

Subject index

Absorber Materials

- Measurement of Gd content in $(U,Gd)O_2$ using thermal gravimetric analysis, K.S. Kim, J.H. Yang, K.W. Kang, K.W. Song and G.M. Kim 325 (2004) 129

Actinides (minor, excludes Plutonium, Thorium and Uranium)

- Electrochemical behaviors of uranium and plutonium at simultaneous recoveries into liquid cadmium cathodes, K. Uozumi, M. Iizuka, T. Kato, T. Inoue, O. Shirai, T. Iwai and Y. Arai 325 (2004) 34

Amorphization and Amorphous Materials

- A model for fission-gas-bubble behavior in amorphous uranium silicide compounds, J. Rest 325 (2004) 107
- Irradiation behaviour of uranium silicide compounds, M.R. Finlay, G.L. Hofman and J.L. Snelgrove 325 (2004) 118

Analytical Instruments and Methods (not listed elsewhere)

- Measurement of Gd content in $(U,Gd)O_2$ using thermal gravimetric analysis, K.S. Kim, J.H. Yang, K.W. Kang, K.W. Song and G.M. Kim 325 (2004) 129

Atom Probe/Field Ion Microscopy

- Helium thermal diffusion in a uranium dioxide matrix, D. Roudil, X. Deschanel, P. Trocellier, C. Jégou, S. Peuget and J.-M. Bart 325 (2004) 148

Breeding Materials for Fusion

- Chemical form of tritium released from solid breeder materials, M. Nishikawa, T. Kinjyo and Y. Nishida 325 (2004) 87

Carbon

- The second order Raman spectroscopy in carbon crystallinity, Y.-J. Lee 325 (2004) 174

Cavities (includes Voids, Holes)

- Master equation and Fokker-Planck methods for void nucleation and growth in irradiation swelling, M.P. Surh, J.B. Sturgeon and W.G. Wolfer 325 (2004) 44
- The development of grain-face porosity in irradiated oxide fuel, R.J. White 325 (2004) 61
- A model for fission-gas-bubble behavior in amorphous uranium silicide compounds, J. Rest 325 (2004) 107
- Irradiation behaviour of uranium silicide compounds, M.R. Finlay, G.L. Hofman and J.L. Snelgrove 325 (2004) 118

Chemical Reactions (includes Electrochemical and Thermochemical Reactions)

- Electrochemical behaviors of uranium and plutonium at simultaneous recoveries into liquid cadmium cathodes, K. Uozumi, M. Iizuka, T. Kato, T. Inoue, O. Shirai, T. Iwai and Y. Arai 325 (2004) 34
- Chemical form of tritium released from solid breeder materials, M. Nishikawa, T. Kinjyo and Y. Nishida 325 (2004) 87
- Diffusion reaction between Zircaloy-2 and thorium, P. Sengupta, P.S. Gawde, K. Bhanumurthy and G.B. Kale 325 (2004) 180

Compatibility and Corrosion (includes Stress Corrosion Cracking)

- Corrosion behavior of Fe-Ni-Cr alloys in the molten salt of $LiCl-Li_2O$ at high temperature, S.H. Cho, J.S. Zhang, Y.J. Shin, S.W. Park and H.S. Park 325 (2004) 13
- Excellent corrosion resistance of 18Cr-20Ni-5Si steel in liquid Pb-Bi, Y. Kurata and M. Futakawa 325 (2004) 217

Crystallographic Properties

- Stress-reorientation of hydrides and hydride embrittlement of Zr-2.5 wt% Nb pressure tube alloy, R.N. Singh, R. Kishore, S.S. Singh, T.K. Sinha and B.P. Kashyap 325 (2004) 26
- The second order Raman spectroscopy in carbon crystallinity, Y.-J. Lee 325 (2004) 174

Defects and Defect Structures (excludes by Irradiation)

Chemical diffusion in uranium dioxide – influence of defect interactions, P. Ruello, G. Chirlesan, G. Petot-Ervas, C. Petot and L. Desgranges
325 (2004) 202

Diffusion

Helium diffusion in uranium and plutonium oxides, C. Ronchi and J.P. Hiernaut
325 (2004) 1

Helium thermal diffusion in a uranium dioxide matrix, D. Roudil, X. Deschanel, P. Trocellier, C. Jégou, S. Peugeot and J.-M. Bart
325 (2004) 148

Diffusion reaction between Zircaloy-2 and thoria, P. Sengupta, P.S. Gawde, K. Bhanumurthy and G.B. Kale
325 (2004) 180

