



## Subject index

**Actinides (minor, excludes Plutonium, Thorium and Uranium)**

Glass-ceramic nuclear waste forms obtained from  $\text{SiO}_2\text{--Al}_2\text{O}_3\text{--CaO--ZrO}_2\text{--TiO}_2$  glasses containing lanthanides (Ce, Nd, Eu, Gd, Yb) and actini, P. Loiseau, D. Caurant, N. Baffier, L. Mazerolles and C. Fillet

335 (2004) 14

Thermodynamic modelling of  $\text{LiF--LnF}_3$  and  $\text{LiF--AnF}_3$  phase diagrams, J.P.M. van der Meer, R.J.M. Konings, M.H.G. Jacobs and H.A.J. Oonk

335 (2004) 345

**Adsorption**

Desorption of water adsorbed on iron oxide by laser irradiation, K. Chiba, S. Tanaka and T. Yoneoka

335 (2004) 493

**Amorphization and Amorphous Materials**

Glass-ceramic nuclear waste forms obtained from  $\text{SiO}_2\text{--Al}_2\text{O}_3\text{--CaO--ZrO}_2\text{--TiO}_2$  glasses containing lanthanides (Ce, Nd, Eu, Gd, Yb) and actini, P. Loiseau, D. Caurant, N. Baffier, L. Mazerolles and C. Fillet

335 (2004) 14

Alkali ion exchange in  $\gamma$ -irradiated glasses, M.I. Ojovan and W.E. Lee

335 (2004) 425

**Analytical Instruments and Methods (not listed elsewhere)**

Oxygen measurements in stagnant lead–bismuth eutectic using electrochemical sensors, J. Konys, H. Muscher, Z. Voß and O. Wedemeyer

335 (2004) 249

Characterisation of an oxygen sensor based on In/In<sub>2</sub>O<sub>3</sub> reference electrode, S. Colominas, J. Abellà and L. Victori

335 (2004) 260

Laser ablation tests performed on TORE-SUPRA graphite samples, F. Le Guern, C. Hubert, S. Mousset, E. Gauthier, C. Blanc, P. Wodling and J.M. Weulersse

335 (2004) 410

**Breeding Materials for Fusion**

Release behavior of bred tritium from LiAlO<sub>2</sub>, M. Nishikawa, T. Kinjyo, T. Ishizaka, S. Beloglazov, T. Takeishi, M. Enaeda and T. Tanifuji

335 (2004) 70

**Carbon**

Laser ablation tests performed on TORE-SUPRA graphite samples, F. Le Guern, C. Hubert, S. Mousset, E. Gauthier, C. Blanc, P. Wodling and J.M. Weulersse

335 (2004) 410

**Cavities (includes Voids, Holes)**

Synergistic effects of implanted helium and hydrogen and the effect of irradiation temperature on the microstructure of SiC/SiC composites, T. Taguchi, N. Igawa, S. Miwa, E. Wakai, S. Jitsukawa, L.L. Snead and A. Hasegawa

335 (2004) 508

**Ceramics (not listed elsewhere)**

Glass-ceramic nuclear waste forms obtained from  $\text{SiO}_2\text{--Al}_2\text{O}_3\text{--CaO--ZrO}_2\text{--TiO}_2$  glasses containing lanthanides (Ce, Nd, Eu, Gd, Yb) and actini, P. Loiseau, D. Caurant, N. Baffier, L. Mazerolles and C. Fillet

335 (2004) 14

Synthesis and characterization of low-temperature precursors of thorium–uranium (IV) phosphate–diphosphate solid solutions, N. Clavier, N. Dauchoux, P. Martinez, V. Brandel, R. Podor and P. Le Coustumer

335 (2004) 397

**Chemical Reactions (includes Electrochemical and Thermochemical Reactions)**

Electrochemical oxygen sensors for online monitoring in lead–bismuth alloys: status of development, J.-L. Courouau

335 (2004) 254

Chemistry control analysis of lead alloys systems to be used as nuclear coolant or spallation target, J.-L. Courouau and J.-C. Robin

335 (2004) 264

**Cladding Materials**

A creep rupture criterion for Zircaloy-4 fuel cladding under internal pressure, R. Limon and S. Lehmann

335 (2004) 322

**Coatings and Coated Particles**

Effect of oxygen concentration and temperature on compatibility of ODS

- steel with liquid, Stagnant Pb<sub>45</sub>Bi<sub>55</sub>, T. Furukawa, G. Müller, G. Schumacher, A. Weisenburger, A. Heinzel and K. Aoto 335 (2004) 189
- Cold-Worked Materials**
- Corrosion behaviour of aluminized martensitic and austenitic steels in liquid Pb–Bi, Ph. Deloffre, F. Balbaud-Célérier and A. Terlain 335 (2004) 180
- Compatibility and Corrosion (includes Stress Corrosion Cracking)**
- Kinetic and thermodynamic studies of the dissolution of thoria-urania solid solutions, G. Heisbourg, S. Hubert, N. Dacheux and J. Purans 335 (2004) 5
- The effect of grain boundary misorientation on the intergranular M<sub>23</sub>C<sub>6</sub> carbide precipitation in thermally treated Alloy 690, Y.S. Lim, J.S. Kim, H.P. Kim and H.D. Cho 335 (2004) 108
- Corrosion of stainless steels in lead–bismuth eutectic up to 600 °C, L. Soler, F.J. Martín, F. Hernández and D. Gómez-Briceño 335 (2004) 174
- Oxide layer stability in lead–bismuth at high temperature, F.J. Martín, L. Soler, F. Hernández and D. Gómez-Briceño 335 (2004) 194
- The impact of the composition of structural steels on their corrosion stability in liquid Pb–Bi at 500 and 400 °C with different oxygen concentrations, G. Ilinčev, D. Kárník, M. Paulovič and A. Doubková 335 (2004) 210
- Studies on weldability of Ti–5Ta–1.8Nb alloy, T. Karthikeyan, A. Dasgupta, S. Saroja, M. Vijayalakshmi and V.S. Raghunathan 335 (2004) 299
- Solid state synthesis of Mg–Ni ferrite and characterization by XRD and XPS, V.K. Mittal, S. Bera, R. Nithya, M.P. Srinivasan, S. Velmurugan and S.V. Narasimhan 335 (2004) 302
- Crystal structure and grain size of Zr oxide characterized by synchrotron radiation microdiffraction, J.-Y. Park, H.-G. Kim, Y.H. Jeong and Y.-H. Jung 335 (2004) 433
- Oxidation kinetics of Zircaloy-4 and Zr–1Nb–1Sn–0.1Fe at temperatures of 700–1200°C, J.H. Baek, K.B. Park and Y.H. Jeong 335 (2004) 443
- Deformation mode maps for tensile deformation of neutron-irradiated structural alloys, K. Farrell, T.S. Byun and N. Hashimoto 335 (2004) 471
- The influence of proton irradiation on the corrosion of HT-9 during immersion in lead bismuth eutectic, R.S. Lillard, M. Paciotti and V. Tcharnotskaia 335 (2004) 487
- Corrosion behavior of Al-surface-treated steels in liquid Pb–Bi in a pot, Y. Kurata, M. Futakawa and S. Saito 335 (2004) 501
- Composite Materials**
- Behavior of steels in flowing liquid PbBi eutectic alloy at 420–600 °C after 4000–7200 h, G. Müller, A. Heinzel, J. Konys, G. Schumacher, A. Weisenburger, F. Zimmermann, V. Engelko, A. Rusanov and V. Markov 335 (2004) 163
- Corrosion behaviour of stainless steels in flowing LBE at low and high oxygen concentration, A. Aiello, M. Azzati, G. Benamati, A. Gessi, B. Long and G. Scaddozzo 335 (2004) 169
- Corrosion behaviour of aluminized martensitic and austenitic steels in liquid Pb–Bi, Ph. Deloffre, F. Balbaud-Célérier and A. Terlain 335 (2004) 180
- Effect of oxygen concentration and temperature on compatibility of ODS steel with liquid, Stagnant Pb<sub>45</sub>Bi<sub>55</sub>, T. Furukawa, G. Müller, G. Schumacher, A. Weisenburger, A. Heinzel and K. Aoto 335 (2004) 189
- Influence of the Pb–Bi hydrodynamics on the corrosion of T91 martensitic steel and pure iron, F. Balbaud-Célérier and A. Terlain 335 (2004) 204
- Influence of Zn as a spallation product on the behaviour of martensitic steel T91 and austenitic steel 316L in liquid Pb–Bi, Ph. Deloffre and A. Terlain 335 (2004) 244
- Synergistic effects of implanted helium and hydrogen and the effect of irradiation temperature on the microstructure of SiC/SiC composites, T. Taguchi, N. Igawa, S. Miwa, E. Wakai, S. Jitsukawa, L.L. Snead and A. Hasegawa 335 (2004) 508
- Copper, Copper Alloys and Compounds**
- The neutron irradiation effect on mechanical properties of HIP joint material, H. Yamada, H. Kawamura, K. Tsuchiya, G. Kalinin, Y. Nagao, S. Sato and K. Mohri 335 (2004) 33
- Simulation of radiation damage in Fe alloys: an object kinetic Monte Carlo approach, C. Domain, C.S. Becquart and L. Malerba 335 (2004) 121
- Creep and Stress Relaxation**
- Manufacturing pressurized creep tubes from highly purified V–4Cr–4Ti alloys, NIFS-Heat2, K. Fukumoto, H. Matsui, M. Narui, T. Nagasaka and T. Muroga 335 (2004) 103

