



Subject index

Absorber Materials

Doppler effect measurement on resonance materials for rock-like oxide fuels in an intermediate neutron spectrum, M. Andoh, Y. Nakano, S. Okajima and K. Kawasaki 319 (2003) 126

Core burnup calculation and accidents analyses of a pressurized water reactor partially loaded with rock-like oxide fuel, H. Akie, Y. Sugo and R. Okawa 319 (2003) 166

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

Inert matrix fuel strategies in the nuclear fuel cycle: the status of the initiative efforts at the 8th Inert Matrix Fuel Workshop, C. Degueldre and T. Yamashita 319 (2003) 1

Design and fabrication of specific ceramic-metallic fuels and targets, A. Fernández, R.J.M. Konings and J. Somers 319 (2003) 44

Zirconium nitride as inert matrix for fast systems, M. Streit, F. Ingold, M. Pouchon, L.J. Gauckler and J.-P. Ottaviani 319 (2003) 51

Modelling the behaviour of oxide fuels containing minor actinides with uranium, thorium and zirconia matrices in an accelerator-driven system, V. Sobolev, S. Lemehov, N. Messaoudi, P. Van Uffelen and H. Ait Abderrahim 319 (2003) 131

Core burnup calculation and accidents analyses of a pressurized water reactor partially loaded with rock-like oxide fuel, H. Akie, Y. Sugo and R. Okawa 319 (2003) 166

Adsorption

Post irradiation examination of irradiated americium oxide and uranium dioxide in magnesium aluminate spinel, F.C. Klaassen, K. Bakker, R.P.C. Schram, R. Klein Meulekamp, R. Conrad, J. Somers and R.J.M. Konings 319 (2003) 108

Ceramics (*not listed elsewhere*)

Manufacturing of zirconia microspheres doped with erbia, yttria and ceria by internal gelation process as a part of a cermet fuel, K. Idemitsu, T. Arima,

Y. Inagaki, S. Torikai and M.A. Pouchon 319 (2003) 31

Cermet sphere-pac concept for inert matrix fuel, M.A. Pouchon, M. Nakamura, Ch. Hellwig, F. Ingold and C. Degueldre 319 (2003) 37

Design and fabrication of specific ceramic-metallic fuels and targets, A. Fernández, R.J.M. Konings and J. Somers 319 (2003) 44

Irradiation effects on yttria-stabilized zirconia irradiated with neon ions, T. Hojo, J. Aihara, K. Hojou, S. Furuno, H. Yamamoto, N. Nitani, T. Yamashita, K. Minato and T. Sakuma 319 (2003) 81

In-pile irradiation of rock-like oxide fuels, N. Nitani, K. Kuramoto, T. Yamashita, Y. Nihei and Y. Kimura 319 (2003) 102

Post irradiation examination of irradiated americium oxide and uranium dioxide in magnesium aluminate spinel, F.C. Klaassen, K. Bakker, R.P.C. Schram, R. Klein Meulekamp, R. Conrad, J. Somers and R.J.M. Konings 319 (2003) 108

The fabrication and irradiation of plutonium-containing inert matrix fuels for the 'Once Though Then Out' experiment, R.P.C. Schram, R.R. van der Laan, F.C. Klaassen, K. Bakker, T. Yamashita and F. Ingold 319 (2003) 118

Cladding Materials

Reaction of yttria-stabilized zirconia with zirconium, silicon and Zircaloy-4 at high temperature: a compatibility study for cermet fuels, T. Arima, T. Tateyama, K. Idemitsu and Y. Inagaki 319 (2003) 24

Compatibility and Corrosion (*includes Stress Corrosion Cracking*)

Reaction of yttria-stabilized zirconia with zirconium, silicon and Zircaloy-4 at high temperature: a compatibility study for cermet fuels, T. Arima, T. Tateyama, K. Idemitsu and Y. Inagaki 319 (2003) 24

Composite Materials

Design and fabrication of specific ceramic-metallic fuels and targets, A. Fernández, R.J.M. Konings and J. Somers 319 (2003) 44

