

Subject index

Aluminum, Aluminum Alloys and Compounds

- Experiments, characterizations and analysis of a U_3Si_2 -Al dispersion fuel plate with sandwich structure, X.-S. Wang and Y. Xu 328 (2004) 243

Analytical Instruments and Methods (not listed elsewhere)

- Oxidation of the hexagonal $Zr(Cr_{0.4}Fe_{0.6})_2$ Laves phase, P.B. Bozzano, C. Ramos, F. Saporiti, P.A. Vázquez, R.A. Versaci and C. Saragovi 328 (2004) 225

Carbon

- Modelling of carbon transport in fusion devices: evidence of enhanced re-erosion of in-situ re-deposited carbon, A. Kirschner, P. Wienhold, V. Philipps, J.P. Coad, A. Huber, U. Samm and JET EFDA contributors 328 (2004) 62

Cavities (includes Voids, Holes)

- Vacancy cluster evolution and swelling in irradiated 316 stainless steel, M.P. Surh, J.B. Sturgeon and W.G. Wolfer 328 (2004) 107

Ceramics (not listed elsewhere)

- Investigation of physico-mechanical properties of ceramic oxide kernels for nuclear applications, M.M. Titov, J. Fachinger and A.A. Bukaemskiy 328 (2004) 21
- A cubic-to-monoclinic structural transformation in the sesquioxide Dy_2O_3 induced by ion irradiation, M. Tang, J.A. Valdez, P. Lu, G.E. Gosnell, C.J. Wetteland and K.E. Sickafus 328 (2004) 71

Chemical Reactions (includes Electrochemical and Thermochemical Reactions)

- Electro-chemical reduction of MOX in LiCl, M. Kurata, T. Inoue, J. Serp, M. Ougier and J.-P. Glatz 328 (2004) 97
- Surface chemistry of Pu oxides, J.D. Farr, R.K. Schulze and M.P. Neu 328 (2004) 124
- Shadow corrosion, N. Ramasubramanian 328 (2004) 249

Cladding Materials

- Study of the $\beta \rightarrow \alpha$ variant selection for a zircaloy-4 rod heated to the β transus

- in presence or not of an axial tensile stress, N. Gey, M. Humbert, E. Gautier and J.L. Béchade 328 (2004) 137
- Oxidation of the hexagonal $Zr(Cr_{0.4}Fe_{0.6})_2$ Laves phase, P.B. Bozzano, C. Ramos, F. Saporiti, P.A. Vázquez, R.A. Versaci and C. Saragovi 328 (2004) 225

Compatibility and Corrosion (includes Stress Corrosion Cracking)

- Effect of prior thermal treatment on the microchemistry and crack propagation of proton-irradiated AISI 304 stainless steels, L.H. Wang, C.H. Tsai and J.J. Kai 328 (2004) 11
- Contribution to the understanding of the $ZrNb(1\%)O(0.13\%)$ oxidation mechanism at 500 °C in dry air, J.J. Vermoyal, A. Fricchet and L. Dessemond 328 (2004) 31
- Spectroscopic and microscopic investigation of the corrosion of 316/316L stainless steel by lead-bismuth eutectic (LBE) at elevated temperatures: importance of surface preparation, A.L. Johnson, D. Parsons, J. Manzerova, D.L. Perry, D. Koury, B. Hosterman and J.W. Farley 328 (2004) 88
- Drying characteristics of thorium fuel corrosion products, R.-E. (Lords) Smith 328 (2004) 215
- Oxidation of the hexagonal $Zr(Cr_{0.4}Fe_{0.6})_2$ Laves phase, P.B. Bozzano, C. Ramos, F. Saporiti, P.A. Vázquez, R.A. Versaci and C. Saragovi 328 (2004) 225
- Shadow corrosion, N. Ramasubramanian 328 (2004) 249

Creep and Stress Relaxation

- Deformation of zirconium irradiated by 4.4 MeV protons at 347 K, C.K. Chow, R.A. Holt, C.H. Woo and C.B. So 328 (2004) 1

