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OC 1-1A3: Kohno, Y., Kohyama, A., Hamilton, M.L., Narui, M., Mechanical Property Changes of Low Activation Ferritic/Martensitic Steels after Neutron Irradiation

OC 1-1A4: Shamardin, V.K., Bulanova, T.M., Povstyanko, A.V., Fedoseyev, Y.D., Goncharenko, Y.D., Ostrovsky, Z.E., Mechanical Properties and Microstructure of Advanced Ferritic - Martensitic Steel Used under High - Dose Neutron Irradiation

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OC 1-1B2: Hassanein, A., Konkashbaev, I., Zhitlukhin, A., Nikandrov, L., Kozhevnikov, V., Litunovsky, V., Performance and Lifetime Assessment of Wall Materials and Nearby Components during Plasma Instabilities

OC 1-1B3: O'hira, S., Steiner, A., Nakamura, H., Causey, R., Okuno, K., Willms, S., Tritium Retention Study of Tungsten using Various Hydrogen Isotope Irradiation Sources

OC 1-1B4: Hino, T., Takahashi, I., Hashiba, M., Hirohata, Y., Gas Gettering Properties of Lithium

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OC 1-2A1: Kazakov, V.A., Chakin, V.P., Goncharenko, Y.D., Ostrovsky, Z.E., Mechanical Properties and Structure of V-Cr-Ti System Alloys after Irradiation at ~ 330°C up to 12-18 dpa in BOR-60 Reactor

OC 1-2A2: Fukumoto, K., Kimura, A., Matsui, H., Swelling Behavior of V-Fe Binary Alloys and V-Fe-Ti Ternary Alloys.

OC 1-2A3: Gelles, D.S., Rice, P.M., Zinkle, S.J., Chung, H.M., Microstructural Examination of

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OI-4: **Barabash, V., Akiba, M., Bonal, J. P., Federici, G., Jacob, W., Matera, R., Pacher, H.D., Rödiger, M., Tamier, P., Vieider, G., Wu, C. H.,** Carbon Fiber Composites Application in ITER Plasma Facing Components

OC 1-2B1: **Bolt, H., Scholz, T., Boedo, J., Finken, K.H., Hassanein, A.,** High Heat Flux Erosion of Carbon Fibre Composite Materials in the TEXTOR Tokamak

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OC 1-2B4: **Kupriyanov, I.B., Gorokhov, V.A., Melder, R.R., Mikhailov, V.S., Mazul, I.V., Nikolaev, G.N.,** Investigation of ITER Candidate Beryllium Grades Irradiated at High Temperature

Poster Session 1

P1-A: Plasma Facing Materials, Low Z (1), High Z, PSI
P1-B: Ferritic Steels (1), Vanadium Alloys(1)
P1-C: Austenitic Steels, Other Materials, Low Act. Criteria
P1-D: Tech. and Knowledge Sharing, Dielectrics, Insulators

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OC 2-A2: **Scholz, R.,** Light Ion Irradiation Creep of SiC-Fibers in Torsion

OC 2-A3: **Snead, L.L., Osborne, M.C.,** Irradiation Stability of SiC/SiC Composites Processed with Low-Oxygen Nicalon™ Fibers

OC 2-A4: **Ukai, S., Nishida, T., Yoshitake, T., Okuda, Hagi, S.,** Development of Oxide Dispersion Strengthened Ferritic Steels

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OI 7: **Smid, I., Kny, E., Akiba, M., Nakamura, K., Leichtfried, G., Plurhl, L.,** Recent Development of Tungsten Alloys and Coatings for Plasma Interactive Components

OC 2-C1: **Philipps, V., Pospieszczyk, A., Weschenfelder, F., Rapp, J., Könen, L., Unterberg, B., van Oost, G., Sergienko, G., Tanabe, T., Ohya, K., Wada, M., Ohgo, Rubel, M.,** Experiments with Tungsten Limiters in TEXTOR-94

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OC 2-C3: **Kurishita, H., Kitsunai, Y., Kuwabara, T., Kayano, H.,** Toward Overcoming of Irradiation Embrittlement in Refractory High Z Metals - Application of Radiation Induced Ductilization (RIDU) -

OC 2-C4: **Fabritsiev, S.A., Pokrovsky, A.S., Zinkle, S.J., Edwards, D.J.,** The Effect of Neutron Dose, Irradiation Temperature and Neutron Spectrum on Physical and Mechanical Properties of Copper Alloys

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P2-A: Design and Materials, Small Speci. Tech., Int. Collab.

P2-B: Low Z (2), High Heat Flux Materials

P2-C: Ferritic Steels (2), Vanadium Alloys (2), SiC/SiC

P2-D: Materials Database, ICF, Optic, Magnets and SCM, Material Processing etc, Welding

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OC 3-1A2: **Rusanov, A.E., Krayev, N.D., Benamati, G., Vitkovsky, I.V., Grasbrenner, H., Zaviatsky, L.P., Kirillov, I.R.,** The Development and Investigations of Oxide and Nitride Coatings in Li, Pb and Pb-17Li

OC 3-1A3: **Terai, T., Suzuki, A., Tanaka, S., Sagara, A., Motojima, O.,** Compatibility of Structural Materials with Li₂BeF₄ Molten Salt Breeder

OC 3-1A4: **Dalle Donne, M., Longhurst, G.R., Kawamura, H., Scaffidi-Argentina, F.,** Beryllium R&D for Blanket Applications

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Common Technology and Knowledge Sharing

OI 9: Shoji, T., Suzuki, S.
Current Status and Future of IASCC Research

- OC 3-1B1: Asano, K., Nishimura, S., Saito, Y., Sakamoto, H., Yamada, Y., Kato, T., Hashimoto, T.,** Weldability of Neutron Irradiated Austenitic Stainless Steel
OC 3-1B2: Louthan Jr., M.R., Kanne Jr., W.R., Tosten, M.H., Rankin, D.T., A Model for the Effect of Helium on the Weldability of Metals and Alloys
OC 3-1B3: Dellis, C., Le Marois, G., Van Osch, E.V., Structural Materials by Powder HIP for Fusion Reactors
OC 3-1B4: Hasegawa, T., Tomita, Y., Kohyama, A., Influence of Tantalum and Nitrogen Contents, Normalizing Condition and TMCP Process on Mechanical Properties of Low Activation 9Cr-2W-0.2V-Ta Steels for Fusion Application

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The Influence of Neutron Spectrum and Irradiation History on Microstructural Evolution in Fusion Structural Materials

- OC 3-1C1: Abromeit, C., Martin, G.,** Dynamical Phase Changes Induced by Point Defect Fluxes
OC 3-1C2: Yoshiie, T., Kiritani, M., Destination of Point Defects and Microstructure Evolution in Collision Cascade Damage
OC 3-1C3: Woo, C.H., Garner, F.A., Contribution to Irradiation Creep Arising from Gas-Driven Bubble Growth
OC 3-1C4: Kamiyama, H., Ohno, K., Maruyama, Y., Li, Z-Q., Kawazoe, Y., Matsui, H., Fundamental Mechanisms of Microstructural Evolution in Irradiated Materials

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OI 11: Rowcliffe, A.
Austenitic Stainless Steels and High Strength Copper Alloys for Fusion Components

- OC 3-2A1: Jitsukawa, S., Hishinuma, A.,** Post Irradiation Mechanical Properties of Austenitic Alloys at Temperatures below 400 °C
OC 3-2A2: Garner, F.A., Toloczko, M.B., Grossbeck, M.L., The Independence of Irradiation Creep in Austenitic Alloys of Displacement Rate and Helium to dpa Ratio
OC 3-2A3: Stamm, H., Bonansinga, M.R., Dos Santos Marques, F., Hähner, P., Kolbe, H., Thermomechanical Characteristics of Low Activation Chromium and Chromium Alloys
OC 3-2A4: Takahashi, H., Shindo, Y., Kinoshita, H., Ishiyama, S., Fukaya, K., Kushihashi, M., Mechanical Properties and Damage Behaviors of Nonmagnetic High Manganese Austenitic Steel