A creep rupture criterion for Zircaloy-4 fuel cladding under internal pressure, R. Limon and S. Lehmann

335 (2004) 322

### Crystallographic Properties

The effect of grain boundary misorientation on the intergranular  $M_{23}C_6$  carbide precipitation in thermally treated Alloy 690, Y.S. Lim, J.S. Kim, H.P. Kim and H.D. Cho

335 (2004) 108

### Defects and Defect Structures (*excludes by Irradiation*)

Simulation of radiation damage in Fe alloys: an object kinetic Monte Carlo approach, C. Domain, C.S. Becquart and L. Malerba

335 (2004) 121

### Deformation

Assessment of the constitutive properties from small ball punch test: experiment and modeling, E.N. Campitelli, P. Späthig, R. Bonadé, W. Hoffelner and M. Victoria

335 (2004) 366

Deformation mode maps for tensile deformation of neutron-irradiated structural alloys, K. Farrell, T.S. Byun and N. Hashimoto

335 (2004) 471

### Diffusion

Release behavior of bred tritium from  $\text{LiAlO}_2$ , M. Nishikawa, T. Kinjyo, T. Ishizaka, S. Beloglazov, T. Takeishi, M. Enaeda and T. Tanifuji

335 (2004) 70

### Dislocations

Micro-texture of extruded Zr-2.5Nb tubes, R.A. Holt and P. Zhao

335 (2004) 520

### Divertor Materials

Temperature dependence of liquid Sn sputtering by low-energy  $\text{He}^+$  and  $\text{D}^+$  bombardment, M.D. Coventry, J.P. Allain and D.N. Ruzic

335 (2004) 115

Tungsten erosion in the baffle and outboard regions of the ITER-like ASDEX Upgrade divertor, H. Maier and ASDEX Upgrade Team

335 (2004) 515

### Electrical Properties

Thermal properties of plasma-sprayed tungsten deposits, H.-K. Kang

335 (2004) 1

### Electron Irradiation

Microstructural investigation of the stability under irradiation of oxide dispersion strengthened ferritic steels, I. Monnet, P. Dubuisson, Y. Serruys, M.O. Ruault, O. Kaitasov and B. Jouffrey

335 (2004) 311

### Electron Microscopy

Microstructural evolution of  $\text{Y}_2\text{O}_3$  and  $\text{MgAl}_2\text{O}_4$  ODS EUROFER steels during their elaboration by mechanical milling and hot isostatic pressing, C. Cayron, E. Rath, I. Chu and S. Launois

335 (2004) 83

The effect of grain boundary misorientation on the intergranular  $M_{23}C_6$  carbide precipitation in thermally treated Alloy 690, Y.S. Lim, J.S. Kim, H.P. Kim and H.D. Cho

335 (2004) 108

Preliminary results of post-irradiation examinations on LiSoR-2 test section, Y. Dai, H. Glasbrenner, V. Boutellier, R. Bruetsch, X. Jia and F. Groeschel

335 (2004) 232

Micro-texture of extruded Zr-2.5Nb tubes, R.A. Holt and P. Zhao

335 (2004) 520

### Embrittlement

Embrittlement of RAFM EUROFER97 by implanted hydrogen, C. Liu, H. Klein and P. Jung

335 (2004) 77

Simulation of radiation damage in Fe alloys: an object kinetic Monte Carlo approach, C. Domain, C.S. Becquart and L. Malerba

335 (2004) 121

Mechanical behaviour of the T91 martensitic steel under monotonic and cyclic loadings in liquid metals, J.-B. Vogt, A. Verleene, I. Serre and A. Legris

335 (2004) 222

Effect of contact conditions on embrittlement of T91 steel by lead–bismuth, T. Auger, G. Lorang, S. Guérin, J.-L. Pastol and D. Gorse

335 (2004) 227

Preliminary results of post-irradiation examinations on LiSoR-2 test section, Y. Dai, H. Glasbrenner, V. Boutellier, R. Bruetsch, X. Jia and F. Groeschel

335 (2004) 232

Bending tests on T91 steel in Pb–Bi eutectic, Bi and Pb–Li eutectic, H. Glasbrenner and F. Gröschel

335 (2004) 239

### Experimental Techniques

Manufacturing pressurized creep tubes from highly purified V-4Cr-4Ti alloys, NIFS-Heat2, K. Fukumoto, H. Matsui, M. Narui, T. Nagasaka and T. Muroga

335 (2004) 103

Testing and qualification of CIRCE instrumentation based on bubble tubes, W. Ambrosini, M. Azzati, G. Benamati, G. Bertacci, L. Cinotti, N. Forgione, F. Oriolo, G. Scaddozzo and M. Tarantino

335 (2004) 293

Characterization of hydrogen concentration in Zircaloy claddings using a low-frequency acoustic microscope with a PVDF/LFB transducer, C.-H. Yang and M.-F. Huang

335 (2004) 359

Assessment of the constitutive properties from small ball punch test: experiment and modeling, E.N. Campitelli, P. Spätić, R. Bonadé, W. Hoffelner and M. Victoria

335 (2004) 366

**Fabrication**

Textural and microstructural developments during fabrication of Zr-2.5Nb pressure tubes, M.K. Kumar, C. Vanitha, I. Samajdar, G.K. Dey, R. Tewari, D. Srivastava and S. Banerjee

Manufacturing pressurized creep tubes from highly purified V-4Cr-4Ti alloys, NIFS-Heat2, K. Fukumoto, H. Matsui, M. Narui, T. Nagasaka and T. Muroga

335 (2004) 48

335 (2004) 103

**Fast Reactor Materials**

Effect of oxygen concentration and temperature on compatibility of ODS steel with liquid, Stagnant Pb<sub>45</sub>Bi<sub>55</sub>, T. Furukawa, G. Müller, G. Schumacher, A. Weisenburger, A. Heinzel and K. Aoto

Effect of contact conditions on embrittlement of T91 steel by lead–bismuth, T. Auger, G. Lorang, S. Guérin, J.-L. Pastol and D. Gorse