Zirconate pyrochlore as a transmutation target: thermal behaviour and radiation resistance against fission fragment impact, S. Lutique, D. Staicu, R.J.M. Konings, V.V. Rondinella, J. Somers and T. Wiss 319 (2003) 59

In-pile irradiation of rock-like oxide fuels, N. Nitani, K. Kuramoto, T. Yamashita, Y. Nihei and Y. Kimura 319 (2003) 102

The fabrication and irradiation of plutonium-containing inert matrix fuels for the 'Once Though Then Out' experiment, R.P.C. Schram, R.R. van der Laan, F.C. Klaassen, K. Bakker, T. Yamashita and F. Ingold 319 (2003) 118

Defects and Defect Structures (*excludes by Irradiation*)

Thermal annealing behaviour and defect evolution of helium in fully stabilised zirconia, P.M.G. Damen, A. van Veen, F. Labohm, H. Schut and M.A. van Huis 319 (2003) 65

Diffusion

Thermal annealing behaviour and defect evolution of helium in fully stabilised zirconia, P.M.G. Damen, A. van Veen, F. Labohm, H. Schut and M.A. van Huis 319 (2003) 65

Electron Irradiation

Radiation-induced defect clusters in fully stabilized zirconia irradiated with ions and/or electrons, K. Yasuda, C. Kinoshita, S. Matsumura and A.I. Ryzanov 319 (2003) 74

Electron Microscopy

Irradiation effects on yttria-stabilized zirconia irradiated with neon ions, T. Hojo, J. Aihara, K. Hojou, S. Furuno, H. Yamamoto, N. Nitani, T. Yamashita, K. Minato and T. Sakuma 319 (2003) 81

Experimental Techniques

Doppler effect measurement on resonance materials for rock-like oxide fuels in an intermediate neutron spectrum, M. Andoh, Y. Nakano, S. Okajima and K. Kawasaki 319 (2003) 126

Fabrication

Manufacturing of zirconia microspheres doped with erbia, yttria and ceria by internal gelation process as a part of a cermet fuel, K. Idemitsu, T. Arima, Y.

Inagaki, S. Torikai and M.A. Pouchon 319 (2003) 31

Design and fabrication of specific ceramic-metallic fuels and targets, A. Fernández, R.J.M. Konings and J. Somers 319 (2003) 44

Zirconium nitride as inert matrix for fast systems, M. Streit, F. Ingold, M. Pouchon, L.J. Gauckler and J.-P. Ottaviani 319 (2003) 51

The fabrication and irradiation of plutonium-containing inert matrix fuels for the 'Once Though Then Out' experiment, R.P.C. Schram, R.R. van der Laan, F.C. Klaassen, K. Bakker, T. Yamashita and F. Ingold 319 (2003) 118

Fast Reactor Materials

Zirconium nitride as inert matrix for fast systems, M. Streit, F. Ingold, M. Pouchon, L.J. Gauckler and J.-P. Ottaviani 319 (2003) 51

Fission Products

In-pile irradiation of rock-like oxide fuels, N. Nitani, K. Kuramoto, T. Yamashita, Y. Nihei and Y. Kimura 319 (2003) 102

Fracture and Fracture Toughness

Study on the mechanical properties and thermal conductivity of silicon carbide-, zirconia- and magnesia aluminate-based simulated inert matrix nuclear fuel materials after cyclic thermal shock, Y.W. Lee, S.C. Lee, H.S. Kim, C.Y. Joung and C. Degueudre 319 (2003) 15

Fuels and Fuel Elements

Reaction of yttria-stabilized zirconia with zirconium, silicon and Zircaloy-4 at high temperature: a compatibility study for cermet fuels, T. Arima, T. Tateyama, K. Idemitsu and Y. Inagaki 319 (2003) 24

Manufacturing of zirconia microspheres doped with erbia, yttria and ceria by internal gelation process as a part of a cermet fuel, K. Idemitsu, T. Arima, Y. Inagaki, S. Torikai and M.A. Pouchon 319 (2003) 31

Cermet sphere-pac concept for inert matrix fuel, M.A. Pouchon, M. Nakamura, Ch. Hellwig, F. Ingold and C. Degueudre 319 (2003) 37