Crystallographic Properties

- Study of the $\beta \rightarrow \alpha$ variant selection for a zircaloy-4 rod heated to the β transus in presence or not of an axial tensile stress, N. Gey, M. Humbert, E. Gautier and J.L. Béchade 328 (2004) 137

Defects and Defect Structures (*excludes by Irradiation*)

Thermal variation of the optical absorption of UO_2 : determination of the small polaron self-energy, P. Ruello, K.D. Becker, K. Ullrich, L. Desgranges, C. Petot and G. Petot-Ervas 328 (2004) 46

Dislocations

A statistical TEM investigation of dislocation channeling mechanism in neutron irradiated zirconium alloys, F. Onimus, I. Monnet, J.L. Béchade, C. Prioul and P. Pilvin 328 (2004) 165

Dynamic strain aging under tensile and LCF loading conditions, and their comparison in cold worked 316L stainless steel, S.-G. Hong and S.-B. Lee 328 (2004) 232

Electron Microscopy

A statistical TEM investigation of dislocation channeling mechanism in neutron irradiated zirconium alloys, F. Onimus, I. Monnet, J.L. Béchade, C. Prioul and P. Pilvin 328 (2004) 165

Fatigue

Cyclic cracking behavior of low-alloy pressure vessel steel in simulated BWR water, X. Wu and Y. Katada 328 (2004) 115

Dynamic strain aging under tensile and LCF loading conditions, and their comparison in cold worked 316L stainless steel, S.-G. Hong and S.-B. Lee 328 (2004) 232

Experiments, characterizations and analysis of a U_3Si_2 -Al dispersion fuel plate with sandwich structure, X.-S. Wang and Y. Xu 328 (2004) 243

Fission Products

Cyclic cracking behavior of low-alloy pressure vessel steel in simulated BWR water, X. Wu and Y. Katada 328 (2004) 115

Fracture and Fracture Toughness

Cyclic cracking behavior of low-alloy pressure vessel steel in simulated BWR water, X. Wu and Y. Katada 328 (2004) 115

Fuels and Fuel Elements

Investigation of physico-mechanical properties of ceramic oxide kernels for nuclear applications, M.M. Titov, J. Fachinger and A.A. Bukaemskiy 328 (2004) 21

Thermodynamic and kinetic modelling of fuel oxidation behaviour in operating defective fuel, B.J. Lewis, W.T. Thompson, F. Akbari, D.M. Thompson, C. Thurgood and J. Higgs 328 (2004) 180

Drying characteristics of thorium fuel corrosion products, R.-E. (Lords) Smith 328 (2004) 215

Experiments, characterizations and analysis of a U_3Si_2 -Al dispersion fuel plate with sandwich structure, X.-S. Wang and Y. Xu 328 (2004) 243

Gases in Materials (*excludes Hydrogen, Helium and Tritium*)

Comments on the threshold porosity for fission gas release in high burn-up fuels, J. Spino, D. Papaioannou and J.-P. Glatz 328 (2004) 67

Heat Treatment

Effect of prior thermal treatment on the microchemistry and crack propagation of proton-irradiated AISI 304 stainless steels, L.H. Wang, C.H. Tsai and J.J. Kai 328 (2004) 11

Hydrogen and Hydrides (*includes Deuterium and Deuterides*)

Deuterium permeation through Eurofer and α -alumina coated Eurofer, D. Levchuk, F. Koch, H. Maier and H. Bolt 328 (2004) 103

Interfaces

Contribution to the understanding of the $\text{ZrNb}(1\%)\text{O}(0.13\%)$ oxidation mechanism at 500 °C in dry air, J.J. Vermoyal, A. Frichet and L. Dessemond 328 (2004) 31

Ion Irradiation

Effect of prior thermal treatment on the microchemistry and crack propagation of proton-irradiated AISI 304 stainless steels, L.H. Wang, C.H. Tsai and J.J. Kai 328 (2004) 11