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OI 12a: Hodgson, E.R.
General Radiation Problems for Insulating Materials in Future Fusion Devices

OC 3-2B1: Tanabe, T., Yoshida, T., Sakai, M., Omori, A., Dynamic Effect in Energetic Particle Induced Luminescence of SiO₂ and Al₂O₃

OI 12b: Motojima, O.
Review of SC Magnet Technologies Developed in LHD Project

- OC 3-2B2: Yu, J., Zhao, X., Wang, Y., Chen, Y., Zhang, Z.,** Influence of Proton and γ Irradiation on the T_c of Bi-system Superconductors
OC 3-2B3: Shikov, A.K., Nikulin, A.D., Silaev, A.G., Volobiena, A.E., Patsyrny, V.I., Vedernikov, G.P., Salunin, N.I., Development of the Superconductors for ITER Magnet System in Russia

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Damage Production and Accumulation -3- : Mechanical Properties

OI 13: Jung, P.
Hydrogen Inventory and Embrittlement in Low Activation Steels

- OC 3-2C1: Lucas, G.E., Odette, G.R.,** An Integrated Approach to Developing a Data Base and Physically-Based Methods for Assessing the Fracture Limits of Fusion Reactor Structures
OC 3-2C2: Kimura, A., Kayano, H., Misawa, T., Matsui, H., Kohyama, A., Dependence of Post-Irradiation Impact Properties on the Irradiation Temperature in Reduced Activation 9Cr-2W Martensitic Steels
OC 3-2C3: Hasegawa, A., Saito, M., Abe, K., Miwa, Y., Hamada, S., Influence of Helium on Mechanical and Microstructural Properties of SiC Fiber and SiC/SiC Composites for Fusion Applications
OC 3-2C4: Ryazanov, A.I., Grain Boundary Fracture of Irradiated Materials

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- P3-A: ITER, Irradiation Facility and Technology:**
P3-B: Damage Prod., Cascade Form., Mech. Properties:
P3-C: Temp. Cycl., Microstructural Evolution, H, He Effects:
P3-D: Breeding Blanket Mater., Breeding Materials:

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- PI-6: Kondo, T.**
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OI 14b: Shannon, T.E., Rennich, M.J., Jameson, R.A., Katsuta, H., Maekawa, H., Martone, M., Moslang, A.
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OC 4-A2: Wong, C.P.C., Whyte, D.G., Bastasz, R.J., Brooks, J., West, W.P., Wampler, W.R., Divertor materials evaluation system (DiMES)
OC 4-A3: Kataoka, H., Yasu, T., Takatsudo, H., Miyagawa, S., Development of Material Irradiation Rig with Precision Temperature Control in Experimental Fast Reactor JOYO

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OI 15b: Ioki, K., Barabash, V., Bruno, L., Cardella, A., Daenner, W., Elio, F., Hechler, M., Janeschik, G., Johnson, G., Kalinin, G., Kodama, T., Koizumi, K., Loesser, D., Lodato, A., Lousteau, D., Matera, R., Miki, N., Maisonnier, D., Mattas, R., Mohri, K., Nelson, B., Onozuka, M., Parker, R., Raffray, R., Sannazzaro, G., Strebkov, Y., Takatsu, H., Tivey, R., Utin, Y., Yamada, M.

Design and Material Selection for ITER First Wall/Blanket, Divertor and Vacuum Vessel

OC 4-B1: Vella, G., Aiello, G., Fütterer, M., Giancarli, L., Oliveri, E., Water Cooled Pb-17Li Blanket ITER Test Module : Impact of the Structural Material Grade on the Neutronic Responses

OC 4-B2: Odegard Jr. B.C., Cadden, C.H., Watson, R.D., Slattery, K., A Review of the Joining Technologies for Plasma Facing Components in the ITER Fusion Reactor

OC 4-B3: Nakayama, T., Abe, M., Tadokoro, T., Otsuka, M., Evaluation of Magnetic Fields due to Ferromagnetic Vacuum Vessel and Their Influence on Plasma Discharge in a Tokamak Device

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KI 52: Ehrlich, K.

Nomenclature:

PI: Plenary Invited

OI: Oral Invited (parallel session)

OC: Oral Contributed (parallel session)

KI: Keynote lecture Invited (discussion session)

P: Poster

P1-A: Plasma Facing Materials, Low Z (1), High Z, PSI**Plasma Facing Materials and High Heat Flux Materials**

- P1-A003** Andrushin, V.V., Dyadin, V., Zouev, Y., Markelov, N., Podgornova, I.; Some Results of Determination of Concentration and Distribution of Residual Tritium in First Wall Materials
- P1-A004** Yanagihara, H., Hino, T., Hirohata, Y.; Energy Dependence of Helium Pumping Due to Nickel
- P1-A005** Ezato, K., Kunugi, T.; Molecular Dynamics Simulation of Atomic Beam Bombardment on Solid Surface
- P1-A006** Okada, H., Nomura, M., Aida, M., Fujii, Y., Okamoto, M., Sharafat, S.; Surface Coating Effects of SiC/SiC Composite as PFM
- P1-A007** Guldashvili, A.I.; Degradation and Prognosis of mechanical Properties Boron Containing Materials Irradiated with Various Particles
- P1-A008** Kudo, H., Kosaku, Y., Ando, Y., Hiraga, M., Sekine, T.; Migration of Deuterium in Metallic Materials Investigated by Means of the d(d,p)t Reaction
- P1-A009** Ueda, Y., Shiota, K., Ohtsuka, Y., Isobe, M., Nishikawa, M.; Erosion and Surface Morphology of Graphite Materials under High Flux Beam Irradiation
- P1-A011** Longhurst, G.R., Anderl, R.A., Haasz, A.A.; Tritium Saturation in Plasma-Facing Materials Surfaces
- P1-A012** Merola, M., Rödiger, M., Duwe, R., Vieider, G.; Behavior of Plasma Facing Materials under VDE
- P1-A013** Würz, H., Bazylev, B., Burdakov, A.; Explosive Like Erosion of Solids under ITER Runaway Electron Conditions
- P1-A016** Karin, B.A., Fedetov, V., Sevryukov, O., Plyushev, A., Mazul, I., Gervash, A., Giniatulin, R.; Be-Cu Joints Based on the Amorphous Alloy Brazing for Divertor and First Wall Application
- P1-A017** Voitsenya, V.S.; On the Mechanism and Source of a Contamination of Diagnostic Windows in Fusion Devices
- P1-A018** Sedano, L.A., Alberici, S., Perujo, A., Camposilvan, J., Douglas, K.; Derivation of H Transport Parameters in CFC by modeling Transient Release in Isovolometric Desorption Experiments
- P1-A019** Ohmori, A., Tanabe, T.; Influence of Target Chemical Activity on Balmer Lines Emission from Backscattered Hydrogen
- P1-A020** Merola, M., Vieider, G.; On the Use of Flat Tile Armor in High Heat Flux Component
- P1-A021** Glazunov, G.P., Volkov, E.D., Pavlichenko, O.S., Voitsenya, V.S., Nasarov, N.I., Kotenko, V.G., Tanaka, S., Motojima, O.; Damages of Hot-Pressed Boron Carbide During Solid Target Boronization in Uran-3m Torsatron
- P1-A022** Sekine, S., Hirano, Y., Shimada, T., Yagi, Y., Sakaita, K.; Dependence of Deuterium Line-Shape on the Insertion Depth of BN and C Limiters in the TPE-1RM20 Reversed Field Pinch Plasma
- P1-A023** Behrisch, R., Lripunov, V., Santoro, R.T., Yesil, J.M.; Modification of Plasma Facing Materials by the Neutron Flux in a DT Fusion Reactor