Design and fabrication of specific ceramic-metallic fuels and targets, A. Fernández, R.J.M. Konings and J. Somers 319 (2003) 44

Radiation-induced defect clusters in fully stabilized zirconia irradiated with ions

- and/or electrons, K. Yasuda, C. Kinoshita, S. Matsumura and A.I. Ryzanov 319 (2003) 74
- Inert matrix fuel performance during the first two irradiation cycles in a test reactor: comparison with modelling results, Ch. Hellwig and U. Kasemeyer 319 (2003) 87
- Morphology change of rock-like oxide fuels in reactivity-initiated-accident simulation tests, T. Nakamura, H. Sasajima, T. Yamashita and H. Uetsuka 319 (2003) 95
- In-pile irradiation of rock-like oxide fuels, N. Nitani, K. Kuramoto, T. Yamashita, Y. Nihei and Y. Kimura 319 (2003) 102
- Doppler effect measurement on resonance materials for rock-like oxide fuels in an intermediate neutron spectrum, M. Andoh, Y. Nakano, S. Okajima and K. Kawasaki 319 (2003) 126
- Modelling the behaviour of oxide fuels containing minor actinides with uranium, thorium and zirconia matrices in an accelerator-driven system, V. Sobolev, S. Lemehov, N. Messaoudi, P. Van Uffelen and H. Ait Abderrahim 319 (2003) 131
- Comparison of various partial light water reactor core loadings with inert matrix and mixed-oxide fuel, U. Kasemeyer, Ch. Hellwig, J. Lebenhaft and R. Chawla 319 (2003) 142
- The feasibility of employing inert matrix ceramic fuels in a Russian light water reactor, Yu.D. Baranaev, V.V. Popov, V.N. Sharapov and V.M. Troyanov 319 (2003) 154
- Reactor physics and safety aspects of various design options of a Russian light water reactor with rock-like fuels, A.V. Bondarenko, O.V. Komissarov, Ya.K. Kozmenkov, Yu.V. Matveev, Yu.I. Orekhov, V.A. Pivovarov and V.N. Sharapov 319 (2003) 159
- Advanced fuels for plutonium management in pressurized water reactors, A. Vasile, Ph. Dufour, H. Golfier, J.P. Grouiller, J.L. Guillet, Ch. Poinot, G. Youinou and A. Zaetta 319 (2003) 173
- Durability test on irradiated rock-like oxide fuels, K. Kuramoto, N. Nitani and T. Yamashita 319 (2003) 180
- Helium**
- Thermal annealing behaviour and defect evolution of helium in fully stabilised zirconia, P.M.G. Damen, A. van Veen, F. Labohm, H. Schut and M.A. van Huis 319 (2003) 65
- Thermal annealing behaviour and defect evolution of helium in fully stabilised zirconia, P.M.G. Damen, A. van Veen, F. Labohm, H. Schut and M.A. van Huis 319 (2003) 59
- Irradiation effects on yttria-stabilized zirconia irradiated with neon ions, T. Hojo, J. Aihara, K. Hojou, S. Furuno, H. Yamamoto, N. Nitani, T. Yamashita, K. Minato and T. Sakuma 319 (2003) 81
- Irradiation** (*not listed elsewhere, includes Irradiation History or Schedule*)
- Inert matrix fuel strategies in the nuclear fuel cycle: the status of the initiative efforts at the 8th Inert Matrix Fuel Workshop, C. Degueudre and T. Yamashita 319 (2003) 1
- Inert matrix fuel performance during the first two irradiation cycles in a test reactor: comparison with modelling results, Ch. Hellwig and U. Kasemeyer 319 (2003) 87
- Post irradiation examination of irradiated americium oxide and uranium dioxide in magnesium aluminate spinel, F.C. Klaassen, K. Bakker, R.P.C. Schram, R. Klein Meulekamp, R. Conrad, J. Somers and R.J.M. Konings 319 (2003) 108
- The fabrication and irradiation of plutonium-containing inert matrix fuels for the 'Once Through Then Out' experiment, R.P.C. Schram, R.R. van der Laan, F.C. Klaassen, K. Bakker, T. Yamashita and F. Ingold 319 (2003) 118
- Comparison of various partial light water reactor core loadings with inert matrix and mixed-oxide fuel, U. Kasemeyer, Ch. Hellwig, J. Lebenhaft and R. Chawla 319 (2003) 142
- Mathematical and Computational Methods**
- Comparison of various partial light water reactor core loadings with inert matrix and mixed-oxide fuel, U. Kasemeyer, Ch. Hellwig, J. Lebenhaft and R. Chawla 319 (2003) 142
- Monitoring Methods**
- Comparison of various partial light water reactor core loadings with inert matrix and mixed-oxide fuel, U. Kasemeyer, Ch. Hellwig, J. Lebenhaft and R. Chawla 319 (2003) 142
- Oxides**
- Thermal conductivity of zirconia based inert matrix fuel: use and abuse of the
- Ion Irradiation**
- Zirconate pyrochlore as a transmutation target: thermal behaviour and radia-

