



Subject index

Aluminum, Aluminum Alloys and Compounds

- Neutron irradiation of sapphire for compressive strengthening. I. Processing conditions and compressive strength, T.M. Regan, D.C. Harris, R.M. Stroud and J.R. White 300 (2002) 39
- Neutron irradiation of sapphire for compressive strengthening. II. Physical properties changes, T.M. Regan, D.C. Harris, D.W. Blodgett, K.C. Baldwin, J.A. Miragliotta, M.E. Thomas, M.J. Linevsky, J.W. Giles, T.A. Kennedy, M. Fatemi, D.R. Black and K.P.D. Lagerlöf 300 (2002) 47
- The effect of coatings on deuterium retention and permeation in aluminum 6061-T6 APT tritium production tubes, K.L. Hertz, R.A. Causey and D.F. Cowgill 300 (2002) 255

Amorphization and Amorphous Materials

- Amorphization and recrystallization of the ABO_3 oxides, A. Meldrum, L.A. Boatner, W.J. Weber and R.C. Ewing 300 (2002) 242

Breeding Materials

- Combustion synthesis of γ -lithium aluminate by using various fuels, F. Li, K. Hu, J. Li, D. Zhang and G. Chen 300 (2002) 82

Ceramics (not listed elsewhere)

- Neutron irradiation of sapphire for compressive strengthening. I. Processing conditions and compressive strength, T.M. Regan, D.C. Harris, R.M. Stroud and J.R. White 300 (2002) 39
- Neutron irradiation of sapphire for compressive strengthening. II. Physical properties changes, T.M. Regan, D.C. Harris, D.W. Blodgett, K.C. Baldwin, J.A. Miragliotta, M.E. Thomas, M.J. Linevsky, J.W. Giles, T.A. Kennedy, M. Fatemi, D.R. Black and K.P.D. Lagerlöf 300 (2002) 47
- Combustion synthesis of γ -lithium aluminate by using various fuels, F. Li, K. Hu, J. Li, D. Zhang and G. Chen 300 (2002) 82
- Aqueous corrosion of lanthanum aluminosilicate glasses: influence of inorganic anions, L. Bois, N. Barré, M.J. Guittet, S. Guillopé, P. Trocellier, M. Gautier-Soyer, P. Verdier and Y. Laurent 300 (2002) 141

- Order–disorder phase transition induced by swift ions in $MgAl_2O_4$ and $ZnAl_2O_4$ spinels, D. Simeone, C. Dodane-Thiriet, D. Gosset, P. Daniel and M. Beauvy 300 (2002) 151
- Amorphization and recrystallization of the ABO_3 oxides, A. Meldrum, L.A. Boatner, W.J. Weber and R.C. Ewing 300 (2002) 242
- Concentration-triggered fission product release from zirconia: consequences for nuclear safety, A. Gentils, L. Thomé, J. Jagielski and F. Garrido 300 (2002) 266

Chemical Reactions (includes Electrochemical and Thermochemical Reactions)

- Pyrochemical reduction of uranium dioxide and plutonium dioxide by lithium metal, T. Usami, M. Kurata, T. Inoue, H.E. Sims, S.A. Beetham and J.A. Jenkins 300 (2002) 15
- Aqueous corrosion of lanthanum aluminosilicate glasses: influence of inorganic anions, L. Bois, N. Barré, M.J. Guittet, S. Guillopé, P. Trocellier, M. Gautier-Soyer, P. Verdier and Y. Laurent 300 (2002) 141
- In situ electrochemical impedance spectroscopy of Zr–1%Nb under VVER primary circuit conditions, G. Nagy, Z. Kerner and T. Pajkossy 300 (2002) 230
- Redox condition in molten fluoride salts Definition and control, D. Olander 300 (2002) 270

Cladding Materials

- Fission product precipitates in irradiated uranium carbonitride fuel, H. Kleykamp 300 (2002) 273