A cubic-to-monoclinic structural transformation in the sesquioxide Dy_2O_3 induced by ion irradiation, M. Tang, J.A. Valdez, P. Lu, G.E. Gosnell, C.J. Wetteland and K.E. Sickafus 328 (2004) 71

Kinetics

Contribution to the understanding of the $\text{ZrNb}(1\%)\text{O}(0.13\%)$ oxidation mechanism at 500 °C in dry air, J.J. Vermoyal, A. Frichet and L. Dessemond 328 (2004) 31

Vacancy cluster evolution and swelling in irradiated 316 stainless steel, M.P. Surh, J.B. Sturgeon and W.G. Wolfer 328 (2004) 107

Dynamic strain aging under tensile and LCF loading conditions, and their comparison in cold worked 316L stainless steel, S.-G. Hong and S.-B. Lee 328 (2004) 232

Liquid Metals

Spectroscopic and microscopic investigation of the corrosion of 316/316L stainless steel by lead-bismuth

- eutectic (LBE) at elevated temperatures: importance of surface preparation, A.L. Johnson, D. Parsons, J. Manzerova, D.L. Perry, D. Koury, B. Hosterman and J.W. Farley 328 (2004) 88
- Mathematical and Computational Methods**
 INCAS: an analytical model to describe displacement cascades, S. Jumel and J.C. Van-Duysen 328 (2004) 151
- Mechanical Properties** (*not listed elsewhere*)
 Investigation of physico-mechanical properties of ceramic oxide kernels for nuclear applications, M.M. Titov, J. Fachinger and A.A. Bukaemskiy 328 (2004) 21
 Small punch tests on austenitic and martensitic steels irradiated in a spallation environment with 530 MeV protons, D. Finarelli, M. Roedig and F. Car-sughi 328 (2004) 146
 A statistical TEM investigation of dislocation channeling mechanism in neutron irradiated zirconium alloys, F. Onimus, I. Monnet, J.L. Béchade, C. Prioul and P. Pilvin 328 (2004) 165
 Dynamic strain aging under tensile and LCF loading conditions, and their comparison in cold worked 316L stainless steel, S.-G. Hong and S.-B. Lee 328 (2004) 232
- Metals, Alloys and Compounds** (*not listed elsewhere*)
 Defect production efficiency in metals under neutron irradiation, C.H.M. Broeders and A.Yu. Konobeyev 328 (2004) 197
- Microstructure and Texture** (*excludes by Irradiation*)
 Thermal variation of the optical absorption of UO₂: determination of the small polaron self-energy, P. Ruello, K.D. Becker, K. Ullrich, L. Des-granges, C. Petot and G. Petot-Ervas 328 (2004) 46
