



ELSEVIER

Journal of Nuclear Materials 306 (2002) 243–247

**journal of
nuclear
materials**

www.elsevier.com/locate/jnucmat

Subject index

Aluminum, Aluminum Alloys and Compounds

Radiogenic silicon precipitates in neutron irradiated aluminum, E. Brosh and A. Kiv

306 (2002) 173

Helium behaviour and defect evolution in amorphous spinel during thermal annealing, P.M.G. Damen, A. van Veen, H.J. Matzke, H. Schut, J.A. Valdez, C.J. Wetteland and K.E. Sickafus

306 (2002) 180

Amorphization and Amorphous Materials

Molecular dynamics simulation of the α - recoil nucleus displacement cascade in zirconolite, L. Veiller, J.-P. Crocombette and D. Ghaleb

306 (2002) 61

Helium behaviour and defect evolution in amorphous spinel during thermal annealing, P.M.G. Damen, A. van Veen, H.J. Matzke, H. Schut, J.A. Valdez, C.J. Wetteland and K.E. Sickafus

306 (2002) 180

Analytical Instruments and Methods (not listed elsewhere)

The determination of hydrogen and deuterium in Zr-2.5Nb material by hot vacuum extraction mass spectrometry, G.A. Bickel, L.W. Green, M.W.D. James, T.G. Lamarche, P.K. Leeson and H. Michel

306 (2002) 21

Raman microspectrometric identification of corrosion products formed on UO₂ nuclear fuel during leaching experiments, M. Amme, B. Renker, B. Schmid, M.P. Feth, H. Bertagnoli and W. Döbelin

306 (2002) 202

Breeding Materials for Fusion

Recombination of deuterium atoms on the surface of molten Li-LiD, M.J. Baldwin, R.P. Doerner, R. Causey, S.C. Luckhardt and R.W. Conn

306 (2002) 15

Carbon

Observations of hydrocarbon film deposition in the MAST tokamak, A. Tabasso, G.F. Counsell, D. Hole and J.P. Coad

306 (2002) 73

Cavities (includes Voids, Holes)

Positron lifetime computations of defects in nickel containing hydrogen or helium, B.L. Shivachev, T. Troev and T. Yoshiie

306 (2002) 105

Ceramics (not listed elsewhere)

Processing and fabrication of mixed uranium/refractory metal carbide fuels with liquid-phase sintering, T.W. Knight and S. Anghaie

306 (2002) 54

Chemical Reactions (includes Electrochemical and Thermochemical Reactions)

Fuel oxidation and thermal conductivity model for operating defective fuel rods, B.J. Lewis, B. Szpunar and F.C. Iglesias

306 (2002) 30

Transport properties of zirconium alloy oxide films, H. Frank

306 (2002) 85

Studies on the oxidation behavior of niobium-implanted Zircaloy-4 at 500 °C, X.W. Chen, X.D. Bai, R.H. Yu, Q.G. Zhou and B.S. Chen

306 (2002) 190

Compatibility and Corrosion (includes Stress Corrosion Cracking)

The determination of hydrogen and deuterium in Zr-2.5Nb material by hot vacuum extraction mass spectrometry, G.A. Bickel, L.W. Green, M.W.D. James, T.G. Lamarche, P.K. Leeson and H. Michel

306 (2002) 21

Oxidation characteristics of basal (0002) plane and prism (11̄20) plane in HCP Zr, H.G. Kim, T.H. Kim and Y.H. Jeong

306 (2002) 44

Iodine release from oxidised Zircaloy cladding in contact with an alkaline solution, K. Poulard, A. Chevarier, N. Moncoffre and D. Crusset

306 (2002) 99

Studies on the oxidation behavior of niobium-implanted Zircaloy-4 at 500 °C, X.W. Chen, X.D. Bai, R.H. Yu, Q.G. Zhou and B.S. Chen

306 (2002) 190

Raman microspectrometric identification of corrosion products formed on UO₂ nuclear fuel during leaching experiments, M. Amme, B. Renker, B. Schmid, M.P. Feth, H. Bertagnoli and W. Döbelin

306 (2002) 202

Copper, Copper Alloys and Compounds

Contribution of thermal neutrons to radiation hardening of pure copper, S.A. Fabritsiev and A.S. Pokrovsky