Coatings and Coated Particles

- Ultrasonic study of UO_2 : effects of porosity and grain size on ultrasonic attenuation and velocities, D. Laux, B. Cros, G. Despau and D. Baron 300 (2002) 192
- The effect of coatings on deuterium retention and permeation in aluminum 6061-T6 APT tritium production tubes, K.L. Hertz, R.A. Causey and D.F. Cowgill 300 (2002) 255

Compatibility and Corrosion (include Stress Corrosion Cracking)

- Active control of oxygen in molten lead–bismuth eutectic systems to prevent steel corrosion and coolant contamination, N. Li 300 (2002) 73

- Emulation of neutron irradiation effects protons: validation of principle, G.S. Was, J.T. Busby, T. Allen, E.A. Kenik, A. Jensson, S.M. Bruemmer, J. Gan, A.D. Edwards, P.M. Scott and P.L. Andreson 300 (2002) 198
- Redox condition in molten fluoride salts
Definition and control, D. Olander 300 (2002) 270
- Crystallographic Properties**
- Neutron irradiation of sapphire for compressive strengthening. I. Processing conditions and compressive strength, T.M. Regan, D.C. Harris, R.M. Stroud and J.R. White 300 (2002) 39
- A Raman study of the nanocrystallite size effect on the pressure-temperature phase diagram of zirconia grown by zirconium-based alloys oxidation, P. Bouvier, J. Godlewski and G. Lucazeau 300 (2002) 118
- Order-disorder phase transition induced by swift ions in $MgAl_2O_4$ and $ZnAl_2O_4$ spinels, D. Simeone, C. Dodane-Thiriet, D. Gosset, P. Daniel and M. Beauvy 300 (2002) 151
- Amorphization and recrystallization of the ABO_3 oxides, A. Meldrum, L.A. Boatner, W.J. Weber and R.C. Ewing 300 (2002) 242
- Deformation**
- Influence of dynamic strain aging on the ductile tearing of C-Mn steels: modelling by a local approach method, D. Wagner, J.C. Moreno, C. Prioul, J.M. Frund and B. Houssin 300 (2002) 178
- Diffusion**
- Hydrogen isotope retention and recycling in fusion reactor plasma-facing components, R.A. Causey 300 (2002) 91
- Concentration-triggered fission product release from zirconia: consequences for nuclear safety, A. Gentils, L. Thomé, J. Jagielski and F. Garrido 300 (2002) 266
- Electron Irradiation**
- Analysis of the monoclinic-tetragonal phase transition of zirconia under irradiation, D. Simeone, D. Gosset, J.L. Bechade and A. Chevarier 300 (2002) 27
- Embrittlement**
- Comparison of microstructural features of radiation embrittlement of VVER-440 and VVER-1000 reactor pressure vessel steels, E.A. Kuleshova, B.A. Gurovich, Ya.I. Shtrombakh, D.Yu. Erak and O.V. Lavrenchuk 300 (2002) 127
- Experimental Techniques**
- Ultrasonic study of UO_2 : effects of porosity and grain size on ultrasonic attenuation and velocities, D. Laux, B. Cros, G. Despaux and D. Baron 300 (2002) 192
- Fatigue**
- Effects of nitrogen on low-cycle fatigue properties of type 304L austenitic stainless steels tested with and without tensile strain hold, B. Rho and S. Nam 300 (2002) 65
- Fission Products**
- Concentration-triggered fission product release from zirconia: consequences for nuclear safety, A. Gentils, L. Thomé, J. Jagielski and F. Garrido 300 (2002) 266
- Fission product precipitates in irradiated uranium carbonitride fuel, H. Kleykamp 300 (2002) 273
- Fracture and Fracture Toughness**
- Influence of dynamic strain aging on the ductile tearing of C-Mn steels: modelling by a local approach method, D. Wagner, J.C. Moreno, C. Prioul, J.M. Frund and B. Houssin 300 (2002) 178
- Fuels and Fuel Elements**
- Thermal conductivities of irradiated UO_2 and (U, Gd) O_2 pellets, M. Amaya, M. Hirai, H. Sakurai, K. Ito, M. Sasaki, T. Nomata, K. Kamimura and R. Iwasaki 300 (2002) 57
- Ultrasonic study of UO_2 : effects of porosity and grain size on ultrasonic attenuation and velocities, D. Laux, B. Cros, G. Despaux and D. Baron 300 (2002) 192
- Fission product precipitates in irradiated uranium carbonitride fuel, H. Kleykamp 300 (2002) 273
- Fusion Reactors**
- Hydrogen isotope retention and recycling in fusion reactor plasma-facing components, R.A. Causey 300 (2002) 91
- Grain Boundaries**
- Effects of nitrogen on low-cycle fatigue properties of type 304L austenitic stainless steels tested with and without tensile strain hold, B. Rho and S. Nam 300 (2002) 65
- Hydrogen and Hydrides (includes Deuterium and Deuterides)**
- Diffusive transport parameters and surface rate constants of deuterium in Incoloy 800, G.A. Esteban, A. Perujo, L.A. Sedano, F. Legarda, B. Mancinelli and K. Douglas 300 (2002) 1
- Hydrogen isotope retention and recycling in fusion reactor plasma-facing components, R.A. Causey 300 (2002) 91
- The effect of coatings on deuterium retention and permeation in aluminum 6061-T6 APT tritium production tubes, K.L. Hertz, R.A. Causey and D.F. Cowgill 300 (2002) 255