335 (2004) 189

335 (2004) 227

**Fatigue**

Mechanical behaviour of the T91 martensitic steel under monotonic and cyclic loadings in liquid metals, J.-B. Vogt, A. Verleene, I. Serre and A. Legris

Preliminary results of post-irradiation examinations on LiSoR-2 test section, Y. Dai, H. Glasbrenner, V. Boutellier, R. Bruetsch, X. Jia and F. Groeschel

335 (2004) 222

335 (2004) 232

**Fracture and Fracture Toughness**

Delayed hydride cracking in Zr-2.5Nb tube with the cooling rate and the notch tip shape, Y.S. Kim, S.J. Kim and K.S. Im

335 (2004) 387

**Fuels and Fuel Elements**

Post-irradiation examination of uranium-7wt% molybdenum atomized dispersion fuel, A. Leenaers, S. Van den Berghe, E. Koonen, C. Jarousse, F. Huet, M. Trotabas, M. Boyard, S. Guillot, L. Sannen and M. Verwerft

335 (2004) 39

The experimental accelerator driven system (XADS) designs in the EURATOM 5th framework programme, L. Cinotti, B. Giraud and H.A. Abderrahim

335 (2004) 148

A creep rupture criterion for Zircaloy-4 fuel cladding under internal pressure, R. Limon and S. Lehmann

Analysis on Lift-Off experiment in Halde reactor by FEMAXI-6 code, M. Suzuki, K. Kusagaya, H. Saitou and T. Fuketa

335 (2004) 322

335 (2004) 417

**Grain Boundaries**

Crystal structure and grain size of Zr oxide characterized by synchrotron radiation microdiffraction, J.-Y. Park, H.-G. Kim, Y.H. Jeong and Y.-H. Jung

335 (2004) 433

**Heat Treatment**

Turbulent heavy liquid metal heat transfer along a heated rod in an annular cavity, C.-H. Lefhalm, N.-I. Tak, H. Piecha and R. Stieglitz

335 (2004) 280

Turbulent heat mixing of a heavy liquid metal flow within the MEGAPIE window geometry: The heated jet experiments, M. Daubner, A. Batta, F. Fellmoser, C.-H. Lefhalm, K.-J. Mack and R. Stieglitz

335 (2004) 286

**Helium**

Synergistic effects of implanted helium and hydrogen and the effect of irradiation temperature on the microstructure of SiC/SiC composites, T. Taguchi, N. Igawa, S. Miwa, E. Wakai, S. Jitsukawa, L.L. Snead and A. Hasegawa

335 (2004) 508

**Hydrogen and Hydrides (includes Deuterium and Deuterides)**

Embrittlement of RAFM EUROFER97 by implanted hydrogen, C. Liu, H. Klein and P. Jung

335 (2004) 77

Characterization of hydrogen concentration in Zircaloy claddings using a low-frequency acoustic microscope with a PVDF/LFB transducer, C.-H. Yang and M.-F. Huang

335 (2004) 359

Delayed hydride cracking in Zr-2.5Nb tube with the cooling rate and the notch tip shape, Y.S. Kim, S.J. Kim and K.S. Im

335 (2004) 387

Synergistic effects of implanted helium and hydrogen and the effect of irradiation temperature on the microstructure of SiC/SiC composites, T. Taguchi, N. Igawa, S. Miwa, E. Wakai, S. Jitsukawa, L.L. Snead and A. Hasegawa

335 (2004) 508

**Impurities**

Electrochemical oxygen sensors for online monitoring in lead–bismuth alloys: status of development, J.-L. Courouau

335 (2004) 254

Chemistry control analysis of lead alloys systems to be used as nuclear coolant or spallation target, J.-L. Courouau and J.-C. Robin

335 (2004) 264

**Ion Irradiation**

Temperature dependence of liquid Sn sputtering by low-energy He<sup>+</sup> and D<sup>+</sup> bombardment, M.D. Coventry, J.P. Allain and D.N. Ruzic

335 (2004) 115

Microstructural investigation of the stability under irradiation of oxide dispersion strengthened ferritic steels, I. Monnet, P. Dubuisson, Y. Serruys, M.O. Ruault, O. Kaitasov and B. Jouffrey

335 (2004) 311

Synergistic effects of implanted helium and hydrogen and the effect of irradiation temperature on the microstructure of SiC/SiC composites, T. Taguchi, N. Igawa, S. Miwa, E. Wakai, S. Jitsukawa, L.L. Snead and A. Hasegawa

335 (2004) 508

**Iron, Iron alloys and Compounds (excludes Steels)**

Desorption of water adsorbed on iron oxide by laser irradiation, K. Chiba, S. Tanaka and T. Yoneoka

335 (2004) 493

**Irradiation (not listed elsewhere, includes Irradiation History or Schedule)**

Long-lived activation products in TRI-GA Mark II research reactor concrete shield: calculation and experiment, T. Žagar, M. Božič and M. Ravnik

335 (2004) 379

**Joining (includes Welding, Brazing, Soldering)**

The neutron irradiation effect on mechanical properties of HIP joint material, H. Yamada, H. Kawamura, K. Tsuchiya, G. Kalinin, Y. Nagao, S. Sato and K. Mohri

335 (2004) 33

Dissimilar welding of nickel-based Alloy 690 to SUS 304L with Ti addition, H.T. Lee, S.L. Jeng, C.H. Yen and T.Y. Kuo

335 (2004) 59

Studies on weldability of Ti-5Ta-1.8Nb alloy, T. Karthikeyan, A. Dasgupta, S. Saroja, M. Vijayalakshmi and V.S. Raghunathan

335 (2004) 299

Impact properties of 304L stainless steel GTAW joints evaluated by high strain rate of compression tests, W.-S. Lee, C.-F. Lin, C.-Y. Liu and F.-T. Tzeng

335 (2004) 335

**Kinetics**

Oxidation kinetics of Zircaloy-4 and Zr-1Nb-1Sn-0.1Fe at temperatures of 700–1200°C, J.H. Baek, K.B. Park and Y.H. Jeong

335 (2004) 443

**Laser**

Laser ablation tests performed on TORE-SUPRA graphite samples, F. Le Guern, C. Hubert, S. Mousset, E. Gauthier, C. Blanc, P. Wodling and J.M. Weulersse

335 (2004) 410

Desorption of water adsorbed on iron oxide by laser irradiation, K. Chiba, S. Tanaka and T. Yoneoka

335 (2004) 493

**Liquid Metals**

Temperature dependence of liquid Sn sputtering by low-energy He<sup>+</sup> and D<sup>+</sup> bombardment, M.D. Coventry, J.P. Allain and D.N. Ruzic

335 (2004) 115

The MEGAPIE 1 MW target in support to ADS development: status of R&D and design, F. Groeschel, C. Fazio, J. Knebel, Ch. Perret, A. Janett, G. Laffont, L. Cachon, Th. Kirchner, A. Cadiou, A. Guertin and P. Agostini

Behavior of steels in flowing liquid PbBi eutectic alloy at 420–600 °C after 4000–7200 h, G. Müller, A. Heinzel, J. Konys, G. Schumacher, A. Weisenburger, F. Zimmermann, V. Engelko, A. Rusanov and V. Markov

Corrosion behaviour of stainless steels in flowing LBE at low and high oxygen concentration, A. Aiello, M. Azzati, G. Benamati, A. Gessi, B. Long and G. Scaddozzo

335 (2004) 163

Corrosion of stainless steels in lead–bismuth eutectic up to 600 °C, L. Soler, F.J. Martín, F. Hernández and D. Gómez-Briceño

335 (2004) 169

Corrosion behaviour of aluminized martensitic and austenitic steels in liquid Pb–Bi, Ph. Deloffre, F. Balbaud-Célérier and A. Terlain