 Study of the $\beta \rightarrow \alpha$ variant selection for a zircaloy-4 rod heated to the β transus in presence or not of an axial tensile stress, N. Gey, M. Humbert, E. Gautier and J.L. Béchade 328 (2004) 137
- Neutron Irradiation**
 Defect production efficiency in metals under neutron irradiation, C.H.M. Broeders and A.Yu. Konobeyev 328 (2004) 197
- Niobium, Niobium Alloys and Compounds**
 Contribution to the understanding of the ZrNb(1%)O(0.13%) oxidation mechanism at 500 °C in dry air, J.J. Vermoyal, A. Frichet and L. Dessemond 328 (2004) 31
- Nuclear Properties**
 Defect production efficiency in metals under neutron irradiation, C.H.M. Broeders and A.Yu. Konobeyev 328 (2004) 197
- Permeation**
 Deuterium permeation through Eurofer and α -alumina coated Eurofer, D. Levchuk, F. Koch, H. Maier and H. Bolt 328 (2004) 103
- Phase Equilibria** (*includes Constitution, Phase Stability, Phase Instability*)
 Thermodynamic and kinetic modelling of fuel oxidation behaviour in operating defective fuel, B.J. Lewis, W.T. Thompson, F. Akbari, D.M. Thompson, C. Thurgood and J. Higgs 328 (2004) 180
- Phase Transformation** (*includes Evaporation, Sublimation*)
 A cubic-to-monoclinic structural transformation in the sesquioxide Dy₂O₃ induced by ion irradiation, M. Tang, J.A. Valdez, P. Lu, G.E. Gosnell, C.J. Wetteland and K.E. Sickafus 328 (2004) 71
 Study of the $\beta \rightarrow \alpha$ variant selection for a zircaloy-4 rod heated to the β transus in presence or not of an axial tensile stress, N. Gey, M. Humbert, E. Gautier and J.L. Béchade 328 (2004) 137
 Oxidation of the hexagonal Zr(Cr_{0.4}-Fe_{0.6})₂ Laves phase, P.B. Bozzano, C. Ramos, F. Saporiti, P.A. Vázquez, R.A. Versaci and C. Saragovi 328 (2004) 225
- Physical Properties** (*not listed elsewhere*)
 Thermal variation of the optical absorption of UO₂: determination of the small polaron self-energy, P. Ruello, K.D. Becker, K. Ullrich, L. Des-granges, C. Petot and G. Petot-Ervas 328 (2004) 46
- Plutonium, Plutonium Alloys and Compounds**
 Electro-chemical reduction of MOX in LiCl, M. Kurata, T. Inoue, J. Serp, M. Ougier and J.-P. Glatz 328 (2004) 97
 Surface chemistry of Pu oxides, J.D. Farr, R.K. Schulze and M.P. Neu 328 (2004) 124
- Pressure Vessel Materials**
 Cyclic cracking behavior of low-alloy pressure vessel steel in simulated BWR water, X. Wu and Y. Katada 328 (2004) 115
- Processing**
 Investigation of physico-mechanical properties of ceramic oxide kernels for