Impurities

- Effects of nitrogen on low-cycle fatigue properties of type 304L austenitic stainless steels tested with and without tensile strain hold, B. Rho and S. Nam 300 (2002) 65

Ion Irradiation

- Analysis of the monoclinic–tetragonal phase transition of zirconia under irradiation, D. Simeone, D. Gosset, J.L. Bechade and A. Chevarier 300 (2002) 27
- Order–disorder phase transition induced by swift ions in MgAl_2O_4 and ZnAl_2O_4 spinels, D. Simeone, C. Dodane-Thiriet, D. Gosset, P. Daniel and M. Beauvy 300 (2002) 151
- Emulation of neutron irradiation effects protons: validation of principle, G.S. Was, J.T. Busby, T. Allen, E.A. Kenik, A. Jensson, S.M. Bruemmer, J. Gan, A.D. Edwards, P.M. Scott and P.L. Andreson 300 (2002) 198
- Amorphization and recrystallization of the ABO_3 oxides, A. Meldrum, L.A. Boatner, W.J. Weber and R.C. Ewing 300 (2002) 242
- The effect of coatings on deuterium retention and permeation in aluminum 6061-T6 APT tritium production tubes, K.L. Hertz, R.A. Causey and D.F. Cowgill 300 (2002) 255
- Concentration-triggered fission product release from zirconia: consequences for nuclear safety, A. Gentils, L. Thomé, J. Jagielski and F. Garrido 300 (2002) 266

Liquid Metals

- Active control of oxygen in molten lead–bismuth eutectic systems to prevent steel corrosion and coolant contamination, N. Li 300 (2002) 73

Mechanical Properties (*not listed elsewhere*)

- Mechanical and thermomechanical properties of commercially pure chromium and chromium alloys, U. Holzwarth and H. Stamm 300 (2002) 161

Metals, Alloys and Compounds (*not listed elsewhere*)

- Mechanical and thermomechanical properties of commercially pure chromium and chromium alloys, U. Holzwarth and H. Stamm 300 (2002) 161

Microstructure and Texture (*excludes by Irradiation*)

- Combustion synthesis of γ -lithium aluminate by using various fuels, F. Li, K. Hu, J. Li, D. Zhang and G. Chen 300 (2002) 82
- A Raman study of the nanocrystallite size effect on the pressure–temperature phase diagram of zirconia grown by zirconium-based alloys oxidation, P. Bouvier, J. Godlewski and G. Lucazeau 300 (2002) 118