- formal models for testing new experimental data, C. Degueldre, T. Arima and Y.W. Lee 319 (2003) 6
- Radiation-induced defect clusters in fully stabilized zirconia irradiated with ions and/or electrons, K. Yasuda, C. Kinoshita, S. Matsumura and A.I. Ryzanov 319 (2003) 74
- Inert matrix fuel performance during the first two irradiation cycles in a test reactor: comparison with modelling results, Ch. Hellwig and U. Kasemeyer 319 (2003) 87
- Modelling the behaviour of oxide fuels containing minor actinides with urania, thorium and zirconia matrices in an accelerator-driven system, V. Sobolev, S. Lemehov, N. Messaoudi, P. Van Uffelen and H. Ait Abderrahim 319 (2003) 131
- Plutonium, Plutonium Alloys and Compounds**
- Inert matrix fuel strategies in the nuclear fuel cycle: the status of the initiative efforts at the 8th Inert Matrix Fuel Workshop, C. Degueldre and T. Yamashita 319 (2003) 1
- Thermal conductivity of zirconia based inert matrix fuel: use and abuse of the formal models for testing new experimental data, C. Degueldre, T. Arima and Y.W. Lee 319 (2003) 6
- Cermet sphere-pac concept for inert matrix fuel, M.A. Pouchon, M. Nakamura, Ch. Hellwig, F. Ingold and C. Degueldre 319 (2003) 37
- Design and fabrication of specific ceramic-metallic fuels and targets, A. Fernández, R.J.M. Konings and J. Somers 319 (2003) 44
- Zirconium nitride as inert matrix for fast systems, M. Streit, F. Ingold, M. Pouchon, L.J. Gauckler and J.-P. Ottaviani 319 (2003) 51
- Inert matrix fuel performance during the first two irradiation cycles in a test reactor: comparison with modelling results, Ch. Hellwig and U. Kasemeyer 319 (2003) 87
- The fabrication and irradiation of plutonium-containing inert matrix fuels for the 'Once Through Then Out' experiment, R.P.C. Schram, R.R. van der Laan, F.C. Klaassen, K. Bakker, T. Yamashita and F. Ingold 319 (2003) 118
- Comparison of various partial light water reactor core loadings with inert matrix and mixed-oxide fuel, U. Kasemeyer, Ch. Hellwig, J. Lebenhaft and R. Chawla 319 (2003) 142
- Advanced fuels for plutonium management in pressurized water reactors, A. Vasile, Ph. Dufour, H. Golfier, J.P. Grouiller, J.L. Guillet, Ch. Poinot, G. Youinou and A. Zaetta 319 (2003) 173
- Radiation Effects: Extended Defects, Microstructures**
- Zirconate pyrochlore as a transmutation target: thermal behaviour and radiation resistance against fission fragment impact, S. Lutique, D. Staicu, R.J.M. Konings, V.V. Rondinella, J. Somers and T. Wiss 319 (2003) 59
- Radiation-induced defect clusters in fully stabilized zirconia irradiated with ions and/or electrons, K. Yasuda, C. Kinoshita, S. Matsumura and A.I. Ryzanov 319 (2003) 74
- In-pile irradiation of rock-like oxide fuels, N. Nitani, K. Kuramoto, T. Yamashita, Y. Nihei and Y. Kimura 319 (2003) 102
- Radiation Effects: Physical Properties**
- Irradiation effects on yttria-stabilized zirconia irradiated with neon ions, T. Hojo, J. Aihara, K. Hojou, S. Furuno, H. Yamamoto, N. Nitani, T. Yamashita, K. Minato and T. Sakuma 319 (2003) 81
- Rare Earths**
- Core burnup calculation and accidents analyses of a pressurized water reactor partially loaded with rock-like oxide fuel, H. Akie, Y. Sugo and R. Okawa 319 (2003) 166
- Recrystallization, Recovery and Grain Growth**
- Inert matrix fuel performance during the first two irradiation cycles in a test reactor: comparison with modelling results, Ch. Hellwig and U. Kasemeyer 319 (2003) 87
- Safety of Nuclear Reactors and Components**
- Inert matrix fuel strategies in the nuclear fuel cycle: the status of the initiative efforts at the 8th Inert Matrix Fuel Workshop, C. Degueldre and T. Yamashita 319 (2003) 1
- Comparison of various partial light water reactor core loadings with inert matrix and mixed-oxide fuel, U. Kasemeyer, Ch. Hellwig, J. Lebenhaft and R. Chawla 319 (2003) 142
- The feasibility of employing inert matrix ceramic fuels in a Russian light water reactor, Yu.D. Baranaev, V.V. Popov, V.N. Sharapov and V.M. Troyanov 319 (2003) 154
- Reactor physics and safety aspects of various design options of a Russian light water reactor with rock-like fuels, A.V. Bondarenko, O.V. Komissarov, Ya.K. Kozmenkov, Yu.V. Matveev, Yu.I. Orekhov, V.A. Pivovarov and V.N. Sharapov 319 (2003) 159