306 (2002) 78

Effect of helium on the swelling of GlidCop Al25 IG alloy, S.A. Fabritsiev, A.S. Pokrovsky, S.J. Zinkle and S.E. Ostrovsky	306 (2002) 218	Fuels and Fuel Elements
Oxidation characteristics of basal (0002) plane and prism (1120) plane in HCP Zr, H.G. Kim, T.H. Kim and Y.H. Jeong	306 (2002) 44	Thermal conductivity of rare earth–uranium ternary oxides of the type RE ₆ UO ₁₂ , M.V. Krishnaiah, G. Seenivasan, P. Srirama Murti and C.K. Mathews
Experimental verification of the existence and structure of ζ Pu ₆ Fe in a Pu–Ga alloy, K.T. Moore, M.A. Wall and A.J. Schwartz	306 (2002) 213	Fuel oxidation and thermal conductivity model for operating defective fuel rods, B.J. Lewis, B. Szpunar and F.C. Iglesias
Defects and Defect Structures (excludes by Irradiation)		Processing and fabrication of mixed uranium/refractory metal carbide fuels with liquid-phase sintering, T.W. Knight and S. Anghaie
Transport properties of zirconium alloy oxide films, H. Frank	306 (2002) 85	Study of decomposition and reactions with aluminum matrix of dispersed atomized U-10 wt% Mo alloy, J.-S. Lee, C.-H. Lee, K.H. Kim and V. Em
Deformation		Helium
Characterization of hot deformation behaviour of Zr–2.5Nb in β phase, R. Kapoor and J.K. Chakravarty	306 (2002) 126	Positron lifetime computations of defects in nickel containing hydrogen or helium, B.L. Shivachev, T. Troev and T. Yoshiie
Dislocations		Effect of helium on the swelling of GlidCop Al25 IG alloy, S.A. Fabritsiev, A.S. Pokrovsky, S.J. Zinkle and S.E. Ostrovsky
Characterization of hot deformation behaviour of Zr–2.5Nb in β phase, R. Kapoor and J.K. Chakravarty	306 (2002) 126	306 (2002) 218
Electrical Properties		Hydrogen and Hydrides (includes Deuterium and Deuterides)
Transport properties of zirconium alloy oxide films, H. Frank	306 (2002) 85	Recombination of deuterium atoms on the surface of molten Li–LiD, M.J. Baldwin, R.P. Doerner, R. Causey, S.C. Luckhardt and R.W. Conn
Electron Microscopy		The determination of hydrogen and deuterium in Zr–2.5Nb material by hot vacuum extraction mass spectrometry, G.A. Bickel, L.W. Green, M.W.D. James, T.G. Lamarche, P.K. Leeson and H. Michel
Experimental verification of the existence and structure of ζ Pu ₆ Fe in a Pu–Ga alloy, K.T. Moore, M.A. Wall and A.J. Schwartz	306 (2002) 213	Positron lifetime computations of defects in nickel containing hydrogen or helium, B.L. Shivachev, T. Troev and T. Yoshiie
Fabrication		Plasma-driven superpermeation of hydrogen through Nb membranes: bulk effects, A.A. Skovoroda, V.S. Svishchov, A.V. Spitsyn, V.L. Stolyarov, Yu.M. Pustovoit, V.D. Borman, V.S. Kulikauskas and A.M. Shipilin
Microstructure of irradiated SBR MOX fuel and its relationship to fission gas release, S.B. Fisher, R.J. White, P.M.A. Cook, S. Bremier, R.C. Corcoran, R. Stratton, C.T. Walker, P.K. Ivison and I.D. Palmer	306 (2002) 153	306 (2002) 232
First Wall Materials		Ion Irradiation
Recombination of deuterium atoms on the surface of molten Li–LiD, M.J. Baldwin, R.P. Doerner, R. Causey, S.C. Luckhardt and R.W. Conn	306 (2002) 15	Effect of sputtering in Xe ion irradiated yttria-stabilized zirconia, I.V. Afanasyev-Charkin and K.E. Sickafus
Fission Products		Effects of Xe-ion irradiation at high temperature on single crystal rutile, F. Li, P. Lu and K.E. Sickafus
Thermal conductivity of rare earth–uranium ternary oxides of the type RE ₆ UO ₁₂ , M.V. Krishnaiah, G. Seenivasan, P. Srirama Murti and C.K. Mathews	306 (2002) 10	Helium behaviour and defect evolution in amorphous spinel during thermal annealing, P.M.G. Damen, A. van Veen, Hj. Matzke, H. Schut, J.A. Valdez, C.J. Wettemann and K.E. Sickafus
Iodine release from oxidised Zircaloy cladding in contact with an alkaline solution, K. Pouillard, A. Chevarier, N. Moncoffre and D. Crusset	306 (2002) 99	Studies on the oxidation behavior of niobium-implanted Zircaloy-4 at 500 °C, X.W. Chen, X.D. Bai, R.H. Yu, Q.G. Zhou and B.S. Chen

