park and C.K. Kim

321 (2003) 210

Study on solid solubility of Gd in UO₂ using X-ray diffraction, K. Kapoor, S.V. Ramana Rao, Sheela, T. Sanyal and A. Singh

321 (2003) 331

Fusion Reactor Materials

Density functional study of chemical erosion mechanisms in carbon and boron-doped carbon as plasma facing material in tokamaks, Y. Ferro, F. Marinelli, A. Allouche and C. Brosset

321 (2003) 294

Gases in Materials (excludes Hydrogen, Helium and Tritium)

The effect of irradiation-induced gas-atom re-solution on grain-boundary bubble growth, J. Rest

321 (2003) 305

Grain Boundaries

The effect of irradiation-induced gas-atom re-solution on grain-boundary bubble growth, J. Rest

321 (2003) 305

Helium

Plastic deformation in 316LN stainless steel – characterization of deforma-

tion microstructures, T.S. Byun, E.H. Lee and J.D. Hunn

321 (2003) 29

The response of a chromium doped alumina screen to keV and MeV ions, K.J. McCarthy, J. García López, F. Martín Hernández, B. Zurro, A. Baciero and M.A. Respaldiza

321 (2003) 78

Helium behavior in UO₂ polycrystalline disks, S. Guillet, T. Sauvage, H. Erramli, M.-F. Barthe, P. Desgardin, G. Blondiaux, C. Corbel and J.P. Piron

321 (2003) 121

Nuclear reaction analysis of helium migration in zirconia, J.-M. Costantini, J.-J. Grob, J. Haussy, P. Trocellier and Ph. Trouslard

321 (2003) 281

Behaviour of fission gases in an irradiated nuclear fuel under α external irradiation, L. Desgranges, M. Ripert, J.P. Piron, H. Kodja and J.P. Gallier

321 (2003) 324

Hydrogen and Hydrides (includes Deuterium and Deuterides)

The response of a chromium doped alumina screen to keV and MeV ions, K.J. McCarthy, J. García López, F. Martín Hernández, B. Zurro, A. Baciero and M.A. Respaldiza

321 (2003) 78

Density functional study of chemical erosion mechanisms in carbon and boron-doped carbon as plasma facing material in tokamaks, Y. Ferro, F. Marinelli, A. Allouche and C. Brosset

321 (2003) 294

Impurities

Determination of the alloying content in the matrix of Zr alloys using synchrotron radiation microprobe X-ray fluorescence, A. Yilmazbayhan, O. Delaire, A.T. Motta, R.C. Birtcher, J.M. Maser and B. Lai

321 (2003) 221

Control of oxygen concentration in liquid lead and lead-bismuth, G. Müller, A. Heinzel, G. Schumacher and A. Weisenburger

321 (2003) 256

Ion Irradiation

Plastic deformation in 316LN stainless steel – characterization of deformation microstructures, T.S. Byun, E.H. Lee and J.D. Hunn

321 (2003) 29

The response of a chromium doped alumina screen to keV and MeV ions, K.J. McCarthy, J. García López, F. Martín Hernández, B. Zurro, A. Baciero and M.A. Respaldiza

321 (2003) 78

Study in chemical bonding states of SiC films before and after hydrogen ion irradiation, N.K. Huang, Q. Xiong and D.Z. Wang