- Core burnup calculation and accidents analyses of a pressurized water reactor partially loaded with rock-like oxide fuel, H. Akie, Y. Sugo and R. Okawa 319 (2003) 166
- Swelling: Ceramics, Other Materials**
- Cermet sphere-pac concept for inert matrix fuel, M.A. Pouchon, M. Nakamura, Ch. Hellwig, F. Ingold and C. Degueldre 319 (2003) 37
- Post irradiation examination of irradiated americium oxide and uranium dioxide in magnesium aluminate spinel, F.C. Klaassen, K. Bakker, R.P.C. Schram, R. Klein Meulekamp, R. Conrad, J. Somers and R.J.M. Konings 319 (2003) 108
- Theory and Modelling**
- Inert matrix fuel performance during the first two irradiation cycles in a test reactor: comparison with modelling results, Ch. Hellwig and U. Kasemeyer 319 (2003) 87
- Comparison of various partial light water reactor core loadings with inert matrix and mixed-oxide fuel, U. Kasemeyer, Ch. Hellwig, J. Lebenhaft and R. Chawla 319 (2003) 142
- The feasibility of employing inert matrix ceramic fuels in a Russian light water reactor, Yu.D. Baranaev, V.V. Popov, V.N. Sharapov and V.M. Troyanov 319 (2003) 154
- Reactor physics and safety aspects of various design options of a Russian light water reactor with rock-like fuels, A.V. Bondarenko, O.V. Komissarov, Ya.K. Kozmenkov, Yu.V. Matveev, Yu.I. Orekhov, V.A. Pivovarov and V.N. Sharapov 319 (2003) 159
- Thermal Reactor Materials**
- Inert matrix fuel strategies in the nuclear fuel cycle: the status of the initiative efforts at the 8th Inert Matrix Fuel Workshop, C. Degueldre and T. Yamashita 319 (2003) 1
- Thermal Shock**
- Study on the mechanical properties and thermal conductivity of silicon carbide-, zirconia- and magnesia aluminate-based simulated inert matrix nuclear fuel materials after cyclic thermal shock, Y.W. Lee, S.C. Lee, H.S. Kim, C.Y. Joung and C. Degueldre 319 (2003) 15
- Thermophysical Properties**
- Thermal conductivity of zirconia based inert matrix fuel: use and abuse of the formal models for testing new experimental data, C. Degueldre, T. Arima and Y.W. Lee 319 (2003) 6
- Zirconate pyrochlore as a transmutation target: thermal behaviour and radiation resistance against fission fragment impact, S. Lutique, D. Staicu, R.J.M. Konings, V.V. Rondinella, J. Somers and T. Wiss 319 (2003) 59
- Thorium, Thorium Alloys and Compounds**
- Doppler effect measurement on resonance materials for rock-like oxide fuels in an intermediate neutron spectrum, M. Andoh, Y. Nakano, S. Okajima and K. Kawasaki 319 (2003) 126
- The feasibility of employing inert matrix ceramic fuels in a Russian light water reactor, Yu.D. Baranaev, V.V. Popov, V.N. Sharapov and V.M. Troyanov 319 (2003) 154
- Reactor physics and safety aspects of various design options of a Russian light water reactor with rock-like fuels, A.V. Bondarenko, O.V. Komissarov, Ya.K. Kozmenkov, Yu.V. Matveev, Yu.I. Orekhov, V.A. Pivovarov and V.N. Sharapov 319 (2003) 159
- Tungsten, Tungsten Alloys and Compounds**
- Doppler effect measurement on resonance materials for rock-like oxide fuels in an intermediate neutron spectrum, M. Andoh, Y. Nakano, S. Okajima and K. Kawasaki 319 (2003) 126
- Uranium Oxides and Compounds**
- Morphology change of rock-like oxide fuels in reactivity-initiated-accident simulation tests, T. Nakamura, H. Sasajima, T. Yamashita and H. Uetsuka 319 (2003) 95
- Post irradiation examination of irradiated americium oxide and uranium dioxide in magnesium aluminate spinel, F.C. Klaassen, K. Bakker, R.P.C. Schram, R. Klein Meulekamp, R. Conrad, J. Somers and R.J.M. Konings 319 (2003) 108
- Waste Materials**
- Inert matrix fuel strategies in the nuclear fuel cycle: the status of the initiative efforts at the 8th Inert Matrix Fuel Workshop, C. Degueldre and T. Yamashita 319 (2003) 1
- Radiation-induced defect clusters in fully stabilized zirconia irradiated with ions and/or electrons, K. Yasuda, C. Kinoshita, S. Matsumura and A.I. Ryzanov 319 (2003) 74
- Zirconium Hydrides and Compounds**
- Manufacturing of zirconia microspheres doped with erbia, yttria and ceria by internal gelation process as a part of a