335 (2004) 174

Corrosion behaviour of steels in lead–bismuth at 823 K, F. Gnecco, E. Ricci, C. Bottino and A. Passerone

335 (2004) 180

Effect of oxygen concentration and temperature on compatibility of ODS steel with liquid, Stagnant Pb<sub>45</sub>Bi<sub>55</sub>, T. Furukawa, G. Müller, G. Schumacher, A. Weisenburger, A. Heinzel and K. Aoto

335 (2004) 185

Oxide layer stability in lead–bismuth at high temperature, F.J. Martin, L. Soler, F. Hernández and D. Gómez-Briceño

335 (2004) 189

Mass transfer of iron impurities in LBE loops under non-isothermal flow conditions, T. Malkow, H. Steiner, H. Muscher and J. Konys

335 (2004) 194

Influence of the Pb–Bi hydrodynamics on the corrosion of T91 martensitic steel and pure iron, F. Balbaud-Célérier and A. Terlain

335 (2004) 199

335 (2004) 204

- The impact of the composition of structural steels on their corrosion stability in liquid Pb–Bi at 500 and 400 °C with different oxygen concentrations, G. Ilinčev, D. Kárník, M. Paulovič and A. Doubková  
335 (2004) 210
- Mechanical properties of martensitic steels after exposure to flowing liquid metals, A. Aiello, M. Agostini, G. Benamati, B. Long and G. Scaddozzo  
335 (2004) 217
- Mechanical behaviour of the T91 martensitic steel under monotonic and cyclic loadings in liquid metals, J.-B. Vogt, A. Verleene, I. Serre and A. Legris  
335 (2004) 222
- Effect of contact conditions on embrittlement of T91 steel by lead–bismuth, T. Auger, G. Lorang, S. Guérin, J.-L. Pastor and D. Gorse  
335 (2004) 227
- Preliminary results of post-irradiation examinations on LiSoR-2 test section, Y. Dai, H. Glasbrenner, V. Boutellier, R. Bruetsch, X. Jia and F. Groeschel  
335 (2004) 232
- Bending tests on T91 steel in Pb–Bi eutectic, Bi and Pb–Li eutectic, H. Glasbrenner and F. Gröschel  
335 (2004) 239
- Influence of Zn as a spallation product on the behaviour of martensitic steel T91 and austenitic steel 316L in liquid Pb–Bi, Ph. Deloffre and A. Terlain  
335 (2004) 244
- Oxygen measurements in stagnant lead–bismuth eutectic using electrochemical sensors, J. Konys, H. Muscher, Z. Voß and O. Wedemeyer  
335 (2004) 249
- Electrochemical oxygen sensors for online monitoring in lead–bismuth alloys: status of development, J.-L. Courouau  
335 (2004) 254
- Characterisation of an oxygen sensor based on In/In<sub>2</sub>O<sub>3</sub> reference electrode, S. Colominas, J. Abellà and L. Victori  
335 (2004) 260
- Chemistry control analysis of lead alloys systems to be used as nuclear coolant or spallation target, J.-L. Courouau and J.-C. Robin  
335 (2004) 264
- Polonium formation in Pb–55.5Bi under proton irradiation, H. Glasbrenner, J. Eikenberg, F. Gröschel and L. Zanini  
335 (2004) 270
- The re-crystallization issue in lead–bismuth technology, P. Agostini, E. Baicchi, A. Zucchini and G. Benamati  
335 (2004) 275
- Turbulent heavy liquid metal heat transfer along a heated rod in an annular cavity, C.-H. Lefhalm, N.-I. Tak, H. Piecha and R. Stieglitz  
335 (2004) 280
- Turbulent heat mixing of a heavy liquid metal flow within the MEGAPIE window geometry: The heated jet experiments, M. Daubner, A. Batta, F. Fellmoser, C.-H. Lefhalm, K.-J. Mack and R. Stieglitz  
335 (2004) 286
- Testing and qualification of CIRCE instrumentation based on bubble tubes, W. Ambrosini, M. Azzati, G. Benamati, G. Bertacci, L. Cinotti, N. Forgione, F. Oriolo, G. Scaddozzo and M. Tarantino  
335 (2004) 293
- The influence of proton irradiation on the corrosion of HT-9 during immersion in lead bismuth eutectic, R.S. Lillard, M. Paciotti and V. Tchernotskaia  
335 (2004) 487
- Corrosion behavior of Al-surface-treated steels in liquid Pb–Bi in a pot, Y. Kurata, M. Futakawa and S. Saito  
335 (2004) 501
- Magnesium, Magnesium Alloys and Compounds**
- Solid state synthesis of Mg–Ni ferrite and characterization by XRD and XPS, V.K. Mittal, S. Bera, R. Nithya, M.P. Srinivasan, S. Velmurugan and S.V. Narasimhan  
335 (2004) 302
- Mathematical and Computational Methods**
- Turbulent heavy liquid metal heat transfer along a heated rod in an annular cavity, C.-H. Lefhalm, N.-I. Tak, H. Piecha and R. Stieglitz  
335 (2004) 280
- Turbulent heat mixing of a heavy liquid metal flow within the MEGAPIE window geometry: The heated jet experiments, M. Daubner, A. Batta, F. Fellmoser, C.-H. Lefhalm, K.-J. Mack and R. Stieglitz  
335 (2004) 286
- Mechanical Properties (not listed elsewhere)**
- Mechanical properties of martensitic steels after exposure to flowing liquid metals, A. Aiello, M. Agostini, G. Benamati, B. Long and G. Scaddozzo  
335 (2004) 217
- Mechanical behaviour of the T91 martensitic steel under monotonic and cyclic loadings in liquid metals, J.-B. Vogt, A. Verleene, I. Serre and A. Legris  
335 (2004) 222
- Effect of contact conditions on embrittlement of T91 steel by lead–bismuth, T. Auger, G. Lorang, S. Guérin, J.-L. Pastor and D. Gorse  
335 (2004) 227
- Impact properties of 304L stainless steel GTAW joints evaluated by high strain rate of compression tests, W.-S. Lee, C.-F. Lin, C.-Y. Liu and F.-T. Tzeng  
335 (2004) 335
- Assessment of the constitutive properties from small ball punch test: experiment and modeling, E.N. Campitelli, P. Späthig, R. Bonadé, W. Hoffelner and M. Victoria  
335 (2004) 366
- Post irradiation plastic properties of F82H derived from the instrumented tensile tests, T. Taguchi, S. Jitsukawa, M. Sato, S. Matsukawa, E. Wakai and K. Shiba  
335 (2004) 457

**Microstructure and Texture (excludes by Irradiation)**

Dissimilar welding of nickel-based Alloy

690 to SUS 304L with Ti addition,  
H.T. Lee, S.L. Jeng, C.H. Yen and  
T.Y. Kuo

335 (2004) 59

Microstructural evolution of  $\text{Y}_2\text{O}_3$  and  
 $\text{MgAl}_2\text{O}_4$  ODS EUROFER steels  
during their elaboration by mechanical  
milling and hot isostatic pressing,  
C. Cayron, E. Rath, I. Chu and S.  
Launois

335 (2004) 83

Preliminary results of post-irradiation  
examinations on LiSoR-2 test section,  
Y. Dai, H. Glasbrenner, V. Boutellier,  
R. Bruetsch, X. Jia and F. Groeschel

335 (2004) 232

Studies on weldability of Ti-5Ta-1.8Nb  
alloy, T. Karthikeyan, A. Dasgupta,  
S. Saroja, M. Vijayalakshmi and V.S.  
Raghunathan