- nuclear applications, M.M. Titov, J. Fachinger and A.A. Bukaemskiy 328 (2004) 21
- Electro-chemical reduction of MOX in LiCl, M. Kurata, T. Inoue, J. Serp, M. Ougier and J.-P. Glatz 328 (2004) 97
- Experiments, characterizations and analysis of a U_3Si_2 -Al dispersion fuel plate with sandwich structure, X.-S. Wang and Y. Xu 328 (2004) 243
- Proton Irradiation**
- Deformation of zirconium irradiated by 4.4 MeV protons at 347 K, C.K. Chow, R.A. Holt, C.H. Woo and C.B. So 328 (2004) 1
- Small punch tests on austenitic and martensitic steels irradiated in a spallation environment with 530 MeV protons, D. Finarelli, M. Roedig and F. Carsughi 328 (2004) 146
- Radiation Effects: Atomic Defects**
- INCAS: an analytical model to describe displacement cascades, S. Jumel and J.C. Van-Duysen 328 (2004) 151
- Radiation Effects: Mechanical Properties**
- Deformation of zirconium irradiated by 4.4 MeV protons at 347 K, C.K. Chow, R.A. Holt, C.H. Woo and C.B. So 328 (2004) 1
- INCAS: an analytical model to describe displacement cascades, S. Jumel and J.C. Van-Duysen 328 (2004) 151
- A statistical TEM investigation of dislocation channeling mechanism in neutron irradiated zirconium alloys, F. Onimus, I. Monnet, J.L. Béchade, C. Prioul and P. Pilvin 328 (2004) 165
- Radiation Effects: Physical Properties**
- A cubic-to-monoclinic structural transformation in the sesquioxide Dy_2O_3 induced by ion irradiation, M. Tang, J.A. Valdez, P. Lu, G.E. Gosnell, C.J. Wetteland and K.E. Sickafus 328 (2004) 71
- Radiolysis**
- Shadow corrosion, N. Ramasubramanian 328 (2004) 249
- Rare Earths**
- A cubic-to-monoclinic structural transformation in the sesquioxide Dy_2O_3 induced by ion irradiation, M. Tang, J.A. Valdez, P. Lu, G.E. Gosnell, C.J. Wetteland and K.E. Sickafus 328 (2004) 71
- Segregation**
- Effect of prior thermal treatment on the microchemistry and crack propagation of proton-irradiated AISI 304 stainless steels, L.H. Wang, C.H. Tsai and J.J. Kai 328 (2004) 11
- Steels, Austenitic**
- Effect of prior thermal treatment on the microchemistry and crack propagation of proton-irradiated AISI 304 stainless steels, L.H. Wang, C.H. Tsai and J.J. Kai 328 (2004) 11
- Spectroscopic and microscopic investigation of the corrosion of 316/316L stainless steel by lead-bismuth eutectic (LBE) at elevated temperatures: importance of surface preparation, A.L. Johnson, D. Parsons, J. Manzerova, D.L. Perry, D. Koury, B. Hosterman and J.W. Farley 328 (2004) 88
- Vacancy cluster evolution and swelling in irradiated 316 stainless steel, M.P. Surh, J.B. Sturgeon and W.G. Wolfer 328 (2004) 107
- Steels, Austenitic, Low C/N**
- Spectroscopic and microscopic investigation of the corrosion of 316/316L stainless steel by lead-bismuth eutectic (LBE) at elevated temperatures: importance of surface preparation, A.L. Johnson, D. Parsons, J. Manzerova, D.L. Perry, D. Koury, B. Hosterman and J.W. Farley 328 (2004) 88
- Small punch tests on austenitic and martensitic steels irradiated in a spallation environment with 530 MeV protons, D. Finarelli, M. Roedig and F. Carsughi 328 (2004) 146
- Dynamic strain aging under tensile and LCF loading conditions, and their comparison in cold worked 316L stainless steel, S.-G. Hong and S.-B. Lee 328 (2004) 232
- Steels, Ferritic, Pressure Vessel**
- Cyclic cracking behavior of low-alloy pressure vessel steel in simulated BWR water, X. Wu and Y. Katada 328 (2004) 115
- Steels, Ferritic/Martensitic, Low Activation**
- Deuterium permeation through Eurofer and α -alumina coated Eurofer, D. Levchuk, F. Koch, H. Maier and H. Bolt 328 (2004) 103
- Small punch tests on austenitic and martensitic steels irradiated in a spallation environment with 530 MeV protons, D. Finarelli, M. Roedig and F. Carsughi 328 (2004) 146
- Surface Effects**
- Sputtering mechanisms near the threshold energy, W. Eckstein, J. Roth, W. Nagel and R. Dohmen 328 (2004) 55
- Modelling of carbon transport in fusion devices: evidence of enhanced