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- P1-A027** Tsofidis, G.; The Behavior of Beryllium under the Influence of External Body Forces during Plasma Disruptions
- P1-A029** Qian, J.P., Song, J.R., Zhang, F., Zhai, G.T., Liu, L., Roth, J., Yang, L.; Development of Multi-element Doped Graphite and Its Modification of Chemical Erosion
- P1-A030** Ueda, S., Ohsaka, T., Kuwajima, S.; Molecular Dynamics Evaluation of Self-Sputtering of Beryllium
- P1-A031** Vagin, S.P., Chakrov, P.V., Utkelbayev, B.D., Jacobson, L.A., Field, R.D.; Microstructural Study of Hydrogen-Implanted Beryllium
- P1-A032** Jimbou, R., Nakamura, K., Bandourko, V., Okumura, Y., Akiba, M.; Temperature Dependence of Sputtering Yield of Carbon Fiber-reinforced Carbon Composites with Low Energy and High Flux Deuterium Ions
- P1-A033** Kenmotsu, T., Kawamura, T., Ono, T., Yamamura, Y.; Dynamical Simulation of Sputtering of a B₄C Materials
- P1-A034** Ohtsuka, Y., Kitamura, Y., Ueda, Y., Isobe, M., Nishikawa, M.; The Property of Boron Coatings Deposited on Graphite Materials and Its Ion Irradiation Effect
- P1-A035** Balden, M., Roth, J., Wu, C.H.; Thermal Stability and Chemical Erosion of the Silicon doped CFC Material NS31

- P1-A036** Snead, L.L., Evans, N.D., Hodgson, E.R.; The Effect of Neutron Irradiation on Beryllium at Temperature under 400°C
- P1-A037** Matsuyama, S., Miyauchi, K., Yamaguchi, K., Tanaka, S., Yamawaki, M.; Optical and Mass Spectrometric Study on chemical Erosion of Graphite under the Plasma Exposure
- P1-A038** Isobe, M., Ohtsuka, Y., Ueda, Y., Nishikawa, M.; Steady State Wall Pumping Performance of Pebble Drop Divertor
- P1-A039** Anderl, R.A., McCarthy, K.A., Oates, M.A., Petti, D.A., Pawelko, R.J., Smolik, G.R.; Steam-Chemical Reactivity for Irradiated Be
- P1-A041** Alberici, S., Coad, P., Hinssen, H-K., Hofmann, M., Moormann, R., Wienhold, P., Wu, C.H.; Oxidation Induced Release of Deuterium From Carbon Based Plasma Facing Materials

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- P1-A043** Yoshida, N., Wakimoto, H.; Microstructural Evolution in Molybdenum by Fusion Relevant Low Energy Helium Ion Irradiation
- P1-A044** Eto, M., Baba, S., Ishihara, M., Ugachi, H.; High Energy Neutron and Charged Particle Irradiation Effects on Thermo-Mechanical Properties of Carbon-Carbon Composites for Divertor Application
- P1-A045** Watanabe, K., Hishinuma, A., Hiraoka, Y., Fujii, T.; Neutron Irradiation Embrittlement of Polycrystalline and Single Crystalline Molybdenum
- P1-A046** Wada, M., Tanabe, T., Philipps, V., Unterberg, B., Pospieszczyk, A., Schweer, B., Weschenfelder, F., Ueda, Y., Ohya, K., Ohgo, T., Noda, N.; High-Heat-Flux-Exposure-Experiments of a Tungsten-Test-Limiter at TEXTOR-94
- P1-A047** Kitsunai, Y., Kurishita, H., Kayano, H., Hiraoka, Y., Igarashi, T., Takida, T.; Microstructure and Impact Properties of Ultra-Fine Grained Tungsten Alloys Dispersed with TiC
- P1-A048** Iwakiri, H., Watanabe, H., Yoshida, N.; Degradation of Mechanical Properties of Molybdenum by Low Energy Helium Ion Irradiation
- P1-A049** Yasunaga, K., Watanabe, H., Yoshida, N., Muroga, T., Noda, N.; Microstructure of Tantalum Irradiated with Heavy Ions
- P1-A050** Chakin, V.P., Morito, F., Kazakov, V.A., Goncharenko, Y.D., Ostrovsky, Z.E.; Radiation Embrittlement of Mo-Re Welds Under Low Temperature Irradiation in the SM Reactor
- P1-A051** Rusanov, A.E., Machankov, A.N., Mazul, I.V., Gruztkov, N.A.; Tungsten as Armor Material for Plasma Facing Component Application
- P1-A052** Haasz, A.A., Davis, J.W.; Deuterium Retention in Tungsten for Fusion Use
- P1-A053** Atsumi, H., Tanabe, T.; Hydrogen Retention in High-Z Materials with Various Contents of Carbon
- P1-A054** Abe, K., Ueda, K., Hasegawa, A., Satou, M.; Neutron Irradiation Embrittlement of Molybdenum and Tungsten Alloys and Improvement by Heat Treatment
- P1-A055** Nagata, S., Takahiro, K., Yamaguchi, S.; Carbon Effect on Retention and Release of Deuterium Implanted in Mo
- P1-A056** Eckstein, W., Roth, J., Ertl, K., Krieger, K.; Erosion of W and Deposition of C due to Simultaneous Bombardment with D and C
- P1-A057** Bandourko, V., Jimbou, R., Nakamura, K., Okumura, K., Akiba, M.; Tungsten Self-sputtering Yield with Different Incidence Angles and Target Temperatures
- P1-A058** Krieger, K., Maier, H., Köterl, S., Neu, R., Asmussen, K., Balden, M., Rohde, V., Roth, J., Thoma, A. and the ASDEX-Upgrade-Team; Performance of Tungsten Coatings as Plasma Facing Components in ASDEX Upgrade
- P1-A059** Tsvetkov, I.V., Tanabe, T.; The Effective Secondary Electron Yield in the Space-Charge Limited Condition
- P3-D176*** Singh, B.N., Evans, J.H., Toft, P.; Effects of Neutron Irradiation on Microstructure and Deformation Behaviour of Mono- and Polycrystalline Molybdenum and Its Alloys
- *This paper has been moved to this session from the third day.**
- Plasma-Surface Interactions**
- P1-A060** Hirooka, Y.; Effects of Plasma Impurities on the Erosion Behavior and Lifetime of In-Vessel Components in a Steady-State Magnetic Fusion Device
- P1-A061** Nakamura, H., Hayashi, T., O'hira, S., Okuno, K.; Implantation Driven Permeation Behavior of Deuteron through Stainless Steel Type 316L
- P1-A062** Ohya, K., Kawata, J., Tanabe, T., Wada, M., Ueda, Y., Philipps, V., Unterberg, B., Pospieszczyk, A., Schweer, B., Weschenfelder, F., Noda, N.; Ion Reflection and Sputtering at Tungsten Surface Exposed to Edge Plasmas in TEXTOR
- P1-A063** Hirai, T., Tokunaga, K., Fujiwara, T., Yoshida, N., Itoh, S., the TRIAM Group; Modification of Plasma Facing Surface by Long Duration Discharge in TRIAM-1M
- P1-A064** Takizawa, M., Kiuchi, K., Okamoto, M., Fujii, Y.; Estimation of Incident Flux Rate in PDP Experiments by Calculating Plasma Composition