Neutron Irradiation

- Neutron irradiation of sapphire for compressive strengthening. I. Processing conditions and compressive strength, T.M. Regan, D.C. Harris, R.M. Stroud and J.R. White 300 (2002) 39
- Neutron irradiation of sapphire for compressive strengthening. II. Physical properties changes, T.M. Regan, D.C. Harris, D.W. Blodgett, K.C. Baldwin, J.A. Miragliotta, M.E. Thomas, M.J. Linevsky, J.W. Giles, T.A. Kennedy, M. Fatemi, D.R. Black and K.P.D. Lagerlöf 300 (2002) 47
- Thermal conductivities of irradiated UO_2 and $(\text{U, Gd})\text{O}_2$ pellets, M. Amaya, M. Hirai, H. Sakurai, K. Ito, M. Sasaki, T. Nomata, K. Kamimura and R. Iwasaki 300 (2002) 57
- Comparison of microstructural features of radiation embrittlement of VVER-440 and VVER-1000 reactor pressure vessel steels, E.A. Kuleshova, B.A. Gurovich, Ya.I. Shtrombakh, D.Yu. Erak and O.V. Lavrenchuk 300 (2002) 127

Nickel, Nickel Alloys and Compounds

- Diffusive transport parameters and surface rate constants of deuterium in Incoloy 800, G.A. Esteban, A. Perujo, L.A. Sedano, F. Legarda, B. Mancinelli and K. Douglas 300 (2002) 1

Permeation

- Diffusive transport parameters and surface rate constants of deuterium in Incoloy 800, G.A. Esteban, A. Perujo, L.A. Sedano, F. Legarda, B. Mancinelli and K. Douglas 300 (2002) 1

Phase Transformation (*includes Evaporation, Sublimation*)

- Analysis of the monoclinic–tetragonal phase transition of zirconia under irradiation, D. Simeone, D. Gosset, J.L. Bechade and A. Chevarier 300 (2002) 27
- A Raman study of the nanocrystallite size effect on the pressure–temperature phase diagram of zirconia grown by zirconium-based alloys oxidation, P. Bouvier, J. Godlewski and G. Lucazeau 300 (2002) 118
- Order–disorder phase transition induced by swift ions in MgAl_2O_4 and ZnAl_2O_4 spinels, D. Simeone, C. Dodane-Thiriet, D. Gosset, P. Daniel and M. Beauvy 300 (2002) 151

Plasma-Materials Interaction

- Hydrogen isotope retention and recycling in fusion reactor plasma-facing components, R.A. Causey 300 (2002) 91

Plutonium, Plutonium Alloys and Compounds

- Pyrochemical reduction of uranium dioxide and plutonium dioxide by lithium metal,