335 (2004) 299

Micro-texture of extruded Zr-2.5Nb  
tubes, R.A. Holt and P. Zhao

335 (2004) 520

**Molybdenum, Molybdenum Alloys and Compounds**

Post-irradiation examination of uranium-

7wt% molybdenum atomized dispersion  
fuel, A. Leenaers, S. Van den  
Bergh, E. Koonen, C. Jarousse, F.  
Huet, M. Trotabas, M. Boyard, S.  
Guillot, L. Sannen and M. Verwerft

335 (2004) 39

**Monitoring Methods**

Electrochemical oxygen sensors for online monitoring in lead–bismuth alloys: status of development, J.-L. Courouau

335 (2004) 254

Chemistry control analysis of lead alloys systems to be used as nuclear coolant or spallation target, J.-L. Courouau and J.-C. Robin

335 (2004) 264

**Neutron Irradiation**

The neutron irradiation effect on mechanical properties of HIP joint material, H. Yamada, H. Kawamura, K. Tsuchiya, G. Kalinin, Y. Nagao, S. Sato and K. Mohri

335 (2004) 33

The MEGAPIE 1 MW target in support to ADS development: status of R&amp;D and design, F. Groeschel, C. Fazio, J. Knebel, Ch. Perret, A. Janett, G. Laffont, L. Cachon, Th. Kirchner, A. Cadiou, A. Guertin and P. Agostini

335 (2004) 156

Microstructural investigation of the stability under irradiation of oxide dispersion strengthened ferritic steels, I. Monnet, P. Dubuisson, Y. Serruys, M.O. Ruault, O. Kaitasov and B. Jouffrey

335 (2004) 311

Post irradiation plastic properties of F82H derived from the instrumented tensile tests, T. Taguchi, S. Jitsukawa,

M. Sato, S. Matsukawa, E. Wakai and K. Shiba

335 (2004) 457

Deformation mode maps for tensile deformation of neutron-irradiated structural alloys, K. Farrell, T.S. Byun and N. Hashimoto

335 (2004) 471

Volume conservation during irradiation growth of Zr-2.5Nb, R.A. Holt and A.R. Causey

335 (2004) 529

**Nickel, Nickel Alloys and Compounds**Dissimilar welding of nickel-based Alloy  
690 to SUS 304L with Ti addition,  
H.T. Lee, S.L. Jeng, C.H. Yen and  
T.Y. Kuo

335 (2004) 59

The effect of grain boundary misorientation on the intergranular  $\text{M}_{23}\text{C}_6$  carbide precipitation in thermally treated Alloy 690, Y.S. Lim, J.S. Kim, H.P. Kim and H.D. Cho

335 (2004) 108

Solid state synthesis of Mg–Ni ferrite and characterization by XRD and XPS, V.K. Mittal, S. Bera, R. Nithya, M.P. Srinivasan, S. Velmurugan and S.V. Narasimhan

335 (2004) 302

**Nuclear Properties**

Synthesis and characterization of low-temperature precursors of thorium–uranium (IV) phosphate–diphosphate solid solutions, N. Clavier, N. Dauchoux, P. Martinez, V. Brandel, R. Podor and P. Le Coustumer

335 (2004) 397

**Optical Microscopy**

Preliminary results of post-irradiation examinations on LiSoR-2 test section, Y. Dai, H. Glasbrenner, V. Boutellier, R. Bruetsch, X. Jia and F. Groeschel

335 (2004) 232

**Oxides**

Oxygen measurements in stagnant lead–bismuth eutectic using electrochemical sensors, J. Konys, H. Muscher, Z. Voß and O. Wedemeyer

335 (2004) 249

Characterisation of an oxygen sensor based on  $\text{In}/\text{In}_2\text{O}_3$  reference electrode, S. Colominas, J. Abellà and L. Victori

335 (2004) 260

Microstructural investigation of the stability under irradiation of oxide dispersion strengthened ferritic steels, I. Monnet, P. Dubuisson, Y. Serruys, M.O. Ruault, O. Kaitasov and B. Jouffrey

335 (2004) 311

Crystal structure and grain size of Zr oxide characterized by synchrotron radiation microdiffraction, J.-Y. Park, H.-G. Kim, Y.H. Jeong and Y.-H. Jung

335 (2004) 433

**Phase Equilibria** (*includes Constitution, Phase Stability, Phase Instability*)

The re-crystallization issue in lead–bismuth technology, P. Agostini, E. Baicchi, A. Zucchini and G. Benamati

335 (2004) 275

Microstructural investigation of the stability under irradiation of oxide dispersion strengthened ferritic steels, I. Monnet, P. Dubuisson, Y. Serruys, M.O. Ruault, O. Kaitasov and B. Jouffrey

Thermodynamic modelling of LiF–LnF<sub>3</sub> and LiF–AnF<sub>3</sub> phase diagrams, J.P.M. van der Meer, R.J.M. Konings, M.H.G. Jacobs and H.A.J. Oonk

335 (2004) 311

335 (2004) 345

**Phase Transformation** (*includes Evaporation, Sublimation*)

Glass-ceramic nuclear waste forms obtained from SiO<sub>2</sub>–Al<sub>2</sub>O<sub>3</sub>–CaO–ZrO<sub>2</sub>–TiO<sub>2</sub> glasses containing lanthanides (Ce, Nd, Eu, Gd, Yb) and actinides, P. Loiseau, D. Caurant, N. Baffier, L. Mazerolles and C. Fillet

335 (2004) 14

Oxidation kinetics of Zircaloy-4 and Zr–1Nb–1Sn–0.1Fe at temperatures of 700–1200°C, J.H. Baek, K.B. Park and Y.H. Jeong

335 (2004) 443

**Plasma-Materials Interaction**

Thermal properties of plasma-sprayed tungsten deposits, H.-K. Kang

335 (2004) 1

Laser ablation tests performed on TORE-SUPRA graphite samples, F. Le Guern, C. Hubert, S. Mousset, E. Gauthier, C. Blanc, P. Wodling and J.M. Weulersse

335 (2004) 410

**Plutonium, Plutonium Alloys and Compounds**

Polonium formation in Pb–55.5Bi under proton irradiation, H. Glasbrenner, J. Eikenberg, F. Gröschel and L. Zanini

335 (2004) 270

**Powder Processes and Products**

Thermal properties of plasma-sprayed tungsten deposits, H.-K. Kang

335 (2004) 1

Characterization and densification studies on ThO<sub>2</sub>–UO<sub>2</sub> pellets derived from ThO<sub>2</sub> and U<sub>3</sub>O<sub>8</sub> powders, T.R.G. Kutty, P.V. Hegde, K.B. Khan, T. Jarvis, A.K. Sengupta, S. Majumdar and H.S. Kamath

335 (2004) 462

**Precipitates and Precipitation**

Microstructural evolution of Y<sub>2</sub>O<sub>3</sub> and MgAl<sub>2</sub>O<sub>4</sub> ODS EUROFER steels during their elaboration by mechanical milling and hot isostatic pressing, C. Cayron, E. Rath, I. Chu and S. Launois

335 (2004) 83

The effect of grain boundary misorientation on the intergranular M<sub>23</sub>C<sub>6</sub> carbide precipitation in thermally treated Alloy 690, Y.S. Lim, J.S. Kim, H.P. Kim and H.D. Cho

335 (2004) 108

Synthesis and characterization of low-temperature precursors of thorium–uranium (IV) phosphate–diphosphate solid solutions, N. Clavier, N. Dauchez, P. Martinez, V. Brandel, R. Podor and P. Le Coustumer

335 (2004) 397

**Pressure Vessel Materials**

Simulation of radiation damage in Fe alloys: an object kinetic Monte Carlo approach, C. Domain, C.S. Becquart and L. Malerba

335 (2004) 121

**Processing**

The effect of grain boundary misorientation on the intergranular M<sub>23</sub>C<sub>6</sub> carbide precipitation in thermally treated Alloy 690, Y.S. Lim, J.S. Kim, H.P. Kim and H.D. Cho