- P1-A065** Sakamoto, K., Higuchi, T., Hashizume, K., Sugisaki, M.; Influence of Coexisting Hydrogen Isotopes on Diffusion of Tritium in Niobium
- P1-A066** Ohkubo, H., Takenaka, M., Takase, A., Tsukuda, N., Kuramoto, E.; ERD Study of Deuterium Atoms Implanted in Edge-HOPG
- P1-A067** Takagi, I., Toyoda, K., Katayama, M., Fujita, H., Higashi, K.; Experiment on Atomic Hydrogen Reflection by Use of a Permeation Probe
- P1-A068** Horikawa, T., Tsuchiya, B., Morita, K.; Retention and Re-emission of Deuterium Implanted into Tungsten Monocarbides
- P1-A069** Tadokoro, T., O'hira, S., Okuno, K.; Tritium Retention Behavior in CX-2002U and Method to Reduce Tritium Inventory
- P1-A070** Yamaguchi, K., Okada, M., Ono, F., Yamawaki, M.; Study on Retention of Hydrogen Isotopes in Mo by means of Tritium Beam Experiments
- P1-A071** Macaulay-Newcombe, R.G., Thompson, D.A.; Ion Beam Analysis of Deuterium-Implanted Al₂O₃ and Tungsten
- P1-A072** Macaulay-Newcombe, Thompson, D.A.; Thermal Desorption Analysis of Beryllium Tile Pieces from JET
- P1-A073** Arkhipov, N.I., Bakhtin, V., Kurkin, S., Safronov, V., Toporkov, D., Vasenin, S., Wuerz, H., Zhitlukhin, A.; ITER Disruption Condition at MK-200UG Facility
- P1-A074** Martynenko, Y.V., Guseva, M.I., Vasiliev, V.I., Gureev, V.M., Danelyan, L.S., Neumoin, V.E., Petrov, V.B., Khripnov, B.I., Sokolov, Y.A., Stativkina, O.V., Dtolyanova, V.G., Strunnikov, V.M.; Experimental Modeling of Plasma-Graphite Surface Interaction in ITER
- P1-A077** Kizu, K., Tanabe, T.; Counter-Diffusion and Permeation of Deuterium and Hydrogen through Metals

P1-B: Ferritic Steels (1), Vanadium Alloys(1)

Ferritic Steels (1)

- P1-B078** von Mollendorff, U., Ikeda, Y., Maekawa, F., Tsige-Tamirat, H., Wilson, P.; Improved Activation Tests of Fusion Structural Materials with a Deuteron-Beryllium Neutron Source
- P1-B079** Rieth, M., Dafferner, B., Röhrig, H.-D.; Embrittlement Behaviour of Different International Low Activation Alloys after Neutron irradiation
- P1-B080** Tamura, M., Shinozuka, K., Masamura, K., Ishizawa, Y., Sugimoto, S.; Solubility Product and Precipitation of TaC in Fe-8Cr-2W Steel
- P1-B081** Toloczko, M.B., Garner, F.A., Eiholzer, C.R.; Irradiation Creep of Various Ferritic Alloys Irradiated at ~400°C in the PFR and FFTF Reactors
- P1-B083** Gondi, P., Montanari, R., Tata, M.E.; Distribution of C-Cr Associates and Mechanical Stability of Cr Martensitic Steels
- P1-B084** Konys, J., Glasbrenner, H., Stein-Fechner, K., Wedemeyer, O.; Comparison of Microstructures and Formation of Intermetallic Phases on F82H-mod. and MANET II
- P1-B085** Schaublin, R., Spätig, P., Victoria, M.; Microstructure Assessment of the Low Activation Ferritic-Martensitic Steel F82H
- P1-B086** Ishii, T., Fukaya, K., Nishiyama, Y., Suzuki, M., Eto, M.; Low Cycle Fatigue Properties of 8Cr-2WV Ta Ferritic Steel at Elevated Temperatures
- P1-B087** Nishiyama, Y., Fukaya, K., Suzuki, M., Eto, M.; Irradiation Embrittlement of 2 1/4Cr-1Mo Steel at 400°C and Electrochemical Evaluation
- P1-B088** Nagasaka, T., Shibayama, T., Kayano, H., Hasegawa, A., Satou, M., Abe, K.; Effect of Purity on Microstructure Evolution in Ferritic Steels after Helium Implantation
- P1-B090** Kimura, A., Morimura, T., Matsui, H., Hasegawa, A., Abe, K., Kayano, H.; Effects of Helium Implantation on the Ductile-Brittle Transition Temperature of the Reduced Activation 9Cr-2W Martensitic Steel
- P1-B091** Filacchioni, G., Casagrade, E., De Angelis, U., De Santis, G., Ferrara, D., Pilloni, L.; Tensile and Impact Behavior of BATMAN II Steels, Ti-Bearing Reduced Activation Martensitic Alloys
- P1-B092** Kasada, R., Kimura, A., Matsui, H., Narui, M.; Anomalous Irradiation Hardening in the Nickel Added Reduced Activation 9Cr-2W Martensitic Steel
- P1-B093** Mukhopadhyay, D.K., Froes, F.H., Gelles, D.S.; Development of Oxide Dispersion Strengthened Ferritic Steels for Fusion
- P1-B094** Gelles, D.S., Hankin, G.L., Hamilton, M.L.; A Reassessment of the Effects of Helium on Charpy Impact Properties of Ferritic/Martensitic Steels
- P1-B095** Hamilton, M.L., Schubert, L.E., Gelles, D.S.; Impact Behavior of Two Low Activation Steels after Irradiation to ~67 dpa at 430°C
- P1-B096** Li, H., Gelles, D.S., Hirth, J.P., Jones, R.H.; Fracture Toughness of the IEA Heat of F82H Ferritic/Martensitic Stainless Steel as a Function of Loading Mode

- P1-B097** Alamo, A., Brachet, J.C., Castaing, A., Lepoittevin, C., Bercelo, F.; Physical Metallurgy and Mechanical Behaviour of FeCrWTaV Low Activation Martensitic Steels. Effects of Chemical Composition
- P1-B098** Kurishita, H., Ukai, S., Narui, M., Mizuta, S., Yamazaki, M., Nagasaka, T., Kayano, H.; Superior Charpy Impact Properties of ODS Ferritic Steel Irradiated in JOYO
- P1-B099** Nishinuma, A., Inoue, N., Muroga, T.; Fracture Toughness of Low Activation Ferritic Steel (JLF-1) Weld Joint at Room Temperature
- P1-B100** Inoue, N., Muroga, T., Nishimura, A.; Correlation of Microstructure, Hardness and Tensile Properties of a Low Activation Ferritic Steel (JLF-1) Weld Joint

Vanadium Alloys (1)