Liquid Metals

Recombination of deuterium atoms on the surface of molten Li-LiD, M.J. Baldwin, R.P. Doerner, R. Causey, S.C. Luckhardt and R.W. Conn

306 (2002) 15

Mathematical and Computational Methods

Molecular dynamics simulation of the α -recoil nucleus displacement cascade in zirconolite, L. Veiller, J.-P. Crocombette and D. Ghaleb

306 (2002) 61

Metals, Alloys and Compounds (not listed elsewhere)

Plasma-driven superpermeation of hydrogen through Nb membranes: bulk effects, A.A. Skovoroda, V.S. Svishchov, A.V. Spitsyn, V.L. Stolyarov, Yu.M. Pustovoit, V.D. Borman, V.S. Kulikauskas and A.M. Shipilin

306 (2002) 232

Neutron Irradiation

Contribution of thermal neutrons to radiation hardening of pure copper, S.A. Fabritsiev and A.S. Pokrovsky

306 (2002) 78

Radiogenic silicon precipitates in neutron irradiated aluminum, E. Brosh and A. Kiv

306 (2002) 173

Effect of helium on the swelling of GlidCop Al25 IG alloy, S.A. Fabritsiev, A.S. Pokrovsky, S.J. Zinkle and S.E. Ostrovsky

306 (2002) 218

Neutron Scattering

Study of decomposition and reactions with aluminum matrix of dispersed atomized U-10 wt% Mo alloy, J.-S. Lee, C.-H. Lee, K.H. Kim and V. Em

306 (2002) 147

Nickel, Nickel Alloys and Compounds

Positron lifetime computations of defects in nickel containing hydrogen or helium, B.L. Shivachev, T. Troev and T. Yoshiie

306 (2002) 105

Permeation

Plasma-driven superpermeation of hydrogen through Nb membranes: bulk effects, A.A. Skovoroda, V.S. Svishchov, A.V. Spitsyn, V.L. Stolyarov, Yu.M. Pustovoit, V.D. Borman, V.S. Kulikauskas and A.M. Shipilin

306 (2002) 232

Phase Equilibria (includes Constitution, Phase Instability)

Experimental verification of the existence and structure of ζ Pu₆Fe in a Pu-Ga alloy, K.T. Moore, M.A. Wall and A.J. Schwartz

306 (2002) 213

Physical Properties (not listed elsewhere)

Study of the thermoelectric power evolution of Zr-based alloys with Nb additions, S. Jin Kim, H. Seon Hong and Y. Min Oh

306 (2002) 194

Plasma-Materials Interaction

Recombination of deuterium atoms on the surface of molten Li-LiD, M.J. Baldwin, R.P. Doerner, R. Causey, S.C. Luckhardt and R.W. Conn

306 (2002) 15

Plasma-driven superpermeation of hydrogen through Nb membranes: bulk effects, A.A. Skovoroda, V.S. Svishchov, A.V. Spitsyn, V.L. Stolyarov, Yu.M. Pustovoit, V.D. Borman, V.S. Kulikauskas and A.M. Shipilin

306 (2002) 232

Plutonium, Plutonium Alloys and Compounds

Microstructure of irradiated SBR MOX fuel and its relationship to fission gas release, S.B. Fisher, R.J. White, P.M.A. Cook, S. Bremier, R.C. Corcoran, R. Stratton, C.T. Walker, P.K. Ivison and I.D. Palmer