335 (2004) 108

Studies on weldability of Ti–5Ta–1.8Nb alloy, T. Karthikeyan, A. Dasgupta, S. Saroja, M. Vijayalakshmi and V.S. Raghunathan

335 (2004) 299

Solid state synthesis of Mg–Ni ferrite and characterization by XRD and XPS, V.K. Mittal, S. Bera, R. Nithya, M.P. Srinivasan, S. Velmurugan and S.V. Narasimhan

335 (2004) 302

**Proton Irradiation**

The MEGAPIE 1 MW target in support to ADS development: status of R&D and design, F. Groeschel, C. Fazio, J. Knebel, Ch. Perret, A. Janett, G. Laffont, L. Cachon, Th. Kirchner, A. Cadiou, A. Guertin and P. Agostini

335 (2004) 156

Preliminary results of post-irradiation examinations on LiSoR-2 test section, Y. Dai, H. Glasbrenner, V. Boutellier, R. Bruetsch, X. Jia and F. Groeschel

335 (2004) 232

Polonium formation in Pb–55.5Bi under proton irradiation, H. Glasbrenner, J. Eikenberg, F. Gröschel and L. Zanini

335 (2004) 270

The influence of proton irradiation on the corrosion of HT-9 during immersion in lead bismuth eutectic, R.S. Lillard, M. Paciotti and V. Tcharnotskaia

335 (2004) 487

**Radiation Effects: Atomic Defects**

Simulation of radiation damage in Fe alloys: an object kinetic Monte Carlo approach, C. Domain, C.S. Becquart and L. Malerba

335 (2004) 121

**Radiation Effects: Extended Defects, Microstructures**

Microstructural investigation of the stability under irradiation of oxide dispersion strengthened ferritic steels, I. Monnet, P. Dubuisson, Y. Serruys, M.O. Ruault, O. Kaitasov and B. Jouffrey

Synergistic effects of implanted helium and hydrogen and the effect of irradiation temperature on the microstructure of SiC/SiC composites, T. Taguchi, N. Igawa, S. Miwa, E. Wakai, S. Jitsukawa, L.L. Snead and A. Hasegawa

**Radiation Effects: Mechanical Properties**

The neutron irradiation effect on mechanical properties of HIP joint material, H. Yamada, H. Kawamura, K. Tsuchiya, G. Kalinin, Y. Nagao, S. Sato and K. Mohri

Post irradiation plastic properties of F82H derived from the instrumented tensile tests, T. Taguchi, S. Jitsukawa, M. Sato, S. Matsukawa, E. Wakai and K. Shiba

Volume conservation during irradiation growth of Zr-2.5Nb, R.A. Holt and A.R. Causey

**Radiation Effects: Physical Properties**

The influence of proton irradiation on the corrosion of HT-9 during immersion in lead bismuth eutectic, R.S. Lillard, M. Paciotti and V. Tcharnotskaia

Volume conservation during irradiation growth of Zr-2.5Nb, R.A. Holt and A.R. Causey

**Recrystallization, Recovery and Grain Growth**

Glass-ceramic nuclear waste forms obtained from  $\text{SiO}_2\text{-Al}_2\text{O}_3\text{-CaO-ZrO}_2\text{-TiO}_2$  glasses containing lanthanides (Ce, Nd, Eu, Gd, Yb) and actini, P. Loiseau, D. Caurant, N. Baffier, L. Mazerolle and C. Fillet

The re-crystallization issue in lead-bismuth technology, P. Agostini, E. Baicchi, A. Zucchini and G. Benamati

**Safety of Nuclear Reactors and Components**

The experimental accelerator driven system (XADS) designs in the EURATOM 5th framework programme, L. Cinotti, B. Giraud and H.A. Abderrahim

The MEGAPIE 1 MW target in support to ADS development: status of R&D and design, F. Groeschel, C. Fazio, J. Knebel, Ch. Perret, A. Janett, G.

335 (2004) 311

335 (2004) 508

335 (2004) 33

335 (2004) 457

335 (2004) 529

335 (2004) 487

335 (2004) 529

335 (2004) 14

335 (2004) 275

335 (2004) 148

Laffont, L. Cachon, Th. Kirchner, A. Cadiou, A. Guertin and P. Agostini

335 (2004) 156

**Silicon and Silicon Compounds**

Tritium management in the first-wall materials of A-DC and TAURUO blankets, G.A. Esteban, A. Perujo and F. Legarda

335 (2004) 353

**Steels, Austenitic**

Behavior of steels in flowing liquid PbBi eutectic alloy at 420–600 °C after 4000–7200 h, G. Müller, A. Heinzel, J. Kony, G. Schumacher, A. Weissenburger, F. Zimmermann, V. Engelko, A. Rusanov and V. Markov

335 (2004) 163

Corrosion behaviour of stainless steels in flowing LBE at low and high oxygen concentration, A. Aiello, M. Azzati, G. Benamati, A. Gessi, B. Long and G. Scaddozzo

Corrosion behaviour of steels in lead-bismuth at 823 K, F. Gnecco, E. Ricci, C. Bottino and A. Passerone

335 (2004) 185

Mass transfer of iron impurities in LBE loops under non-isothermal flow conditions, T. Malkow, H. Steiner, H. Muscher and J. Kony

335 (2004) 199

The impact of the composition of structural steels on their corrosion stability in liquid Pb-Bi at 500 and 400 °C with different oxygen concentrations, G. Ilinčev, D. Kárník, M. Paulovič and A. Doubková

335 (2004) 210

Assessment of the constitutive properties from small ball punch test: experiment and modeling, E.N. Campitelli, P. Spätić, R. Bonadé, W. Hoffelner and M. Victoria

335 (2004) 366

Deformation mode maps for tensile deformation of neutron-irradiated structural alloys, K. Farrell, T.S. Byun and N. Hashimoto

335 (2004) 471

**Steels, Austenitic, Low C/N**

The neutron irradiation effect on mechanical properties of HIP joint material, H. Yamada, H. Kawamura, K. Tsuchiya, G. Kalinin, Y. Nagao, S. Sato and K. Mohri

335 (2004) 33

Dissimilar welding of nickel-based Alloy 690 to SUS 304L with Ti addition, H.T. Lee, S.L. Jeng, C.H. Yen and T.Y. Kuo

335 (2004) 59

Behavior of steels in flowing liquid PbBi eutectic alloy at 420–600 °C after 4000–7200 h, G. Müller, A. Heinzel, J. Kony, G. Schumacher, A. Weissenburger, F. Zimmermann, V. Engelko, A. Rusanov and V. Markov