321 (2003) 152

| | | |
|--|----------------|----------------|
| Behaviour of fission gases in an irradiated nuclear fuel under α external irradiation, L. Desgranges, M. Ripert, J.P. Piron, H. Kodja and J.P. Gallier | 321 (2003) 324 | |
| Iron, Iron alloys and Compounds (excludes Steels) | | |
| Ab initio formation energies of Fe-Cr alloys, P. Olsson, I.A. Abrikosov, L. Vitos and J. Wallenius | 321 (2003) 84 | 321 (2003) 170 |
| Joining (includes Welding, Brazing, Soldering) | | |
| Corrosion and microstructural aspects of dissimilar joints of titanium and type 304L stainless steel, U.K. Mudali, B.M. Ananda Rao, K. Shanmugam, R. Natarajan and B. Raj | 321 (2003) 40 | 321 (2003) 210 |
| Kinetics | | |
| The kinetics of dissolution of $\text{Th}_{1-x}\text{U}_x\text{O}_2$ solid solutions in nitric media, G. Heisbourg, S. Hubert, N. Dacheux and J. Ritt | 321 (2003) 141 | 321 (2003) 135 |
| Liquid Metals | | |
| Compatibility studies in the $\text{Li}_{17}\text{Pb}_{83-}$ SiC, Be-SiC and Be-Mo systems, H. Kleykamp | 321 (2003) 170 | 321 (2003) 158 |
| Parametric study of a corrosion model applied to lead-bismuth flow systems, J. Zhang and N. Li | 321 (2003) 184 | |
| Control of oxygen concentration in liquid lead and lead-bismuth, G. Müller, A. Heinzel, G. Schumacher and A. Weissenburger | 321 (2003) 256 | 321 (2003) 165 |
| Layer formation on metal surfaces in lead-bismuth at high temperatures in presence of zirconium, E.P. Loewen, H.J. Yount, K. Volk and A. Kumar | 321 (2003) 269 | |
| Mechanical Properties (not listed elsewhere) | | |
| Strength proof evaluation of diffusion-jointed W/Ta interfaces by small punch test, J.-F. Li, M. Kawai, K. Kikuchi, T. Igarashi, H. Kurishita, R. Watanabe and A. Kawasaki | 321 (2003) 129 | 321 (2003) 238 |
| Influences of laser surface alloying with niobium (Nb) on the corrosion resistance of Zircaloy-4, S.J. Lee, C.J. Park, Y.S. Lim and H.S. Kwon | 321 (2003) 177 | |
| Effect of MX type particles on creep strength of ferritic steel, M. Tamura, H. Sakasegawa, A. Kohyama, H. Esaka and K. Shinozuka | 321 (2003) 288 | 321 (2003) 8 |
| Microstructure and Texture (excludes by Irradiation) | | |
| Effect of Mo addition on the corrosion resistance of Zr-based alloy in water containing LiOH, J.H. Lee and S.K. Hwang | 321 (2003) 238 | 321 (2003) 84 |
| Molybdenum, Molybdenum Alloys and Compounds | | |
| Compatibility studies in the $\text{Li}_{17}\text{Pb}_{83-}$ SiC, Be-SiC and Be-Mo systems, H. Kleykamp | 321 (2003) 170 | 321 (2003) 110 |
| Reaction layer growth and reaction heat of U-Mo/Al dispersion fuels using centrifugally atomized powders, H.J. Ryu, Y.S. Han, J.M. Park, S.D. Park and C.K. Kim | 321 (2003) 210 | 321 (2003) 233 |
| Neutron Irradiation | | |
| Embrittlement behaviour of low-activation alloys with reduced boron content after neutron irradiation, H.-C. Schneider, B. Dafferner and J. Aktaa | 321 (2003) 135 | |
| Optical absorption and luminescence of 14-MeV neutron-irradiated CaF_2 single crystals, D.W. Cooke and B.L. Bennett | 321 (2003) 158 | |
| Nickel, Nickel Alloys and Compounds | | |
| Strength of neutron-irradiated high-quality 3D carbon fiber composite, L.L. Snead, T.D. Burchell and A.L. Qualls | 321 (2003) 165 | |
| Niobium, Niobium Alloys and Compounds | | |
| Influences of laser surface alloying with niobium (Nb) on the corrosion resistance of Zircaloy-4, S.J. Lee, C.J. Park, Y.S. Lim and H.S. Kwon | 321 (2003) 177 | |
| Oxides | | |
| Effect of Mo addition on the corrosion resistance of Zr-based alloy in water containing LiOH, J.H. Lee and S.K. Hwang | 321 (2003) 238 | |
| Phase Equilibria (includes Constitution, Phase Stability, Phase Instability) | | |
| Contribution to a thermodynamic database and phase equilibria calculations for low activation Ta-containing steels, A. Danon and C. Servant | 321 (2003) 8 | |
| Physical Properties (not listed elsewhere) | | |
| Ab initio formation energies of Fe-Cr alloys, P. Olsson, I.A. Abrikosov, L. Vitos and J. Wallenius | 321 (2003) 238 | 321 (2003) 110 |
| Light emission from carbon-based materials under ITER relevant thermal shock loads, T. Hirai, J. Linke, W. Kühnlein, G. Sergienko and S. Brezinsek | 321 (2003) 233 | 321 (2003) 256 |
| Raman spectra of stoichiometric and hyperstoichiometric uranium dioxide, D. Manara and B. Renker | 321 (2003) 238 | |
| Control of oxygen concentration in liquid lead and lead-bismuth, G. Müller, A. Heinzel, G. Schumacher and A. Weissenburger | 321 (2003) 256 | |

Structural aspects of PbO–P₂O₅ glasses containing ThO₂, C.G.S. Pillai, V. Sudarsan, M. Roy and A.K. Dua