306 (2002) 153

Experimental verification of the existence and structure of ζ Pu₆Fe in a Pu-Ga alloy, K.T. Moore, M.A. Wall and A.J. Schwartz

306 (2002) 213

Positron Annihilation

Positron lifetime computations of defects in nickel containing hydrogen or helium, B.L. Shivachev, T. Troev and T. Yoshiie

306 (2002) 105

Powder Processes and Products

De-agglomeration of thorium oxalate – a method for the synthesis of sinteractive thoria, K. Ananthasivan, S. Anthonyasamy, A. Singh and P.R. Vasudeva Rao

306 (2002) 1

Precipitates and Precipitation

Radiogenic silicon precipitates in neutron irradiated aluminum, E. Brosh and A. Kiv

306 (2002) 173

Processing

De-agglomeration of thorium oxalate – a method for the synthesis of sinteractive thoria, K. Ananthasivan, S. Anthonyasamy, A. Singh and P.R. Vasudeva Rao

306 (2002) 1

Processing and fabrication of mixed uranium/refractory metal carbide fuels with liquid-phase sintering, T.W. Knight and S. Anghaie

306 (2002) 54

Characterization of hot deformation behaviour of Zr-2.5Nb in β phase, R. Kapoor and J.K. Chakravarty

306 (2002) 126

Study of decomposition and reactions with aluminum matrix of dispersed atomized U-10 wt% Mo alloy, J.-S. Lee, C.-H. Lee, K.H. Kim and V. Em

306 (2002) 147

Radiation Effects: Atomic Defects

Contribution of thermal neutrons to radiation hardening of pure copper, S.A. Fabritsiev and A.S. Pokrovsky

306 (2002) 78

Effect of sputtering in Xe ion irradiated yttria-stabilized zirconia, I.V. Afanasyev-Charkin and K.E. Sickafus	306 (2002) 112	Thermophysical Properties
Effects of Xe-ion irradiation at high temperature on single crystal rutile, F. Li, P. Lu and K.E. Sickafus	306 (2002) 121	Thermal conductivity of rare earth–uranium ternary oxides of the type RE ₆ UO ₁₂ , M.V. Krishnaiah, G. Seenivasan, P. Srirama Murti and C.K. Mathews
Helium behaviour and defect evolution in amorphous spinel during thermal annealing, P.M.G. Damen, A. van Veen, Hj. Matzke, H. Schut, J.A. Valdez, C.J. Wetteland and K.E. Sickafus	306 (2002) 180	306 (2002) 10
Radiation Effects: Extended Defects, Microstructures		
Molecular dynamics simulation of the α -recoil nucleus displacement cascade in zirconolite, L. Veiller, J.-P. Crocombette and D. Ghaleb	306 (2002) 61	Thorium, Thorium Alloys and Compounds
Microstructure of irradiated SBR MOX fuel and its relationship to fission gas release, S.B. Fisher, R.J. White, P.M.A. Cook, S. Bremier, R.C. Corcoran, R. Stratton, C.T. Walker, P.K. Ivison and I.D. Palmer	306 (2002) 153	De-agglomeration of thorium oxalate – a method for the synthesis of sinteractive thoria, K. Ananthasivan, S. Anthonyasamy, A. Singh and P.R. Vasudeva Rao
Radiogenic silicon precipitates in neutron irradiated aluminum, E. Brosh and A. Kiv	306 (2002) 173	Influence of the pH on the dissolution of TPD and associated solid solutions, A.C. Robisson, N. Dacheux and J. Aupiais
Rare Earths		
Thermal conductivity of rare earth–uranium ternary oxides of the type RE ₆ UO ₁₂ , M.V. Krishnaiah, G. Seenivasan, P. Srirama Murti and C.K. Mathews	306 (2002) 10	Titanium, Titanium Alloys and Compounds
Redeposition		
Observations of hydrocarbon film deposition in the MAST tokamak, A. Tabasso, G.F. Counsell, D. Hole and J.P. Coad	306 (2002) 73	Effects of Xe-ion irradiation at high temperature on single crystal rutile, F. Li, P. Lu and K.E. Sickafus
Safety of Nuclear Reactors and Components		
Fuel oxidation and thermal conductivity model for operating defective fuel rods, B.J. Lewis, B. Szpunar and F.C. Iglesias	306 (2002) 30	306 (2002) 121
Swelling: Metals and Alloys		
Effect of helium on the swelling of GlidCop Al25 IG alloy, S.A. Fabritsiev, A.S. Pokrovsky, S.J. Zinkle and S.E. Ostrovsky	306 (2002) 218	Uranium Oxides and Compounds
Theory and Modelling		
Fuel oxidation and thermal conductivity model for operating defective fuel rods, B.J. Lewis, B. Szpunar and F.C. Iglesias	306 (2002) 30	Processing and fabrication of mixed uranium/refractory metal carbide fuels with liquid-phase sintering, T.W. Knight and S. Anghaie
Positron lifetime computations of defects in nickel containing hydrogen or helium, B.L. Shivachev, T. Troev and T. Yoshiie	306 (2002) 105	306 (2002) 54
Radiogenic silicon precipitates in neutron irradiated aluminum, E. Brosh and A. Kiv	306 (2002) 173	Microstructure of irradiated SBR MOX fuel and its relationship to fission gas release, S.B. Fisher, R.J. White, P.M.A. Cook, S. Bremier, R.C. Corcoran, R. Stratton, C.T. Walker, P.K. Ivison and I.D. Palmer
Uranium, Uranium Alloys		
		Raman microspectrometric identification of corrosion products formed on UO ₂ nuclear fuel during leaching experiments, M. Amme, B. Renker, B. Schmid, M.P. Feth, H. Bertagnoli and W. Döbelin
Waste Materials		
		306 (2002) 153
		Raman microspectrometric identification of corrosion products formed on UO ₂ nuclear fuel during leaching experiments, M. Amme, B. Renker, B. Schmid, M.P. Feth, H. Bertagnoli and W. Döbelin
Waste: Behavior in Storage		
		306 (2002) 202
		Iodine release from oxidised Zircaloy cladding in contact with an alkaline solution,