Chemical diffusion in uranium dioxide – influence of defect interactions, P. Ruello, G. Chirlesan, G. Petot-Ervas, C. Petot and L. Desgranges
325 (2004) 202

Embrittlement

Hydrogen embrittlement of a V4Cr4Ti alloy evaluated by different test methods, J. Chen, T. Muroga, S. Qiu, Y. Xu, Y. Den and Z. Xu
325 (2004) 79

Fast Reactor Materials

Thermal expansion studies on Inconel-600[®] by high temperature X-ray diffraction, S. Raju, K. Sivasubramanian, R. Divakar, G. Panneerselvam, A. Banerjee, E. Mohandas and M.P. Antony
325 (2004) 18

Fracture and Fracture Toughness

Hydrogen embrittlement of a V4Cr4Ti alloy evaluated by different test methods, J. Chen, T. Muroga, S. Qiu, Y. Xu, Y. Den and Z. Xu
325 (2004) 79

Fuels and Fuel Elements

A model for fission-gas-bubble behavior in amorphous uranium silicide compounds, J. Rest
325 (2004) 107

Irradiation behaviour of uranium silicide compounds, M.R. Finlay, G.L. Hoffman and J.L. Snelgrove
325 (2004) 118

Measurement of Gd content in (U,Gd)O₂ using thermal gravimetric analysis, K.S. Kim, J.H. Yang, K.W. Kang, K.W. Song and G.M. Kim
325 (2004) 129

Fabrication of (Th,U)O₂ pellets containing 3 mol% of uranium by gel pelle-

tisation technique, R.V. Pai, S.K. Mukerjee and V.N. Vaidya
325 (2004) 159

Microwave process for sintering of uranium dioxide, J.H. Yang, K.W. Song, Y.W. Lee, J.H. Kim, K.W. Kang, K.S. Kim and Y.H. Jung
325 (2004) 210

Grain Boundaries

Effect of titania addition on hot hardness of UO₂, A.K. Sengupta, C.B. Basak, T. Jarvis, R.K. Bhagat, V.D. Pandey and S. Majumdar
325 (2004) 141

Heat Treatment

The second order Raman spectroscopy in carbon crystallinity, Y.-J. Lee
325 (2004) 174

Helium

Helium diffusion in uranium and plutonium oxides, C. Ronchi and J.P. Hiernaut
325 (2004) 1

Helium thermal diffusion in a uranium dioxide matrix, D. Roudil, X. Deschanel, P. Trocellier, C. Jégou, S. Peugeot and J.-M. Bart
325 (2004) 148

Hydrogen and Hydrides (includes Deuterium and Deuterides)

Stress-reorientation of hydrides and hydride embrittlement of Zr-2.5 wt% Nb pressure tube alloy, R.N. Singh, R. Kishore, S.S. Singh, T.K. Sinha and B.P. Kashyap
325 (2004) 26

Hydrogen embrittlement of a V4Cr4Ti alloy evaluated by different test methods, J. Chen, T. Muroga, S. Qiu, Y. Xu, Y. Den and Z. Xu
325 (2004) 79

Impurities

Recrystallization and precipitation behavior of low-activation V-Cr-Ti alloys after cold rolling, N.J. Heo, T. Nagasaka and T. Muroga
325 (2004) 53

Kinetics

Electron spin resonance measurement of irradiation defects in vitreous silica irradiated with neutrons, K. Moritani, I. Takagi and H. Moriyama
325 (2004) 169

Liquid Metals

A general equation of state for dense liquid alkali metals, H. Eslami
325 (2004) 188