- T. Usami, M. Kurata, T. Inoue, H.E. Sims, S.A. Beetham and J.A. Jenkins 300 (2002) 15
- Powder Processes and Products**
- A Raman study of the nanocrystallite size effect on the pressure–temperature phase diagram of zirconia grown by zirconium-based alloys oxidation, P. Bouvier, J. Godlewski and G. Lucazeau 300 (2002) 118
- Thoria doped with cations of group VB–synthesis and sintering, K. Ananthasivan, S. Anthonysamy, C. Sudha, A.L.E. Terrence and P.R. Vasudeva Rao 300 (2002) 217
- Precipitates and Precipitation**
- Effects of nitrogen on low-cycle fatigue properties of type 304L austenitic stainless steels tested with and without tensile strain hold, B. Rho and S. Nam 300 (2002) 65
- Fission product precipitates in irradiated uranium carbonitride fuel, H. Kleykamp 300 (2002) 273
- Processing**
- Neutron irradiation of sapphire for compressive strengthening. I. Processing conditions and compressive strength, T.M. Regan, D.C. Harris, R.M. Stroud and J.R. White 300 (2002) 39
- Combustion synthesis of γ -lithium aluminate by using various fuels, F. Li, K. Hu, J. Li, D. Zhang and G. Chen 300 (2002) 82
- Radiation Effects: Extended Defects, Microstructures**
- Comparison of microstructural features of radiation embrittlement of VVER-440 and VVER-1000 reactor pressure vessel steels, E.A. Kuleshova, B.A. Gurovich, Ya.I. Shtrombakh, D.Yu. Erak and O.V. Lavrenchuk 300 (2002) 127
- Order–disorder phase transition induced by swift ions in MgAl_2O_4 and ZnAl_2O_4 spinels, D. Simeone, C. Dodane-Thiriet, D. Gosset, P. Daniel and M. Beauvy 300 (2002) 151
- Emulation of neutron irradiation effects protons: validation of principle, G.S. Was, J.T. Busby, T. Allen, E.A. Kenik, A. Jansson, S.M. Bruemmer, J. Gan, A.D. Edwards, P.M. Scott and P.L. Andreson 300 (2002) 198
- Amorphization and recrystallization of the ABO_3 oxides, A. Meldrum, L.A. Boatner, W.J. Weber and R.C. Ewing 300 (2002) 242
- Radiation Effects: Mechanical Properties**
- Neutron irradiation of sapphire for compressive strengthening. I. Processing conditions and compressive strength, T.M. Regan, D.C. Harris, R.M. Stroud and J.R. White 300 (2002) 39
- Comparison of microstructural features of radiation embrittlement of VVER-440 and VVER-1000 reactor pressure vessel steels, E.A. Kuleshova, B.A. Gurovich, Ya.I. Shtrombakh, D.Yu. Erak and O.V. Lavrenchuk 300 (2002) 127
- Radiation Effects: Physical Properties**
- Neutron irradiation of sapphire for compressive strengthening. II. Physical properties changes, T.M. Regan, D.C. Harris, D.W. Blodgett, K.C. Baldwin, J.A. Miragliotta, M.E. Thomas, M.J. Linevsky, J.W. Giles, T.A. Kennedy, M. Fatemi, D.R. Black and K.P.D. Lagerlöf 300 (2002) 47
- Concentration-triggered fission product release from zirconia: consequences for nuclear safety, A. Gentils, L. Thomé, J. Jagielski and F. Garrido 300 (2002) 266
- Rare Earths**
- Aqueous corrosion of lanthanum aluminosilicate glasses: influence of inorganic anions, L. Bois, N. Barré, M.J. Guittet, S. Guillopé, P. Trocellier, M. Gautier-Soyer, P. Verdier and Y. Laurent 300 (2002) 141
- Reprocessing**
- Pyrochemical reduction of uranium dioxide and plutonium dioxide by lithium metal, T. Usami, M. Kurata, T. Inoue, H.E. Sims, S.A. Beetham and J.A. Jenkins 300 (2002) 15
- Segregation**
- Emulation of neutron irradiation effects protons: validation of principle, G.S. Was, J.T. Busby, T. Allen, E.A. Kenik, A. Jansson, S.M. Bruemmer, J. Gan, A.D. Edwards, P.M. Scott and P.L. Andreson 300 (2002) 198
- Steels, Austenitic**
- Effects of nitrogen on low-cycle fatigue properties of type 304L austenitic stainless steels tested with and without tensile strain hold, B. Rho and S. Nam 300 (2002) 65
- Emulation of neutron irradiation effects protons: validation of principle, G.S. Was, J.T. Busby, T. Allen, E.A. Kenik, A. Jansson, S.M. Bruemmer, J. Gan, A.D. Edwards, P.M. Scott and P.L. Andreson 300 (2002) 198
- Steels, Ferritic**
- Comparison of microstructural features of radiation embrittlement of VVER-440 and VVER-1000 reactor pressure vessel steels, E.A. Kuleshova, B.A. Gurovich, Ya.I. Shtrombakh, D.Yu. Erak and O.V. Lavrenchuk 300 (2002) 127
- Influence of dynamic strain aging on the ductile tearing of C–Mn steels: modelling