- cermet fuel, K. Idemitsu, T. Arima, Y. Inagaki, S. Torikai and M.A. Pouchon 319 (2003) 31
- Zirconium, Zirconium Alloys**
- Thermal conductivity of zirconia based inert matrix fuel: use and abuse of the formal models for testing new experimental data, C. Degueldre, T. Arima and Y.W. Lee 319 (2003) 6
- Reaction of yttria-stabilized zirconia with zirconium, silicon and Zircaloy-4 at high temperature: a compatibility study for cermet fuels, T. Arima, T. Tateyama, K. Idemitsu and Y. Inagaki 319 (2003) 24
- Cermet sphere-pac concept for inert matrix fuel, M.A. Pouchon, M. Nakamura, Ch. Hellwig, F. Ingold and C. Degueldre 319 (2003) 37
- Zirconium nitride as inert matrix for fast systems, M. Streit, F. Ingold, M. Pouchon, L.J. Gauckler and J.-P. Ottaviani 319 (2003) 51
- Thermal annealing behaviour and defect evolution of helium in fully stabilised zirconia, P.M.G. Damen, A. van Veen, F. Labohm, H. Schut and M.A. van Huis 319 (2003) 65
- Irradiation effects on yttria-stabilized zirconia irradiated with neon ions, T. Hojo, J. Aihara, K. Hojou, S. Furuno, H. Yamamoto, N. Nitani, T. Yamashita, K. Minato and T. Sakuma 319 (2003) 81
- Comparison of various partial light water reactor core loadings with inert matrix and mixed-oxide fuel, U. Kasemeyer, Ch. Hellwig, J. Lebenhaft and R. Chawla 319 (2003) 142