- P1-B101** Röhrig, H.D., DiStefano, J.R., Chitwood, L.D.; Effect of Hydrogen and Oxygen on the Tensile Properties of V-4Cr-4Ti
- P1-B102** Hui, X., Wang, Y., Liu, A.-S., Han, X., Wu, L.-J.; Study of Pure Vanadium Product for Fusion Structure Materials
- P1-B103** Shibayama, T., Yamagata, I., Kayano, H.; Effect of Small Additional Elements on DBTT of V-4Cr-4Ti Irradiated at Low Temperature
- P1-B104** Tanaka, T., Morimura, T., Fukumoto, K., Kimura, A., Matsui, H.; Hydrogen Effects on Charpy-Impact Properties of V-4Cr-4Ti Alloy
- P1-B105** Grossbeck, M.L., King, J.F., Goodwin, G.M., Alexander, D.J.; Development of Techniques for Welding Vanadium-Chromium-Titanium Alloys
- P1-B106** Grossbeck, M.L., Röhrig, H.D., DiStefano, J.R., DeVan, J.H., Pint, B.A.; Effects of Oxygen and Hydrogen on Fracture Mechanism in V-4Cr-4Ti
- P1-B107** Lucas, G.E., Odette, G.R., Donauhe, E., Sheckherd, J.W., Rowcliffe, A.; Effect of Irradiation on Toughness-Temperature Curves in V-4Cr-4Ti
- P1-B108** Kurtz, R.J., Hamilton, M.L., Li, H.-X.; Grain Boundary Chemistry and Heat Treatment Effects on the Ductile-to-Brittle Transition Behavior of Vanadium Alloys
- P1-B109** Li, H., Kurtz, R.J., Jones, R.H.; Effect of Thickness and Loading Mode on the Fracture Properties of V-4Cr-4Ti at Room Temperature
- P1-B110** Lansberry, M.R., Kurtz, R.J., Kumar, A.S., Mueller, G.E.; Dynamic Finite Element Analysis of Third Size Charpy Specimens of V-4Cr-4Ti
- P1-B111** Fedorov, A.V., van Veen, A., Ryazanov, A.I.; Helium-Vacancy Clustering in V-4Cr-4Ti at Elevated Temperatures
- P1-B112** van Veen, A., Fedorov, A.V., Ryazanov, A.I.; Influence of Thermal Treatment on Helium Trapping at Fine-size Precipitates in V-4Cr-4Ti.
- P1-B113** Saito, H., Hishi, T., Misawa, T., Noya, Y., Ohnishi, T., Matsuzaki, T., Watanabe, T.; Quantitative Visualization of Tritium Distribution in Vanadium by Tritium Luminography
- P1-B114** Dediurin, A., Platov, Y.M., Zakharova, M.I., Borovitskaja, I.V., Artemov, N.A.; Effect of Neutron Irradiation on Swelling and Elastic Modules of V-Ga Alloys
- P1-B115** Van Osch, E.V., de Vries, M.I.; Irradiation Hardening of V-4Cr-4Ti
- P1-B116** Nishizawa, T., Suda, T., Ohnuki, S., Takahashi, H.; Defect Solute Interaction in Binary and Ternary Vanadium Alloys during Electron Irradiation
- P1-B117** Snead, L.L., Zinkle, S.J., Alexander, D.J., Rowcliff, A.F., Eatherly, W.S.; Temperature Dependence of the Tensile and Impact Properties of V-4Cr-4Ti Irradiated to Low Neutron Doses
- P1-B118** Rice, P.M., Zinkle, S.J.; Temperature Dependence of Radiation Damage Microstructure in V-4Cr-4Ti Neutron Irradiated to Low Dose
- P1-B119** Gubbi, A.N., Rowcliff, A.F., Alexander, D.J.; The Effects of Cr and Ti Variations on the Impact Properties of V-Cr-Ti Alloys
- P1-B120** Gubbi, A.N., Rowcliff, A.F.; Strain Rate and Strain-Aging Phenomena in V-Cr-Ti Alloys
- P1-B122** Smith, J., Johnson, W.R., Trester, P.W.; Metallurgical Bonding Development of V-4Cr-4Ti Alloy for the DIII-D Radiative Divertor Program
- P1-B123** Johnson, W.R., Smith, J.P.; Fabrication of a 1200kg Ingot of V-4Cr-4Ti Alloy for the DIII-D Radiative Divertor Program
- P1-B124** Smith, D.L., Chung, H.M., Tsai, H.-C., Natesan, K.; Progress in the Development of Vanadium-Base Alloys for Fusion Applications
- P1-B125** Kondo, T., Fukumoto, K., Kaneda, K., Kimura, A., Matsui, H.; Effect of Dynamically or Statically Charged Helium on Deformation Behavior of Vanadium Alloys under Neutron Irradiation

P1-C: Austenitic Steels, Other Materials, Low Activation Criteria**Austenitic Steels**

- P1-C127** Nakata, K., Okada, O., Fukai, K., Hishinuma, A., Ameyama, K.; Effects of Mn and Si Additions on Microstructural Development in TiAl Intermetallic Compounds Irradiated with He-Ions
- P1-C128** Hishinuma, A., Nakata, K., Fukai, K., Sawai, T. ; Development and Irradiation Behavior of Ti-Al Based Intermetallic Alloys
- P1-C129** Rybin, V.V., Vinokurov, V.F., Markov, V.G., Odintsov, N.B.; Prospects of Use of O4X16H11M3T Grade Steel as Advanced Material for In-Vessel Components of ITER
- P1-C130** Gorynin, I.V., Rybin, V.V.; Titanium Base α -Alloys as Advanced Structural Materials for Vacuum Vessel and In-vessel Components of Fusion Reactors
- P1-C131** Solonin, M.I., Aleksandrov, V.V., Alekseev, A.B., Votinov, S.N., Gprynin, I.V., Grinchuk, P.P., Kondratiev, V.P., Rechintsky, V.N., Rybin, V.V.; Chromium-Nickel Alloys for Fusion Reactors
- P1-C132** Rakitsky, A.N., Nekliudov, Milman, Y.V., Morozova, E.A., Pisarenko, V.A., Poryadchenko, N.E.; Layer Composition Materials Based on Chromium and Vanadium Alloys

Other Materials

- P1-C134** Scholz, R., Mueller, R.; The Effect of Hold-Times on the Fatigue Behavior of Type AISI 316L Stainless Steel under Deuteron Irradiation
- P1-C135** Toloczko, M.B., Garner, F.A., Standing, J., Munro, B., Adaway, S.; The Compositional Dependence of Irradiation Creep of Austenitic Alloys Irradiated in PFR at 420°C
- P1-C136** Porollo, S.I., Vorobjev, A.N., Konobeev, Yu.V., Garner, F.A.; Extreme Embrittlement of Austenitic Stainless Steel Irradiated to 75-81 dpa at 335-360°C
- P1-C139** Wang, Z.G., Chen, K.Q., Li, L.W., Zhang, C.H., Quan, J.M., Hou, M.D., Xu, R.H., Ma, F., Jin, Y.F., Li, C.L., Sun, Y.M.; Effects of 52.4MeV C-Ion Irradiation on 316L Stainless Steel at 500°C
- P1-C140** Zhang, C.H., Chen, K.Q., Wang, Y.S., Sun, J.G.; Temperature Dependence of Bubble Structure in 316L Stainless Steel Irradiated with 2.5 MeV He Ions
- P1-C141** Yamamoto, N., Nagakawa, J., Murase, Y., Shiraishi, H.; Microstructural Observation on Helium Implanted and Creep Ruptured Fe-25%Ni-15%Cr Alloys Containing Various MC and MN Formers
- P1-C142** Yamamoto, N., Nagakawa, J., Murase, Y., Shiraishi, H.; Effect of Combined Addition of Ti and P on Creep Rupture Properties of Helium Implanted Fe-25%Ni-15%Cr Alloy
- P1-C143** Murase, Y., Nagakawa, J., Yamamoto, N., Shiraishi, H.; Effect of Cold Work on Void Swelling in Proton Irradiated Fe-15Cr-20Ni Ternary Alloy
- P1-C144** Kanda, H., Hashimoto, N., Takahashi, H.; Effect of Solute Concentration on Grain Boundary Migration with Segregation in Stainless Steel and Model Alloys
- P1-C145** Hamilton, M.L., Hankin, G.L.; Validation of the Shear Punch-Tensile Correlation Technique Using Irradiated Materials
- P1-C146** Hankin, G.L., Hamilton, M.L., Garner, F.A.; Shear Punch Testing of ^{59}Ni Isotopically-Doped Model Austenitic Alloys after Irradiation in FFTF at Different He/dpa Ratios
- P1-C147** Ioka, I., Naito, A., Shiba, K., Robertson, J.P., Jitsukawa, S., Hishinuma, A.; Effects of Annealing on the Tensile Properties of Irradiated Austenitic Stainless Steel
- P1-C148** Miwa, Y., Tsukada, T., Tsuji, H., Nakajima, H.; Neutron-Irradiation Induced Microstructure of Type 316 Model Alloys
- P1-C149** Tsukada, T., Miwa, Y., Tsuji, H., Nakajima, H.; Irradiation Assisted Stress Corrosion Cracking of Model Austenitic Stainless Steels
- P1-C150** Vagin, S., Utkelbayev, B.D., Chakrov, P.V., Jacobson, L.A., Field, R.D., Kung, H.; Formation of Fine Precipitates in Helium Implanted 0.6C-16Cr-15Ni-3Mo-0.5Nb Steel
- P1-C151** Sagaradze, V.V., Lapin, S.S., Goshchitskii, B.N., Kirk, M.A.; The Structural Evolution of New Low-Activated and Chromium-Nickel Stainless Steels under a High-Dose Irradiation up to 200 dpa
- P1-C152** Goshchitskii, B.N., Sagaradze, V.V., Arbuzov, V.L., Zuev, Y.M., Parkhomenko, V.D.; The Effect of Tritium and Low-Temperature Neutron Irradiation at 77 K on the Structure and Mechanical Properties of Reactor Steels
- P1-C153** Suzuki, Y., Saida, T., Kudough, F.; Low Activation Austenitic Mn-Steel for In-Vessel Fusion Materials
- P1-C154** Fukuda, T., Aoki, T., Isobe, Y., Furuya, T., Hasegawa, A., Abe, K.; Microchemical and Microstructural Changes of Austenitic Steels Caused by Proton Irradiation following Helium Implantation
- P1-C155** Hide, K., Dohi, K., Mayuzumi, M., Onchi, T., Ooka, N.; Post-irradiation Annealing Effects on Tensile and SCC Properties of Irradiated Type 347 Stainless Steel
- P1-C156** Benfu, H., Kinoshita, H., Takahashi, H.; Damage Behavior of Electron/Helium Dual-Beam Irradiated Fe-Cr-Mn(W,V) Alloy