321 (2003) 313

Plasma-Materials Interaction

Study in chemical bonding states of SiC films before and after hydrogen ion irradiation, N.K. Huang, Q. Xiong and D.Z. Wang

Density functional study of chemical erosion mechanisms in carbon and boron-doped carbon as plasma facing material in tokamaks, Y. Ferro, F. Marinelli, A. Allouche and C. Brosset

321 (2003) 152

321 (2003) 294

Precipitates and Precipitation

Determination of the alloying content in the matrix of Zr alloys using synchrotron radiation microprobe X-ray fluorescence, A. Yilmazbayhan, O. Delaire, A.T. Motta, R.C. Birtcher, J.M. Maser and B. Lai

Effect of MX type particles on creep strength of ferritic steel, M. Tamura, H. Sakasegawa, A. Kohyama, H. Esaka and K. Shinozuka

321 (2003) 221

321 (2003) 288

Processing

Reaction layer growth and reaction heat of U–Mo/Al dispersion fuels using centrifugally atomized powders, H.J. Ryu, Y.S. Han, J.M. Park, S.D. Park and C.K. Kim

Study on solid solubility of Gd in UO₂ using X-ray diffraction, K. Kapoor, S.V. Ramana Rao, Sheela, T. Sanyal and A. Singh

321 (2003) 210

321 (2003) 331

Proton Irradiation

The influence of oversized solute additions on radiation-induced changes and post-irradiation intergranular stress corrosion cracking behavior in high-purity 316 stainless steels, L. Fournier, B.H. Sencer, G.S. Was, E.P. Simonen and S.M. Bruemmer

321 (2003) 192

Radiation Effects: Atomic Defects

Measured displacement energies of oxygen ions in titanates and zirconates, K.L. Smith, M. Colella, R. Cooper and E.R. Vance

321 (2003) 19

Radiation Effects: Extended Defects, Microstructures

Helium behavior in UO₂ polycrystalline disks, S. Guibert, T. Sauvage, H. Erramli, M.-F. Barthe, P. Desgardin, G. Blondiaux, C. Corbel and J.P. Piron

The influence of oversized solute additions on radiation-induced changes

321 (2003) 121

and post-irradiation intergranular stress corrosion cracking behavior in high-purity 316 stainless steels, L. Fournier, B.H. Sencer, G.S. Was, E.P. Simonen and S.M. Bruemmer

321 (2003) 192

Radiation Effects: Mechanical Properties

The influence of oversized solute additions on radiation-induced changes and post-irradiation intergranular stress corrosion cracking behavior in high-purity 316 stainless steels, L. Fournier, B.H. Sencer, G.S. Was, E.P. Simonen and S.M. Bruemmer

321 (2003) 192

Radiation Effects: Physical Properties

The response of a chromium doped alumina screen to keV and MeV ions, K.J. McCarthy, J. García López, F. Martín Hernández, B. Zurro, A. Baciero and M.A. Respaldiza

321 (2003) 78

Optical absorption and luminescence of 14-MeV neutron-irradiated CaF₂ single crystals, D.W. Cooke and B.L. Bennett

321 (2003) 158

Strength of neutron-irradiated high-quality 3D carbon fiber composite, L.L. Snead, T.D. Burchell and A.L. Qualls

321 (2003) 165

Radiolysis

Optical absorption and luminescence of 14-MeV neutron-irradiated CaF₂ single crystals, D.W. Cooke and B.L. Bennett

321 (2003) 158

Reprocessing

The kinetics of dissolution of Th_{1-x}U_xO₂ solid solutions in nitric media, G. Heisbourg, S. Hubert, N. Dacheux and J. Ritt

321 (2003) 141

Silicon and Silicon Compounds

Study in chemical bonding states of SiC films before and after hydrogen ion irradiation, N.K. Huang, Q. Xiong and D.Z. Wang

321 (2003) 152

Steels, Austenitic

The influence of oversized solute additions on radiation-induced changes and post-irradiation intergranular stress corrosion cracking behavior in high-purity 316 stainless steels, L. Fournier, B.H. Sencer, G.S. Was, E.P. Simonen and S.M. Bruemmer