- re-erosion of in-situ re-deposited carbon, A. Kirschner, P. Wienhold, V. Philipps, J.P. Coad, A. Huber, U. Samm and JET EFDA contributors 328 (2004) 62
- Spectroscopic and microscopic investigation of the corrosion of 316/316L stainless steel by lead–bismuth eutectic (LBE) at elevated temperatures: importance of surface preparation, A.L. Johnson, D. Parsons, J. Manzerova, D.L. Perry, D. Koury, B. Hosterman and J.W. Farley 328 (2004) 88
- Surface chemistry of Pu oxides, J.D. Farr, R.K. Schulze and M.P. Neu 328 (2004) 124
- Swelling: Metals and Alloys**
- Vacancy cluster evolution and swelling in irradiated 316 stainless steel, M.P. Surh, J.B. Sturgeon and W.G. Wolfer 328 (2004) 107
- Theory and Modelling**
- Sputtering mechanisms near the threshold energy, W. Eckstein, J. Roth, W. Nagel and R. Dohmen 328 (2004) 55
- Vacancy cluster evolution and swelling in irradiated 316 stainless steel, M.P. Surh, J.B. Sturgeon and W.G. Wolfer 328 (2004) 107
- INCAS: an analytical model to describe displacement cascades, S. Jumel and J.C. Van-Duysen 328 (2004) 151
- Thermodynamic and kinetic modelling of fuel oxidation behaviour in operating defective fuel, B.J. Lewis, W.T. Thompson, F. Akbari, D.M. Thompson, C. Thurgood and J. Higgs 328 (2004) 180
- Thermal Reactor Materials**
- Shadow corrosion, N. Ramasubramanian 328 (2004) 249
- Thermodynamic Properties**
- Thermodynamic and kinetic modelling of fuel oxidation behaviour in operating defective fuel, B.J. Lewis, W.T. Thompson, F. Akbari, D.M. Thompson, C. Thurgood and J. Higgs 328 (2004) 180
- Thorium, Thorium Alloys and Compounds**
- Investigation of physico-mechanical properties of ceramic oxide kernels for nuclear applications, M.M. Titov, J. Fachinger and A.A. Bukaemskiy 328 (2004) 21
- Drying characteristics of thorium fuel corrosion products, R.-E. (Lords) Smith 328 (2004) 215
- Uranium, Uranium Alloys**
- Electro-chemical reduction of MOX in LiCl, M. Kurata, T. Inoue, J. Serp, M. Ougier and J.-P. Glatz 328 (2004) 97
- Uranium Oxides and Compounds**
- Investigation of physico-mechanical properties of ceramic oxide kernels for nuclear applications, M.M. Titov, J. Fachinger and A.A. Bukaemskiy 328 (2004) 21
- Thermal variation of the optical absorption of UO_2 : determination of the small polaron self-energy, P. Ruello, K.D. Becker, K. Ullrich, L. Desgranges, C. Petot and G. Petot-Ervas 328 (2004) 46
- Comments on the threshold porosity for fission gas release in high burn-up fuels, J. Spino, D. Papaioannou and J.-P. Glatz 328 (2004) 67
- Electro-chemical reduction of MOX in LiCl, M. Kurata, T. Inoue, J. Serp, M. Ougier and J.-P. Glatz 328 (2004) 97
- Thermodynamic and kinetic modelling of fuel oxidation behaviour in operating defective fuel, B.J. Lewis, W.T. Thompson, F. Akbari, D.M. Thompson, C. Thurgood and J. Higgs 328 (2004) 180
- Experiments, characterizations and analysis of a U_3Si_2 –Al dispersion fuel plate with sandwich structure, X.-S. Wang and Y. Xu 328 (2004) 243
- Waste: Behavior in Storage**
- Surface chemistry of Pu oxides, J.D. Farr, R.K. Schulze and M.P. Neu 328 (2004) 124
- Drying characteristics of thorium fuel corrosion products, R.-E. (Lords) Smith 328 (2004) 215
- X-ray Techniques and Applications**
- Surface chemistry of Pu oxides, J.D. Farr, R.K. Schulze and M.P. Neu 328 (2004) 124
- Zirconium, Zirconium Alloys**
- Deformation of zirconium irradiated by 4.4 MeV protons at 347 K, C.K. Chow, R.A. Holt, C.H. Woo and C.B. So 328 (2004) 1
- Contribution to the understanding of the $\text{ZrNb}(\text{l}\%)\text{O}(0.13\%)$ oxidation mechanism at 500 °C in dry air, J.J. Vermoyal, A. Frichet and L. Dessemond 328 (2004) 31
- Study of the $\beta \rightarrow \alpha$ variant selection for a zircaloy-4 rod heated to the β transus in presence or not of an axial tensile stress, N. Gey, M. Humbert, E. Gautier and J.L. Béchade 328 (2004) 137
- A statistical TEM investigation of dislocation channeling mechanism in

- neutron irradiated zirconium alloys,
F. Onimus, I. Monnet, J.L. Béchade,
C. Prioul and P. Pilvin 328 (2004) 165
- Shadow corrosion, N. Ramasubra-
manian 328 (2004) 249
- Zirconium Hydrides and Compounds**
- Oxidation of the hexagonal $\text{Zr}(\text{Cr}_{0.4}\text{-}$
 $\text{Fe}_{0.6})_2$ Laves phase, P.B. Bozzano, C.
Ramos, F. Saporiti, P.A. Vázquez,
R.A. Versaci and C. Saragovi 328 (2004) 225