- P1-C157** Kano, F., Furuya, F., Miwa, Y., Hamada, S.; Effect of Carbon and Nitrogen on Grain Boundary Segregation in Irradiated Stainless Steels
- P1-C158** Miyaji, N., Abe, Y., Ukai, S., Onose, S.; Effects of Neutron Irradiation on Creep Properties of FBR Grade 316SS Structure Material

P1-D: Technology and Knowledge Sharing, Dielectrics, Insulators**Technology and Knowledge Sharing**

- P1-D160** Yamamoto, T., Kurishita, H., Nagasaka, T., Kayano, H.; The Cyclic Ball Indentation Test for Small Specimens and Its Modeling using Finite Element Method
- P1-D161** Kimura, A., Kondo, T., Matusi, H.; Mass Spectrometer System to Measure Helium Concentration in Irradiated Small Specimens
- P1-D162** Dai, Y., Victoria, M., Bauer, G.S.; Tensile Properties and Microstructures in Zircaloy-2 after 590 MeV Proton Irradiation
- P1-D163** Howlader, M.M.R., Kinoshita, C., Shiiyama, K., Kutsuwada, M.; In-situ Measurement of Electrical Conductivity of Zircaloy Oxide Films and Their Formation Mechanism under Electron Irradiation
- P1-D164** Hoshiya, T., Ohmi, M., Matsui, Y., Nishikawa, M.; Shape Memory Characteristics of Neutron Irradiated Ti-Ni Shape Memory Alloy Couplers
- P1-D165** Hiura, N., Endo, Y., Yamaura, T., Hoshiya, T., Niimi, M., Saito, J., Sozawa, S., Ooka, N., Kobiyama, M.; Electrical Properties of Neutron Irradiated Oxygen Potential Sensors Using Zirconia Solid Electrolyte
- P1-D166** Hamada, S., Tsuchiya, K., Miwa, Y., Kawamura, H., Kiuchi, K.; Microstructural Evolution in Type 316 Stainless Steel Rewelded after Neutron Irradiation
- P1-D169** Sato, S., Nakazato, T., Moriya, S., Suzuki, S., Shoji, T.; Quantitative Prediction of Environmentally Assisted Cracking Based on a Theoretical Model and Computer Simulation
- P1-D170** Kasaba, K., Kudo, S., Sano, T., Syoji, T., Katagiri, K., Sato, T.; Fatigue Crack Growth under Compressive Loading
- P1-D171** Lee, J., Shoji, T.; Remote Sensing of Defects by Means of Laser and Magneto-Optical Sensor
- P1-D173** Fabritsiev, S.A., Pokrovsky, A.S., Edwards, D.J., Zinkle, S.J., Rowcliff, A.F.; The Effect of Neutron Irradiation on Mechanical Properties of Cu/SS Joints for ITER Applications
- P1-D174** Fabritsiev, S.A., Pokrovsky, A.S., Zinkle, S.J., Rowcliff, A.F., Edwards, D.J., Solomon, R.; The Effect of Copper-Steel Joining Technology on the Radiation Resistance of Copper Alloys

Dielectrics, Insulators, Windows and Optics

- P1-D175** Morono, A., Hodgson, E.R.; Role of Environment on the Surface Degradation of Wesgo AL995
- P1-D176** Jung, P., Chen, J., Klein, H.; Recovery of Irradiated and Deformed Ceramic Materials
- P1-D178** Tanimura, Y., Iida, T.; Effects of D-D and D-T Neutron Irradiation on some Components for Fusion Diagnostics
- P1-D179** Furuno, S., Hojou, K., Izui, K., Sasajima, N., Otsu, H., Matsui, T., Muromura, T.; Radiation and Annealing Effects in MgAl_2O_4 and Al_2O_3 Irradiated with H and He Ions
- P1-D180** Heidinger, R., Ibarra, A., Molla, J.; Pre- and Post- Irradiation Studies on mm-wave Losses in Reference Window Materials for Electron Cyclotron Wave Systems
- P1-D181** Plaskin, O.A., Belyakov, V.A., Chernov, V.M., Stepanov, P.A., Stepanov, V.A.; Radiation-Induced Electrical and Optical Phenomena in Al_2O_3 and BN Based Materials

Insulators

- P1-D182** Nakata, K., Katano, Y., Noda, K.; In-situ Observation of Microstructural Development during Electron Irradiation in Al_2O_3 Containing Cr_2O_3 or TiO_2
- P1-D183** Yano, T., Insani, A., Sawada, H., Iseki, T.; Neutron-Induced Damage in Near-Stoichiometric Spinel Ceramics Irradiated below 200°C and its Recovery due to Annealing
- P1-D184** Katano, Y., Nakazawa, T., Yamaki, D., Aruga, T., Noda, K.; Damage Structure Evolution in Al_2O_3 Irradiated with Multiple Ion Beams of H, He and O and after Annealing
- P1-D185** Sonoda, T., Abe, H., Kinoshita, C.; Cascade Effects on the Formation and Growth Process of Defect Clusters in Magnesia under Ion Irradiation
- P1-D186** Shiiyama, K., Howlader, M.M.R., Zinkle, S.J., Shikama, T., Kutsuwada, M., Matsumura, S., Kinoshita, C.; Electrical Conductivity and Current-voltage Characteristic of Alumina with or without Neutron and Electron Irradiation
- P1-D187** Yasuda, K., Kinoshita, C., Ohmura, M., Morisaki, R., Abe, H.; Concurrent Irradiation Effects with Ions and Electrons in Oxide Ceramics
- P1-D188** Izumi, K., Yasuda, K., Kinoshita, C., Kutsuwada, M.; Mechanical Properties and Microstructure of Alumina and Magnesium Aluminate Spinel Irradiated with He Ions