Excellent corrosion resistance of 18Cr–20Ni–5Si steel in liquid Pb–Bi, Y. Kurata and M. Futakawa	325 (2004) 217	Electrochemical behaviors of uranium and plutonium at simultaneous recoveries into liquid cadmium cathodes, K. Uozumi, M. Iizuka, T. Kato, T. Inoue, O. Shirai, T. Iwai and Y. Arai	325 (2004) 34
Mechanical Properties (not listed elsewhere)		Powder Processes and Products	
Hydrogen embrittlement of a V4Cr4Ti alloy evaluated by different test methods, J. Chen, T. Muroga, S. Qiu, Y. Xu, Y. Den and Z. Xu	325 (2004) 79	Novel approach for the bulk synthesis of nanocrystalline yttria doped thoria powders via polymeric precursor routes, R. Ganesan, S. Vivekanandhan, T. Gnanasekaran, G. Periaswami and R.S. Srinivas	325 (2004) 134
Effect of titania addition on hot hardness of UO_2 , A.K. Sengupta, C.B. Basak, T. Jarvis, R.K. Bhagat, V.D. Pandey and S. Majumdar	325 (2004) 141	Fabrication of $(\text{Th},\text{U})\text{O}_2$ pellets containing 3 mol% of uranium by gel pelle-tisation technique, R.V. Pai, S.K. Mukerjee and V.N. Vaidya	325 (2004) 159
Metals, Alloys and Compounds (not listed elsewhere)		Microwave process for sintering of uranium dioxide, J.H. Yang, K.W. Song, Y.W. Lee, J.H. Kim, K.W. Kang, K.S. Kim and Y.H. Jung	325 (2004) 210
Corrosion behavior of Fe–Ni–Cr alloys in the molten salt of $\text{LiCl}-\text{Li}_2\text{O}$ at high temperature, S.H. Cho, J.S. Zhang, Y.J. Shin, S.W. Park and H.S. Park	325 (2004) 13	Precipitates and Precipitation	
Microstructure and Texture (excludes by Irradiation)		Recrystallization and precipitation beha-vior of low-activation V–Cr–Ti alloys after cold rolling, N.J. Heo, T. Na-gasaka and T. Muroga	325 (2004) 53
Stress-reorientation of hydrides and hydride embrittlement of Zr-2.5 wt% Nb pressure tube alloy, R.N. Singh, R. Kishore, S.S. Singh, T.K. Sinha and B.P. Kashyap	325 (2004) 26	The effect of oversized solute additions on the microstructure of 316SS irradiated with 5 MeV Ni^{++} ions or 3.2 MeV protons, J. Gan, E.P. Simonen, S.M. Bruemmer, L. Fournier, B.H. Sencer and G.S. Was	325 (2004) 94
Neutron Irradiation		Processing	
Chemical form of tritium released from solid breeder materials, M. Nishikawa, T. Kinjyo and Y. Nishida	325 (2004) 87	Measurement of Gd content in $(\text{U},\text{Gd})\text{O}_2$ using thermal gravimetric analysis, K.S. Kim, J.H. Yang, K.W. Kang, K.W. Song and G.M. Kim	325 (2004) 129
Irradiation behaviour of uranium silicide compounds, M.R. Finlay, G.L. Hof-man and J.L. Snelgrove	325 (2004) 118	Microwave process for sintering of ur-anium dioxide, J.H. Yang, K.W. Song, Y.W. Lee, J.H. Kim, K.W. Kang, K.S. Kim and Y.H. Jung	325 (2004) 210
Electron spin resonance measurement of irradiation defects in vitreous silica irradiated with neutrons, K. Moritani, I. Takagi and H. Moriyama	325 (2004) 169	Proton Irradiation	
Nickel, Nickel Alloys and Compounds		The effect of oversized solute additions on the microstructure of 316SS irradiated with 5 MeV Ni^{++} ions or 3.2 MeV protons, J. Gan, E.P. Simonen, S.M. Bruemmer, L. Fournier, B.H. Sencer and G.S. Was	325 (2004) 94
Thermal expansion studies on Inconel-600 [®] by high temperature X-ray diffraction, S. Raju, K. Sivasubramanian, R. Divakar, G. Panneerselvam, A. Banerjee, E. Mohandas and M.P. Antony	325 (2004) 18	Radiation Effects: Atomic Defects	
Physical Properties (not listed elsewhere)		Electron spin resonance measurement of irradiation defects in vitreous silica	
A general equation of state for dense liquid alkali metals, H. Eslami	325 (2004) 188		
Plutonium, Plutonium Alloys and Compounds			
Helium diffusion in uranium and plutonium oxides, C. Ronchi and J.P. Hiernaut	325 (2004) 1		