321 (2003) 192

Steels, Austenitic, Low C/N

Plastic deformation in 316LN stainless steel – characterization of deforma-

- tion microstructures, T.S. Byun, E.H. Lee and J.D. Hunn
Corrosion and microstructural aspects of dissimilar joints of titanium and type 304L stainless steel, U.K. Mudali, B.M. Ananda Rao, K. Shanmugam, R. Natarajan and B. Raj
Layer formation on metal surfaces in lead–bismuth at high temperatures in presence of zirconium, E.P. Loewen, H.J. Yount, K. Volk and A. Kumar
- Steels, Ferritic/Martensitic**
Parametric study of a corrosion model applied to lead–bismuth flow systems, J. Zhang and N. Li
Layer formation on metal surfaces in lead–bismuth at high temperatures in presence of zirconium, E.P. Loewen, H.J. Yount, K. Volk and A. Kumar
Effect of MX type particles on creep strength of ferritic steel, M. Tamura, H. Sakasegawa, A. Kohyama, H. Esaka and K. Shinozuka
- Steels, Ferritic/Martensitic, Low Activation**
Contribution to a thermodynamic database and phase equilibria calculations for low activation Ta-containing steels, A. Danon and C. Servant
Embrittlement behaviour of low-activation alloys with reduced boron content after neutron irradiation, H.-C. Schneider, B. Dafferner and J. Aktaa
- Surface Effects**
Study in chemical bonding states of SiC films before and after hydrogen ion irradiation, N.K. Huang, Q. Xiong and D.Z. Wang
Strength of neutron-irradiated high-quality 3D carbon fiber composite, L.L. Snead, T.D. Burchell and A.L. Qualls
Influences of laser surface alloying with niobium (Nb) on the corrosion resistance of Zircaloy-4, S.J. Lee, C.J. Park, Y.S. Lim and H.S. Kwon
Layer formation on metal surfaces in lead–bismuth at high temperatures in presence of zirconium, E.P. Loewen, H.J. Yount, K. Volk and A. Kumar
- Theory and Modelling**
Ab initio formation energies of Fe–Cr alloys, P. Olsson, I.A. Abrikosov, L. Vitos and J. Wallenius
Parametric study of a corrosion model applied to lead–bismuth flow systems, J. Zhang and N. Li
- 321 (2003) 29
321 (2003) 40
321 (2003) 269
321 (2003) 184
321 (2003) 269
321 (2003) 288
321 (2003) 8
321 (2003) 135
321 (2003) 152
321 (2003) 165
321 (2003) 177
321 (2003) 269
321 (2003) 84
321 (2003) 184
- Three-dimensional simulation of threshold porosity for fission gas release in the rim region of LWR UO₂ fuel, Y.-H. Koo, J.-Y. Oh, B.-H. Lee and D.-S. Sohn
Density functional study of chemical erosion mechanisms in carbon and boron-doped carbon as plasma facing material in tokamaks, Y. Ferro, F. Marinelli, A. Allouche and C. Brosset
The effect of irradiation-induced gas-atom re-solution on grain-boundary bubble growth, J. Rest
- Thermal Shock**
Light emission from carbon-based materials under ITER relevant thermal shock loads, T. Hirai, J. Linke, W. Kühnlein, G. Sergienko and S. Brezinsek
- Thermodynamic Properties**
Gibbs energy of formation of the Rh–Te intermetallic compounds Rh₃Te₂ and RhTe_{0.9}, R. Mishra, M. Ali, S.R. Bharadwaj and D. Das
- Thorium, Thorium Alloys and Compounds**
The kinetics of dissolution of Th_{1-x}U_xO₂ solid solutions in nitric media, G. Heisbourg, S. Hubert, N. Dacheux and J. Ritt
Structural aspects of PbO–P₂O₅ glasses containing ThO₂, C.G.S. Pillai, V. Sudarsan, M. Roy and A.K. Dua
- Titanium, Titanium Alloys and Compounds**
Corrosion and microstructural aspects of dissimilar joints of titanium and type 304L stainless steel, U.K. Mudali, B.M. Ananda Rao, K. Shanmugam, R. Natarajan and B. Raj
- Tungsten, Tungsten Alloys and Compounds**
Strength proof evaluation of diffusion-jointed W/Ta interfaces by small punch test, J.-F. Li, M. Kawai, K. Kikuchi, T. Igarashi, H. Kurishita, R. Watanabe and A. Kawasaki
- Uranium Oxides and Compounds**
Dissolution of synthetic brannerite in acidic and alkaline fluids, Y. Zhang, B.S. Thomas, G.R. Lumpkin, M. Blackford, Z. Zhang, M. Colella and Z. Aly
UO₂ dissolution in Boom Clay conditions, C. Cachoir, K. Lemmens, S. Van den Berghe and P. Van Iseghem
Helium behavior in UO₂ polycrystalline disks, S. Guilbert, T. Sauvage, H.
- 321 (2003) 249
321 (2003) 294
321 (2003) 305
321 (2003) 110
321 (2003) 318
321 (2003) 141
321 (2003) 313
321 (2003) 40
321 (2003) 129
321 (2003) 1
321 (2003) 49