- P1-D189 Zinkle, S.J., Evans, N.D., Hodgson, E.R.;** Microstructure of Sapphire Subjected to Radiation-Induced Electrical Degradation
- P1-D190 Shikama, T., Zinkle, S.J.;** Evidence for Moderate Radiation-Induced Electrical Degradation in Insulators
- P1-D191 Shikama, T., Zinkle, S.J., Shiyama, K., Snead, L.L., Farnum, E.H.;** Electrical Properties of Ceramics during Reactor Irradiation
- P1-D192 Nakamichi, M., Kawamura, H.;** Characterization of Y₂O₃ Coating under Neutron Irradiation
- P1-D193 Revyakin, Y.L., Bender, S.E., Belyakov, V.A.;** Electrophysical Characteristics of MI-Cables for ITER Plasma Diagnostic System during Irradiation in the BOR-60 Reactor up to Resource Fluence
- P1-D194 Molla, J., Vila, R., Heidinger, R., Ibarra, A.;** Radiation Effects on Dielectric Losses of Au-Doped Silicon
- P1-D195 Hodgson, E.R., Morono, A.;** Radiation Effects on Insulating Gases for the ITER NBI System

P2-A: Design and Materials, Small Specimen Test Technology, International Collaboration

Design and Materials

- P2-A001 Noda, T., Fujita, M.;** Transmutation and Induced Radioactivity of W First Wall of Fusion Reactors
- P2-A002 Takatsu, H., Hatano, T., Sato, S., Furuya, K., Kuroda, T.;** Application of HIP Bonding to First Wall Panel Fabrication Made from Reduced Activation Ferritic Steel F82H
- P2-A005 Sagara, A., Muroga, T., Motojima, O., Noda, T., Tanaka, S., Terari, T., Kohyama, A., Matsui, H.;** Materials Design and Relating R&D Issues for the Force-Free Helical Reactor (FFHR)
- P2-A006 Lee, E.H., Rao, G.R., Hunn, J.D., Mansur, L.K.;** Triple Ion-Beam Studies of Radiation Damage Effects on 9Cr2WVTa Ferritic Steel in a High Power Spallation Neutron Source Environment
- P2-A007 Voitsenya, V.S., Bardanid, A.F., Borisenko, Y.N., Gritsyna, V.I., Konovalov, V.G., Motojima, O., Orlinskij, D.V., Peterson, B.J., Ruzhitskij, V.V., Shapoval, A.N., Shtan, A.F., Solodovchenko, S.I., Yakimov, K.I.;** On the Choice of the Material for the First Mirrors of Fusion Reactor
- P2-A008 Kondo, T., Watanabe, Y., Ti, Y.S., Hishinuma, A.;** An Evaluation of Potential Material-Coolant Compatibility in Application to Advanced Fusion Reactors with Emphasis Placed on the Use of Superheated Steam

Small Specimen Test Technology

- P2-A010 Donato, A., Gondi, P., Montanari, R., Moreschi, L., Sili, A., Storai, S.;** Remotized FIMEC Apparatus for the Mechanical Characterization of Neutron Irradiated Materials
- P2-A011 Murase, Y., Nagakawa, J., Yamamoto, N., Fukuzawa, Y.;** Evaluation of the Creep-Fatigue Response under 17MeV Proton Irradiation
- P2-A012 Santos, C., Odette, G.R., Lucas, G.E., Yamamoto, T.;** Examination of Indentation Geometry-Constitutive Behavior Relations with Confocal Microscopy and Finite Element Modeling
- P2-A013 Miwa, Y., Jitsukawa, S., Hishinuma, A.;** Development of a Miniaturized Hourglass Shaped Fatigue Specimen
- P2-A014 Pyykkinen, M., Karjalainen-Roikonen, P., Tahtinen, S.;** Effect of Specimen Type and Size on Fracture Resistance Curve Determination for CuCrZr Alloy
- P2-A015 Ueda, K., Satou, M., Hasegawa, A., Abe, K.;** Deformation Analysis of Small Size Bend Specimens by FEM Calculation to Estimate Irradiation Induced Embrittlements of Mo and W
- P2-A016 Kitsunai, Y., Kurishita, H., Narui, M., Kayano, H.;** Effect of Neutron Irradiation on Impact Properties of TZM Alloy
- P3-D177* Odette, G.R., Lucas, G.E., Edsinger, K., Donauhe, E., Rathbun, H.;** Evaluation of Fracture Toughness, Constraint and Size Effects from Critical Crack Tip Opening Measurements Using Confocal Microscopy and Fracture Reconstruction Methods

(*This paper has been moved to this session from the third day.)

International Collaboration Program and Materials R & D Strategies

- P2-A017 Yu, J., Shan, C.;** Research Progress of Fusion Reactor Materials in CIAE
- P2-A018 Ohnuki, S., Garner, F.A., Greenwood, L.R., Sekimura, N., Kohno, Y., Muroga, T., Hasegawa, A., Takahashi, H., Abe, K.;** Collaboration Study of Transmutation Effect on Fusion Candidate Materials by Means of Thermal Neutron Irradiation

- P2-A019 Wu, C.H., Alessandrini, C., Bonal, C., Xaso, A., Grote, H., Moormann, R., Rödig, M., Roth, J., Werle, H., Vieider, G.;** Overview of EU CFCs Development for Plasma Facing Materials
- P2-A020 Matsui, H., Kimura, A., Fukumoto, K., Abe, K., Satou, M., Smith, D.L., Chung, H.M., Tsai, H-C.;** Summary of Dynamic Helium Charging Experiments
- P2-A021 Abe, K., Kohyama, A., Numba, C., Wiffen, F.W., Jones, R.H.;** Neutron Irradiation Experiments for Fusion Reactor Materials through JUPITER Program

P2-B: Low Z Materials (2), High Heat Flux Materials

Low Z Materials (2)