335 (2004) 163

- Corrosion behaviour of stainless steels in flowing LBE at low and high oxygen concentration, A. Aiello, M. Azzati, G. Benamati, A. Gessi, B. Long and G. Scaddozzo  
335 (2004) 169
- Corrosion behaviour of aluminized martensitic and austenitic steels in liquid Pb–Bi, Ph. Deloffre, F. Balbaud-Célérier and A. Terlain  
335 (2004) 180
- Influence of the Pb–Bi hydrodynamics on the corrosion of T91 martensitic steel and pure iron, F. Balbaud-Célérier and A. Terlain  
335 (2004) 204
- The impact of the composition of structural steels on their corrosion stability in liquid Pb–Bi at 500 and 400 °C with different oxygen concentrations, G. Ilinčev, D. Kárník, M. Paulovič and A. Doubková  
335 (2004) 210
- Mechanical properties of martensitic steels after exposure to flowing liquid metals, A. Aiello, M. Agostini, G. Benamati, B. Long and G. Scaddozzo  
335 (2004) 217
- Influence of Zn as a spallation product on the behaviour of martensitic steel T91 and austenitic steel 316L in liquid Pb–Bi, Ph. Deloffre and A. Terlain  
335 (2004) 244
- Impact properties of 304L stainless steel GTAW joints evaluated by high strain rate of compression tests, W.-S. Lee, C.-F. Lin, C.-Y. Liu and F.-T. Tzeng  
335 (2004) 335
- Steels, Austenitic, Stabilized**
- The impact of the composition of structural steels on their corrosion stability in liquid Pb–Bi at 500 and 400 °C with different oxygen concentrations, G. Ilinčev, D. Kárník, M. Paulovič and A. Doubková  
335 (2004) 210
- Steels, Ferritic, Pressure Vessel**
- Simulation of radiation damage in Fe alloys: an object kinetic Monte Carlo approach, C. Domain, C.S. Becquart and L. Malerba  
335 (2004) 121
- The impact of the composition of structural steels on their corrosion stability in liquid Pb–Bi at 500 and 400 °C with different oxygen concentrations, G. Ilinčev, D. Kárník, M. Paulovič and A. Doubková  
335 (2004) 210
- Deformation mode maps for tensile deformation of neutron-irradiated structural alloys, K. Farrell, T.S. Byun and N. Hashimoto  
335 (2004) 471
- Steels, Ferritic/Martensitic**
- The MEGAPIE 1 MW target in support to ADS development: status of R&D and design, F. Groeschel, C. Fazio, J. Knebel, Ch. Perret, A. Janett, G. Laffont, L. Cachon, Th. Kirchner, A. Cadiou, A. Guertin and P. Agostini  
335 (2004) 156
- Corrosion behaviour of steels in lead–bismuth at 823 K, F. Gnecco, E. Ricci, C. Bottino and A. Passerone  
335 (2004) 185
- Mass transfer of iron impurities in LBE loops under non-isothermal flow conditions, T. Malkow, H. Steiner, H. Muscher and J. Konys  
335 (2004) 199
- The impact of the composition of structural steels on their corrosion stability in liquid Pb–Bi at 500 and 400 °C with different oxygen concentrations, G. Ilinčev, D. Kárník, M. Paulovič and A. Doubková  
335 (2004) 210
- Mechanical behaviour of the T91 martensitic steel under monotonic and cyclic loadings in liquid metals, J.-B. Vogt, A. Verleene, I. Serre and A. Legris  
335 (2004) 222
- Effect of contact conditions on embrittlement of T91 steel by lead–bismuth, T. Auger, G. Lorang, S. Guérin, J.-L. Pastor and D. Gorse  
335 (2004) 227
- Bending tests on T91 steel in Pb–Bi eutectic, Bi and Pb–Li eutectic, H. Glasbrenner and F. Gröschel  
335 (2004) 239
- Microstructural investigation of the stability under irradiation of oxide dispersion strengthened ferritic steels, I. Monnet, P. Dubuisson, Y. Serruys, M.O. Ruault, O. Kaitasov and B. Jouffrey  
335 (2004) 311
- The influence of proton irradiation on the corrosion of HT-9 during immersion in lead bismuth eutectic, R.S. Lillard, M. Paciotti and V. Tcharnotskaia  
335 (2004) 487
- Steels, Ferritic/Martensitic, Low Activation**
- Embrittlement of RAFM EUROFER97 by implanted hydrogen, C. Liu, H. Klein and P. Jung  
335 (2004) 77
- Microstructural evolution of  $\text{Y}_2\text{O}_3$  and  $\text{MgAl}_2\text{O}_4$  ODS EUROFER steels during their elaboration by mechanical milling and hot isostatic pressing, C. Cayron, E. Rath, I. Chu and S. Launois  
335 (2004) 83
- Tritium management in the first-wall materials of A-DC and TAURO blankets, G.A. Esteban, A. Perujo and F. Legarda  
335 (2004) 353
- Post irradiation plastic properties of F82H derived from the instrumented tensile tests, T. Taguchi, S. Jitsukawa, M. Sato, S. Matsukawa, E. Wakai and K. Shiba  
335 (2004) 457
- Structural Materials**
- Microstructural evolution of  $\text{Y}_2\text{O}_3$  and  $\text{MgAl}_2\text{O}_4$  ODS EUROFER steels

- during their elaboration by mechanical milling and hot isostatic pressing, C. Cayron, E. Rath, I. Chu and S. Launois 335 (2004) 83
- Corrosion of stainless steels in lead–bismuth eutectic up to 600 °C, L. Soler, F.J. Martín, F. Hernández and D. Gómez-Briceño 335 (2004) 174
- Oxide layer stability in lead–bismuth at high temperature, F.J. Martín, L. Soler, F. Hernández and D. Gómez-Briceño 335 (2004) 194
- Assessment of the constitutive properties from small ball punch test: experiment and modeling, E.N. Campitelli, P. Spätić, R. Bonadé, W. Hoffelner and M. Victoria 335 (2004) 366
- Surface Effects**
- Release behavior of bred tritium from  $\text{LiAlO}_2$ , M. Nishikawa, T. Kinjyo, T. Ishizaka, S. Beloglazov, T. Takeishi, M. Enoda and T. Tanifuji 335 (2004) 70
- Temperature dependence of liquid Sn sputtering by low-energy  $\text{He}^+$  and  $\text{D}^+$  bombardment, M.D. Coventry, J.P. Allain and D.N. Ruzic 335 (2004) 115
- Corrosion behaviour of steels in lead–bismuth at 823 K, F. Gnecco, E. Ricci, C. Bottino and A. Passerone 335 (2004) 185
- Effect of contact conditions on embrittlement of T91 steel by lead–bismuth, T. Auger, G. Lorang, S. Guérin, J.-L. Pastol and D. Gorse 335 (2004) 227
- Desorption of water adsorbed on iron oxide by laser irradiation, K. Chiba, S. Tanaka and T. Yoneoka 335 (2004) 493
- Corrosion behavior of Al-surface-treated steels in liquid Pb–Bi in a pot, Y. Kurata, M. Futakawa and S. Saito 335 (2004) 501
- Tungsten erosion in the baffle and outboard regions of the ITER-like ASDEX Upgrade divertor, H. Maier and ASDEX Upgrade Team 335 (2004) 515
- Theory and Modelling**
- Thermal properties of plasma-sprayed tungsten deposits, H.-K. Kang 335 (2004) 1
- Mass transfer of iron impurities in LBE loops under non-isothermal flow conditions, T. Malkow, H. Steiner, H. Muscher and J. Konys 335 (2004) 199
- A creep rupture criterion for Zircaloy-4 fuel cladding under internal pressure, R. Limon and S. Lehmann 335 (2004) 322
- Analysis on Lift-Off experiment in Hallden reactor by FEMAXI-6 code, M. Suzuki, K. Kusagaya, H. Saitou and T. Fuketa 335 (2004) 417
- Thermal Reactor Materials**
- Long-lived activation products in TRIGA Mark II research reactor concrete shield: calculation and experiment, T. Žagar, M. Božič and M. Ravnik 335 (2004) 379
- Micro-texture of extruded  $\text{Zr}-2.5\text{Nb}$  tubes, R.A. Holt and P. Zhao 335 (2004) 520
- Volume conservation during irradiation growth of  $\text{Zr}-2.5\text{Nb}$ , R.A. Holt and A.R. Causey 335 (2004) 529
- Thermodynamic Properties**
- Turbulent heavy liquid metal heat transfer along a heated rod in an annular cavity, C.-H. Lefhalm, N.-I. Tak, H. Piecha and R. Stieglitz 335 (2004) 280
- Turbulent heat mixing of a heavy liquid metal flow within the MEGAPIE window geometry: The heated jet experiments, M. Daubner, A. Batta, F. Fellmoser, C.-H. Lefhalm, K.-J. Mack and R. Stieglitz 335 (2004) 345
- Thermodynamic modelling of  $\text{LiF}-\text{LnF}_3$  and  $\text{LiF}-\text{AnF}_3$  phase diagrams, J.P.M. van der Meer, R.J.M. Konings, M.H.G. Jacobs and H.A.J. Onk 335 (2004) 1
- Thermophysical Properties**
- Thermal properties of plasma-sprayed tungsten deposits, H.-K. Kang 335 (2004) 5
- Thorium, Thorium Alloys and Compounds**
- Kinetic and thermodynamic studies of the dissolution of thoria-urania solid solutions, G. Heisbourg, S. Hubert, N. Dacheux and J. Purans 335 (2004) 397
- Synthesis and characterization of low-temperature precursors of thorium–uranium (IV) phosphate–diphosphate solid solutions, N. Clavier, N. Dacheux, P. Martinez, V. Brandel, R. Podor and P. Le Coustumer 335 (2004) 462
- Characterization and densification studies on  $\text{ThO}_2-\text{UO}_2$  pellets derived from  $\text{ThO}_2$  and  $\text{U}_3\text{O}_8$  powders, T.R.G. Kutty, P.V. Hegde, K.B. Khan, T. Jarvis, A.K. Sengupta, S. Majumdar and H.S. Kamath 335 (2004) 299
- Titanium, Titanium Alloys and Compounds**
- Studies on weldability of  $\text{Ti}-5\text{Ta}-1.8\text{Nb}$  alloy, T. Karthikeyan, A. Dasgupta, S. Saroja, M. Vijayalakshmi and V.S. Raghunathan 335 (2004) 70
- Tritium and Tritides**
- Release behavior of bred tritium from  $\text{LiAlO}_2$ , M. Nishikawa, T. Kinjyo, T. Ishizaka, S. Beloglazov, T. Takeishi, M. Enoda and T. Tanifuji 335 (2004) 379