<p>irradiated with neutrons, K. Moritani, I. Takagi and H. Moriyama</p> <p>Immobilization of interstitial loops by substitutional alloy and transmutation atoms in irradiated metals, G.A. Cottrell, S.L. Dudarev and R.A. Forrest</p> <p>Radiation Effects: Extended Defects, Microstructures</p> <p>Master equation and Fokker–Planck methods for void nucleation and growth in irradiation swelling, M.P. Surh, J.B. Sturgeon and W.G. Wolfer</p> <p>The development of grain-face porosity in irradiated oxide fuel, R.J. White</p> <p>The effect of oversized solute additions on the microstructure of 316SS irradiated with 5 MeV Ni^{++} ions or 3.2 MeV protons, J. Gan, E.P. Simonen, S.M. Bruemmer, L. Fournier, B.H. Sencer and G.S. Was</p> <p>Rare Earths</p> <p>Measurement of Gd content in $(\text{U},\text{Gd})\text{O}_2$ using thermal gravimetric analysis, K.S. Kim, J.H. Yang, K.W. Kang, K.W. Song and G.M. Kim</p> <p>Recrystallization, Recovery and Grain Growth</p> <p>Recrystallization and precipitation behavior of low-activation V–Cr–Ti alloys after cold rolling, N.J. Heo, T. Nagasaka and T. Muroga</p> <p>Reprocessing</p> <p>Electrochemical behaviors of uranium and plutonium at simultaneous recoveries into liquid cadmium cathodes, K. Uozumi, M. Iizuka, T. Kato, T. Inoue, O. Shirai, T. Iwai and Y. Arai</p> <p>Silicon and Silicon Compounds</p> <p>Electron spin resonance measurement of irradiation defects in vitreous silica irradiated with neutrons, K. Moritani, I. Takagi and H. Moriyama</p> <p>Steels, Austenitic</p> <p>Corrosion behavior of Fe–Ni–Cr alloys in the molten salt of $\text{LiCl}-\text{Li}_2\text{O}$ at high temperature, S.H. Cho, J.S. Zhang, Y.J. Shin, S.W. Park and H.S. Park</p>	<p>325 (2004) 169</p> <p>325 (2004) 195</p> <p>325 (2004) 195</p> <p>325 (2004) 44</p> <p>325 (2004) 61</p> <p>325 (2004) 94</p> <p>325 (2004) 129</p> <p>325 (2004) 53</p> <p>325 (2004) 34</p> <p>325 (2004) 169</p> <p>325 (2004) 13</p> <p>Steels, Ferritic/Martensitic, Low Activation</p> <p>Immobilization of interstitial loops by substitutional alloy and transmutation atoms in irradiated metals, G.A. Cottrell, S.L. Dudarev and R.A. Forrest</p> <p>Surface Effects</p> <p>Chemical form of tritium released from solid breeder materials, M. Nishikawa, T. Kinjyo and Y. Nishida</p> <p>Swelling: Ceramics, Other Materials</p> <p>A model for fission-gas-bubble behavior in amorphous uranium silicide compounds, J. Rest</p> <p>Irradiation behaviour of uranium silicide compounds, M.R. Finlay, G.L. Hoffman and J.L. Snelgrove</p> <p>Swelling: Metals and Alloys</p> <p>Master equation and Fokker–Planck methods for void nucleation and growth in irradiation swelling, M.P. Surh, J.B. Sturgeon and W.G. Wolfer</p> <p>The effect of oversized solute additions on the microstructure of 316SS irradiated with 5 MeV Ni^{++} ions or 3.2 MeV protons, J. Gan, E.P. Simonen, S.M. Bruemmer, L. Fournier, B.H. Sencer and G.S. Was</p> <p>Theory and Modelling</p> <p>Master equation and Fokker–Planck methods for void nucleation and growth in irradiation swelling, M.P. Surh, J.B. Sturgeon and W.G. Wolfer</p> <p>A model for fission-gas-bubble behavior in amorphous uranium silicide compounds, J. Rest</p> <p>Thermodynamic Properties</p> <p>Chemical diffusion in uranium dioxide – influence of defect interactions, P. Ruello, G. Chirlesan, G. Petot-Ervás, C. Petot and L. Desgranges</p> <p>Thermophysical Properties</p> <p>Thermal expansion studies on Inconel-600[®] by high temperature X-ray diffraction, S. Raju, K. Sivasubramanian, R. Divakar, G. Panneer-</p>	<p>Excellent corrosion resistance of 18Cr–20Ni–5Si steel in liquid Pb–Bi, Y. Kurata and M. Futakawa</p> <p>325 (2004) 217</p> <p>325 (2004) 195</p> <p>325 (2004) 87</p> <p>325 (2004) 107</p> <p>325 (2004) 118</p> <p>325 (2004) 44</p> <p>325 (2004) 94</p> <p>325 (2004) 44</p> <p>325 (2004) 107</p> <p>325 (2004) 107</p>
---	--	---