- by a local approach method, D. Wagner, J.C. Moreno, C. Prioul, J.M. Frund and B. Houssin 300 (2002) 178
- Surface Effects**
- Thermal conductivities of irradiated UO_2 and $(\text{U}, \text{Gd})\text{O}_2$ pellets, M. Amaya, M. Hirai, H. Sakurai, K. Ito, M. Sasaki, T. Nomata, K. Kamimura and R. Iwasaki 300 (2002) 57
- Aqueous corrosion of lanthanum aluminosilicate glasses: influence of inorganic anions, L. Bois, N. Barré, M.J. Guittet, S. Guillopé, P. Trocellier, M. Gautier-Soyer, P. Verdier and Y. Laurent 300 (2002) 141
- Theory and Modelling**
- Active control of oxygen in molten lead–bismuth eutectic systems to prevent steel corrosion and coolant contamination, N. Li 300 (2002) 73
- Thermodynamic Properties**
- Active control of oxygen in molten lead–bismuth eutectic systems to prevent steel corrosion and coolant contamination, N. Li 300 (2002) 73
- Thermodynamic stability of Na_2ZrO_3 using the solid electrolyte galvanic cell technique, R. Subasri, T. Mathews, K. Swaminathan and O.M. Sreedharan 300 (2002) 237
- Redox condition in molten fluoride salts
Definition and control, D. Olander 300 (2002) 270
- Thermophysical Properties**
- Thermal conductivities of irradiated UO_2 and $(\text{U}, \text{Gd})\text{O}_2$ pellets, M. Amaya, M. Hirai, H. Sakurai, K. Ito, M. Sasaki, T. Nomata, K. Kamimura and R. Iwasaki 300 (2002) 57
- Mechanical and thermomechanical properties of commercially pure chromium and chromium alloys, U. Holzwarth and H. Stamm 300 (2002) 161
- Thorium, Thorium Alloys and Compounds**
- Thoria doped with cations of group VB–synthesis and sintering, K. Ananthasivan, S. Anthonysamy, C. Sudha, A.L.E. Terrence and P.R. Vasudeva Rao 300 (2002) 217
- Tritium and Tritides**
- Hydrogen isotope retention and recycling in fusion reactor plasma-facing components, R.A. Causey 300 (2002) 91
- The effect of coatings on deuterium retention and permeation in aluminum 6061-T6 APT tritium production tubes, K.L. Hertz, R.A. Causey and D.F. Cowgill 300 (2002) 255
- Uranium, Uranium Alloys and Compounds**
- Pyrochemical reduction of uranium dioxide and plutonium dioxide by lithium metal, T. Usami, M. Kurata, T. Inoue, H.E. Sims, S.A. Beetham and J.A. Jenkins 300 (2002) 15
- Thermal conductivities of irradiated UO_2 and $(\text{U}, \text{Gd})\text{O}_2$ pellets, M. Amaya, M. Hirai, H. Sakurai, K. Ito, M. Sasaki, T. Nomata, K. Kamimura and R. Iwasaki 300 (2002) 57
- Ultrasonic study of UO_2 : effects of porosity and grain size on ultrasonic attenuation and velocities, D. Laux, B. Cros, G. Despau and D. Baron 300 (2002) 192
- Fission product precipitates in irradiated uranium carbonitride fuel, H. Kleykamp 300 (2002) 273
- Wastes**
- Aqueous corrosion of lanthanum aluminosilicate glasses: influence of inorganic anions, L. Bois, N. Barré, M.J. Guittet, S. Guillopé, P. Trocellier, M. Gautier-Soyer, P. Verdier and Y. Laurent 300 (2002) 141
- Zirconium, Zirconium Alloys and Compounds**
- Analysis of the monoclinic–tetragonal phase transition of zirconia under irradiation, D. Simeone, D. Gosset, J.L. Bechade and A. Chevarier 300 (2002) 27
- A Raman study of the nanocrystallite size effect on the pressure–temperature phase diagram of zirconia grown by zirconium-based alloys oxidation, P. Bouvier, J. Godlewski and G. Lucazeau 300 (2002) 118
- In situ electrochemical impedance spectroscopy of Zr-1\%Nb under VVER primary circuit conditions, G. Nagy, Z. Kerner and T. Pajkossy 300 (2002) 230
- Thermodynamic stability of Na_2ZrO_3 using the solid electrolyte galvanic cell technique, R. Subasri, T. Mathews, K. Swaminathan and O.M. Sreedharan 300 (2002) 237