| | | |
|---|---|----------------|
| Erramli, M.-F. Barthe, P. Desgardin, G. Blondiaux, C. Corbel and J.P. Piron | K.L. Smith, M. Colella, R. Cooper and E.R. Vance | 321 (2003) 19 |
| The kinetics of dissolution of $\text{Th}_{1-x}\text{U}_x\text{O}_2$ solid solutions in nitric media, G. Heisbourg, S. Hubert, N. Dacheux and J. Ritt | UO_2 dissolution in Boom Clay conditions, C. Cachoir, K. Lemmens, S. Van den Berghe and P. Van Iseghem | 321 (2003) 49 |
| Raman spectra of stoichiometric and hyperstoichiometric uranium dioxide, D. Manara and B. Renker | Nature and role of natural alteration gels formed on the surface of ancient volcanic glasses (Natural analogs of waste containment glasses), J.-L. Crovisier, T. Advocat and J.-L. Dussoy | 321 (2003) 91 |
| Three-dimensional simulation of threshold porosity for fission gas release in the rim region of LWR UO_2 fuel, Y.-H. Koo, J.-Y. Oh, B.-H. Lee and D.-S. Sohn | | |
| Comparative study of thermal decomposition of the sol-gel products of U and Ce by external and internal gelation processes, K. Suresh Kumar, H.P. Nawada and N.P. Bhat | X-ray Techniques and Applications | |
| Behaviour of fission gases in an irradiated nuclear fuel under α external irradiation, L. Desgranges, M. Ripert, J.P. Piron, H. Kodja and J.P. Gallier | Optical absorption and luminescence of 14-MeV neutron-irradiated CaF_2 single crystals, D.W. Cooke and B.L. Bennett | 321 (2003) 158 |
| Uranium, Uranium Alloys | Determination of the alloying content in the matrix of Zr alloys using synchrotron radiation microprobe X-ray fluorescence, A. Yilmazbayhan, O. Delaire, A.T. Motta, R.C. Birtcher, J.M. Maser and B. Lai | 321 (2003) 221 |
| Reaction layer growth and reaction heat of U-Mo/Al dispersion fuels using centrifugally atomized powders, H.J. Ryu, Y.S. Han, J.M. Park, S.D. Park and C.K. Kim | | |
| Waste Materials | Zirconium Hydrides and Compounds | |
| Dissolution of synthetic brannerite in acidic and alkaline fluids, Y. Zhang, B.S. Thomas, G.R. Lumpkin, M. Blackford, Z. Zhang, M. Colella and Z. Aly | Influence of humidity on the permittivity and conductivity of thin zirconium alloy oxide films, H. Frank | 321 (2003) 115 |
| Nature and role of natural alteration gels formed on the surface of ancient volcanic glasses (Natural analogs of waste containment glasses), J.-L. Crovisier, T. Advocat and J.-L. Dussoy | Nuclear reaction analysis of helium migration in zirconia, J.-M. Costantini, J.-J. Grob, J. Haussy, P. Trocellier and Ph. Trouslard | 321 (2003) 281 |
| Waste: Behavior in Storage | Zirconium, Zirconium Alloys | |
| Dissolution of synthetic brannerite in acidic and alkaline fluids, Y. Zhang, B.S. Thomas, G.R. Lumpkin, M. Blackford, Z. Zhang, M. Colella and Z. Aly | Cyclic stress-strain response of textured Zircaloy-4, C. Li, S. Ying, B. Shen, S. Qiu, X. Ling, Y. Wang and Q. Peng | 321 (2003) 60 |
| Measured displacement energies of oxygen ions in titanates and zirconates, | In situ study of the oxidation of Zircaloy-4 by ESEM, S. Abolhassani, M. Dadras, M. Leboeuf and D. Gavillet | 321 (2003) 70 |
| | Influences of laser surface alloying with niobium (Nb) on the corrosion resistance of Zircaloy-4, S. Lee, C. Park, Y. Lim and H. Kwon | 321 (2003) 177 |
| | Determination of the alloying content in the matrix of Zr alloys using synchrotron radiation microprobe X-ray fluorescence, A. Yilmazbayhan, O. Delaire, A.T. Motta, R.C. Birtcher, J.M. Maser and B. Lai | 321 (2003) 221 |
| | Effect of Mo addition on the corrosion resistance of Zr-based alloy in water containing LiOH, J.H. Lee and S.K. Hwang | 321 (2003) 238 |