selvam, A. Banerjee, E. Mohandas and M.P. Antony		A model for fission-gas-bubble behavior in amorphous uranium silicide compounds, J. Rest	325 (2004) 107
A general equation of state for dense liquid alkali metals, H. Eslami		Irradiation behaviour of uranium silicide compounds, M.R. Finlay, G.L. Hofman and J.L. Snelgrove	325 (2004) 118
Thorium, Thorium Alloys and Compounds		Measurement of Gd content in $(U,Gd)O_2$ using thermal gravimetric analysis, K.S. Kim, J.H. Yang, K.W. Kang, K.W. Song and G.M. Kim	325 (2004) 129
Novel approach for the bulk synthesis of nanocrystalline yttria doped thoria powders via polymeric precursor routes, R. Ganesan, S. Vivekanandhan, T. Gnanasekaran, G. Periaswami and R.S. Srinivasa		Effect of titania addition on hot hardness of UO_2 , A.K. Sengupta, C.B. Basak, T. Jarvis, R.K. Bhagat, V.D. Pandey and S. Majumdar	325 (2004) 141
Fabrication of $(Th,U)O_2$ pellets containing 3 mol% of uranium by gel pelle-tisation technique, R.V. Pai, S.K. Mukerjee and V.N. Vaidya	325 (2004) 134	Helium thermal diffusion in a uranium dioxide matrix, D. Roudil, X. Deschanel, P. Trocellier, C. Jégou, S. Peuget and J.-M. Bart	325 (2004) 148
Diffusion reaction between Zircaloy-2 and thoria, P. Sengupta, P.S. Gawde, K. Bhanumurthy and G.B. Kale	325 (2004) 159	Fabrication of $(Th,U)O_2$ pellets containing 3 mol% of uranium by gel pelle-tisation technique, R.V. Pai, S.K. Mukerjee and V.N. Vaidya	325 (2004) 159
Titanium, Titanium Alloys and Compounds		Chemical diffusion in uranium dioxide – influence of defect interactions, P. Ruello, G. Chirlesan, G. Petot-Ervás, C. Petot and L. Desgranges	325 (2004) 202
Effect of titania addition on hot hardness of UO_2 , A.K. Sengupta, C.B. Basak, T. Jarvis, R.K. Bhagat, V.D. Pandey and S. Majumdar	325 (2004) 180	Microwave process for sintering of uranium dioxide, J.H. Yang, K.W. Song, Y.W. Lee, J.H. Kim, K.W. Kang, K.S. Kim and Y.H. Jung	325 (2004) 210
Tritium and Tritides			
Chemical form of tritium released from solid breeder materials, M. Nishikawa, T. Kinjyo and Y. Nishida	325 (2004) 141		
Uranium, Uranium Alloys		Vanadium, Vanadium Alloys and Compounds	
Electrochemical behaviors of uranium and plutonium at simultaneous recoveries into liquid cadmium cathodes, K. Uozumi, M. Iizuka, T. Kato, T. Inoue, O. Shirai, T. Iwai and Y. Arai	325 (2004) 87	Recrystallization and precipitation behavior of low-activation V–Cr–Ti alloys after cold rolling, N.J. Heo, T. Nagasaka and T. Muroga	325 (2004) 53
	325 (2004) 34	Hydrogen embrittlement of a V4Cr4Ti alloy evaluated by different test methods, J. Chen, T. Muroga, S. Qiu, Y. Xu, Y. Den and Z. Xu	325 (2004) 79
Uranium Oxides and Compounds		Waste: Behavior in Storage	
Helium diffusion in uranium and plutonium oxides, C. Ronchi and J.P. Hiernaut	325 (2004) 1	Helium thermal diffusion in a uranium dioxide matrix, D. Roudil, X. Deschanel, P. Trocellier, C. Jégou, S. Peuget and J.-M. Bart	325 (2004) 148
The development of grain-face porosity in irradiated oxide fuel, R.J. White	325 (2004) 61		
X-ray Techniques and Applications			
		Thermal expansion studies on Inconel-600 [®] by high temperature X-ray diffraction, S. Raju, K. Sivasubramanian, R. Divakar, G. Panneerselvam,	

A. Banerjee, E. Mohandas and M.P. Antony	Diffusion reaction between Zircaloy-2 and thoria, P. Sengupta, P.S. Gawde, K. Bhanumurthy and G.B. Kale	325 (2004) 18	325 (2004) 180
The second order Raman spectroscopy in carbon crystallinity, Y.-J. Lee		325 (2004) 174	
Zirconium, Zirconium Alloys	Zirconium Hydrides and Compounds		
Stress-reorientation of hydrides and hydride embrittlement of Zr-2.5 wt% Nb pressure tube alloy, R.N. Singh, R. Kishore, S.S. Singh, T.K. Sinha and B.P. Kashyap	Stress-reorientation of hydrides and hydride embrittlement of Zr-2.5 wt% Nb pressure tube alloy, R.N. Singh, R. Kishore, S.S. Singh, T.K. Sinha and B.P. Kashyap	325 (2004) 26	325 (2004) 26