Tritium management in the first-wall materials of A-DC and TAURO blankets, G.A. Esteban, A. Perujo and F. Legarda	335 (2004) 353	<b>Waste: Behavior in Storage</b>
Laser ablation tests performed on TORE-SUPRA graphite samples, F. Le Guern, C. Hubert, S. Mousset, E. Gauthier, C. Blanc, P. Wodling and J.M. Weulersse	335 (2004) 410	Kinetic and thermodynamic studies of the dissolution of thoria-urania solid solutions, G. Heisbourg, S. Hubert, N. Dacheux and J. Purans
<b>Tungsten, Tungsten Alloys and Compounds</b>	335 (2004) 515	Glass-ceramic nuclear waste forms obtained from $\text{SiO}_2\text{--Al}_2\text{O}_3\text{--CaO--ZrO}_2\text{--TiO}_2$ glasses containing lanthanides (Ce, Nd, Eu, Gd, Yb) and actini, P. Loiseau, D. Caurant, N. Baffier, L. Mazerolles and C. Fillet
Tungsten erosion in the baffle and outboard regions of the ITER-like ASDEX Upgrade divertor, H. Maier and ASDEX Upgrade Team	335 (2004) 5	Alkali ion exchange in $\gamma$ -irradiated glasses, M.I. Ojovan and W.E. Lee
<b>Uranium, Uranium Alloys</b>	335 (2004) 39	<b>X-ray Techniques and Applications</b>
Kinetic and thermodynamic studies of the dissolution of thoria-urania solid solutions, G. Heisbourg, S. Hubert, N. Dacheux and J. Purans	335 (2004) 302	Solid state synthesis of Mg–Ni ferrite and characterization by XRD and XPS, V.K. Mittal, S. Bera, R. Nithya, M.P. Srinivasan, S. Velmurugan and S.V. Narasimhan
Post-irradiation examination of uranium–7wt% molybdenum atomized dispersion fuel, A. Leenaers, S. Van den Berghe, E. Koonen, C. Jarousse, F. Huet, M. Trotabas, M. Boyard, S. Guillot, L. Sannen and M. Verwerft	335 (2004) 393	Crystal structure and grain size of Zr oxide characterized by synchrotron radiation microdiffraction, J.-Y. Park, H.-G. Kim, Y.H. Jeong and Y.-H. Jung
<b>Uranium Oxides and Compounds</b>	335 (2004) 397	<b>Zirconium, Zirconium Alloys</b>
Synthesis and characterization of low-temperature precursors of thorium–uranium (IV) phosphate–diphosphate solid solutions, N. Clavier, N. Dacheux, P. Martinez, V. Brandel, R. Podor and P. Le Coustumer	335 (2004) 462	Textural and microstructural developments during fabrication of Zr–2.5Nb pressure tubes, M.K. Kumar, C. Vanitha, I. Samajdar, G.K. Dey, R. Tewari, D. Srivastava and S. Banerjee
Characterization and densification studies on $\text{ThO}_2\text{--UO}_2$ pellets derived from $\text{ThO}_2$ and $\text{U}_3\text{O}_8$ powders, T.R.G. Kutty, P.V. Hegde, K.B. Khan, T. Jarvis, A.K. Sengupta, S. Majumdar and H.S. Kamath	335 (2004) 103	Electrochemical oxygen sensors for online monitoring in lead–bismuth alloys: status of development, J.-L. Courouau
<b>Vanadium, Vanadium Alloys and Compounds</b>	335 (2004) 399	A creep rupture criterion for Zircaloy-4 fuel cladding under internal pressure, R. Limon and S. Lehmann
Manufacturing pressurized creep tubes from highly purified V–4Cr–4Ti alloys, NIFS-Heat2, K. Fukumoto, H. Matsui, M. Narui, T. Nagasaka and T. Muroga	335 (2004) 387	Characterization of hydrogen concentration in Zircaloy claddings using a low-frequency acoustic microscope with a PVDF/LFB transducer, C.-H. Yang and M.-F. Huang
<b>Waste Materials</b>	335 (2004) 399	Delayed hydride cracking in Zr–2.5Nb tube with the cooling rate and the notch tip shape, Y.S. Kim, S.J. Kim and K.S. Im
Long-lived activation products in TRIGA Mark II research reactor concrete shield: calculation and experiment, T. Žagar, M. Božič and M. Ravnik	335 (2004) 433	Crystal structure and grain size of Zr oxide characterized by synchrotron radiation microdiffraction, J.-Y. Park, H.-G. Kim, Y.H. Jeong and Y.-H. Jung
Synthesis and characterization of low-temperature precursors of thorium–uranium (IV) phosphate–diphosphate solid solutions, N. Clavier, N. Dacheux, P. Martinez, V. Brandel, R. Podor and P. Le Coustumer	335 (2004) 443	Oxidation kinetics of Zircaloy-4 and Zr–1Nb–1Sn–0.1Fe at temperatures of 700–1200°C, J.H. Baek, K.B. Park and Y.H. Jeong
Alkali ion exchange in $\gamma$ -irradiated glasses, M.I. Ojovan and W.E. Lee	335 (2004) 471	Deformation mode maps for tensile deformation of neutron-irradiated structural alloys, K. Farrell, T.S. Byun and N. Hashimoto

Micro-texture of extruded Zr-2.5Nb tubes, R.A. Holt and P. Zhao

335 (2004) 520

notch tip shape, Y.S. Kim, S.J. Kim and K.S. Im

Volume conservation during irradiation growth of Zr-2.5Nb, R.A. Holt and A.R. Causey

335 (2004) 529

Crystal structure and grain size of Zr oxide characterized by synchrotron radiation microdiffraction, J.-Y. Park, H.-G. Kim, Y.H. Jeong and Y.-H. Jung

#### Zirconium Hydrides and Compounds

Delayed hydride cracking in Zr-2.5Nb tube with the cooling rate and the

335 (2004) 387

335 (2004) 433