K. Poulard, A. Chevarier, N. Moncoffre and D. Crusset	
Influence of the pH on the dissolution of TPD and associated solid solutions, A.C. Robisson, N. Dacheux and J. Aupiais	306 (2002) 99
X-ray Techniques and Applications	
Oxidation characteristics of basal (0002) plane and prism (11 $\bar{2}$ 0) plane in HCP Zr, H.G. Kim, T.H. Kim and Y.H. Jeong	306 (2002) 134
Zirconium Hydrides and Compounds	
Oxidation characteristics of basal (0002) plane and prism (11 $\bar{2}$ 0) plane in HCP Zr, H.G. Kim, T.H. Kim and Y.H. Jeong	306 (2002) 44
Molecular dynamics simulation of the α -re- coil nucleus displacement cascade in zir- conolite, L. Veiller, J.-P. Crocombe, J.-P. Crocombe and D. Ghaleb	306 (2002) 44
Effect of sputtering in Xe ion irradiated yt- tria-stabilized zirconia, I.V. Afanasyev- Charkin and K.E. Sickafus	306 (2002) 61
Zirconium, Zirconium Alloys	
The determination of hydrogen and deuter- ium in Zr-2.5Nb material by hot vacuum extraction mass spectrometry, G.A. Bickel, L.W. Green, M.W.D. James, T.G. Lamarche, P.K. Leeson and H. Michel	306 (2002) 21
Transport properties of zirconium alloy oxide films, H. Frank	306 (2002) 85
Iodine release from oxidised Zircaloy clad- ding in contact with an alkaline solution, K. Poulard, A. Chevarier, N. Moncoffre and D. Crusset	306 (2002) 99
Characterization of hot deformation beha- viour of Zr-2.5Nb in β phase, R. Kapoor and J.K. Chakravarty	306 (2002) 126
Studies on the oxidation behavior of niobium-implanted Zircaloy-4 at 500 °C, X.W. Chen, X.D. Bai, R.H. Yu, Q.G. Zhou and B.S. Chen	306 (2002) 190
Study of the thermoelectric power evolution of Zr-based alloys with Nb additions, S. Jin Kim, H. Seon Hong and Y. Min Oh	306 (2002) 194