- P2-B022 Krussenberg, A-K, Moormann, R., Hinssen, H-K., Hofmann, M., Wu, C.H.;** Investigation of Oxidation Resistance of Carbon Based First-Wall Liner Material Aerolor AO5
- P2-B023 Berardinucci, L.;** Modeling of Tritium Permeation through Beryllium as Plasma Facing Material
- P2-B024 Wu, C.H., Martin, J.M.L.;** The Impact of Larger Clusters Formation C₅, C₆, C₇, C₈, C₉, and C₁₀ on the Rate of Carbon Sublimation at Elevated Temperature
- P2-B025 Forty, C.B.A., Forrest, R.A., Butterworth, G.J.;** Activation of beryllium in a fusion power plant
- P2-B026 Platonov, P.A., Chugunov, O.K., Biryukov, A.Y., Alekseev, V.M., Burtseva, T.A.;** Russian Carbon-Based Materials for ITER Fusion Reactor
- P2-B027 Romanenko, O.G., Shestakov, V.P., Tazhibaeva, I.L., Klepikov, A.K., Chikhay, Y.V.;** Investigation of Changes in Beryllium Surface Element Composition Caused by Plasma Glowing Discharge
- P2-B029 Burtseva, T.A., Bagautdinov, P.M., Chugunov, O.K., Lebedev, I.G., Platonov, P.A., Pokrovsky, A.C.;** The Effect of Neutron Irradiation on the Property Changes in Recrystallized Graphites and Carbon-Carbon Fiber Materials
- P2-B030 Burtseva, T.A., Gorodetsky, A.E., Zakharov, A.P., Markin, A.V., Shipkov, N.N.;** The Development of Graphite Materials with the Aim of Reducing Tritium Trapping and the Study of Hydrogen Isotope Retention
- P2-B032 Tazhibaeva, I.L., Klepikov, A.K., Shestakov, V.P., Charkov, P.V.;** Influence of Irradiation on Microstructure of Beryllium Samples
- P2-B033 Klepikov, A.Kh., Tazhibeave, I.L., V.P.Shestakov, Romanenko, O.G., Chikhay, Y.V., Kenzhin, E.A., Tikhomirov, L.N.;** Influence of Saturation Method on Hydrogen Release and Retention in Beryllium
- P2-B034 Sharapov, V.M., Gavrilov, L.E., Alimov, V.K., Kulilauskas, V.S.;** Deuterium Retention in Beryllium during Atomic Deuterium Exposure
- P2-B036 Arkipov, I.I., Gorodetsky, A.E., Zalavutdinov, R.K., Zakharov, A.P., Burtseva, T.A., Khripunov, B.I., Shapkin, V.V., Petrov, V.B.;** Deuterium Retention in Codeposited Layers and Carbon Materials Exposed to High Flux D-Plasma
- P2-B037 Oku, T., Kurumada, A., Imamura, Y., Kawamata, K., Shiraishi, M.;** Effects of Prestresses on Mechanical Properties of Isotropic Graphite Materials
- P2-B038 Kurumada, A., Oku T., Imamura, Y., Kawamata, K., Motojima, O., Noda, N., McEnaney, B.;** Thermal Shock Resistances of a Joining Material of C/C Composite and Copper
- P2-B039 Nakamura, K., S.Suzuki, Dairaku, M., Yokoyama, K., Okumura, Y., Suzuki, T., Jimbou, R., Bandourko, V., Akiba, M.;** Disruption and Sputtering Erosions on SiC Doped CFC
- #### **High Heat Flux Materials**
- P2-B040 Ivanov, A.D., Kozlov, A.V., Chernetsov, M.V., Rodin, M.E.;** Irradiation Examination of CuNiCrSi alloy for ITER Application
- P2-B041 Li, J., Xu, H., Yu, J., He, Q.;** Microstructural Evolution in Cu-Al25 Alloy under 300 keV Cu⁺ Ion Irradiation
- P2-B042 Hatano, T., Sato, S., Furuya, K., Kuroda, T., Takatsu, H.;** Fracture Strengths of HIPed DS-Cu/SS Joints for ITER Shielding Blanket/ First Wall
- P2-B043 Pokrovsky, A.S., Barabash, V.R., Fabritsiev, S.A., Hamilton, M.L., Eiholzer, C.R., Garner, F.A., Edwards, D.J.;** Irradiation Creep of Dispersion Strengthened Copper Alloy
- P2-B044 Muroga, T., Watanabe, H., Yoshida, N.;** The Effect of Solid Transmutant Production in Copper Studied by Mixed-Spectrum Neutron Irradiation

- P2-B045 Takamura, S., Hayashi, K., Ohno, N., Morita, K.;** Static and Dynamic Erosion Behavior of TiC coated Graphite in High Heat Flux Plasma
- P2-B046 Mitteau, R., Chappuis, P., Moncel, L., Schlosser, J.;** Evidence of Damage in Carbon Fibre Composite Tiles Joined to a Metallic Heat Sink under High Heat Flux Fatigue
- P2-B047 Edwards, D.J., Singh, B.N., Toft, P., Eldrup, M.;** Effect of Bonding and Bakeout Thermal Cycles on The Properties of Copper Alloys Irradiated At 100°C
- P2-B048 Greenwood, L.R., Oliver, B.M., Garner, F.A., Muroga, T.;** Calculation and Measurement of Helium Generation and Solid Transmutants in Cu-Zn-Ni Alloys
- P2-B049 Tokunaga, K., Yoshida, N., Kubota, Y., Noda, N., Motojima, O., Youchison, D.L., Watson, R.D., Nygren, R.E., McDonald, J.M., Marshall, T.D.;** Material Damage and Thermal Response of LHD Divertor Mock-ups by High Heat Flux
- P2-B050 Tokunaga, K., Yoshida, N., Noda, N., Sogabe, T., Kato, T.;** High Heat Load Properties of Tungsten Coated Carbon Materials
- P2-B051 Alexander, D.J., Zinkle, S.J., Rowcliff, A.F.;** Fracture Toughness of Copper-Base Alloys for ITER Applications
- P2-B052 Ceretti, M., Coppola, R., Di Pietro, E., Nardi, C.;** High-Temperature Residual Strain Measurements, Using Neutron Diffraction, in Brazed Cu-CFC Graphite divertor Structures
- P2-B053 Karjalainen-Roikonen, P., Pyyken, M., Tahtinen, S., Singh, B.N.;** Effect of Neutron Irradiation on Fracture Toughness Behavior of Copper Alloys and Their Joints with Stainless Steels
- P2-B054 Eldrup, M., Singh, B.N.;** Influence of Composition, Heat Treatment and Neutron Irradiation on the Electrical Conductivity of Copper Alloys
- P2-B055 Serra, E., Perujo, A.;** Hydrogen and Deuterium Transport and Inventory Parameters in a Cu-0.65Cr-0.08Zr Alloy for Fusion Reactor Application
- P2-B056 McCoy, J.H., Kumar, A.S., Stubbins, J.F.;** Dynamic Crack Propagation in Copper-Stainless Steel Layered Structures
- P2-B057 Neklyudov, I.M., Rybalko, V.F., Shevshenko, S.V., Voyevodin, V.N.;** Change of Structure and Properties of Microalloyed Copper at Deformation, Annealing and Irradiation
- P2-B058 Stubbins, J.F., Singh, B.N., Toft, P.;** Fatigue Performance of Copper and Copper Alloys Before and After Irradiation to 0.3 dpa at 50 and 100°C
- P2-B059 Solomon, R., Troxell, J., Nadkarni, A., Wolfe, F.;** GlidCop IG1 High Temperature Annealing Study: Simulation of 920-1000-1050°C Hot Isostatic Press Cycles for FIRST WALL Module Fabrication

P2-C: Ferritic Steels (2), Vanadium Alloys (2), SiC/SiC Composites

Ferritic Steels (2)

- P2-C060 Wanderka, N., Camus, E., Wollenberger, H.;** Decomposition of Selected Ferritic-Martensitic Steels under Ion Irradiation
- P2-C061 Camus, E., Wanderka, N., Wollenberger, H., Carsughi, F., Ullmaier, H.;** Low Temperature Mechanical Properties of Selected Ferritic-Martensitic and Austenitic Steels under Ion Irradiation
- P2-C062 Sato, M., Miura, Y., Takeji, S.;** Analysis of Error Field due to Ferritic Steel in the Advanced Material Testing Program of JFT-2M
- P3-D186* Avalos, M., Moscato, M.G., Alvarez-Armas, I., Petersen, C., Schmitt, R., Armas, A.F.;** Dynamic Strain Aging Evidences during Low Cycle Fatigue Deformation in Ferritic-Martensitic Stainless Steels
(*This paper has been moved to this session from the third day.)
- P2-C064 Marmy, P.;** The In-situ Fatigue Properties of the MANET II Ferritic-Martensitic Steel Irradiated with 590 MeV Protons
- P2-C065 Saito, J., Suda, T., Ohnuki, S., Takahashi, H., Nishida, T., Akasaka, N., Ukai, S.;** Void Formation and Microstructural Evolution during Electron-Irradiation in Oxide Dispersion Strengthened Ferritic Steels
- P2-C066 Wakai, E., Shiba, K., Hashimoto, N., Robertson, J.P., Klueh, R.L., Hishinuma, A.;** Damage Structure and Precipitation Behavior of HFIR-Irradiated Low Activation Steel F82H
- P2-C067 Robertson, J.P., Klueh, R.L., Shiba, K., Wakai, A., Hishinuma, A.;** Radiation Hardening and Deformation Behavior of Irradiated Ferritic-Martensitic Cr-Steels
- P2-C068 Rowcliffe, A.F., Robertson, J.P., Wakai, A., Shiba, K., Alexander, D.J., Jitsukawa, S.;** Fracture Toughness and Tensile Behavior of Ferritic-Martensitic Steels Irradiated to 3 dpa at 250°C

- P2-C069 Hara, S., Abe, T., Takatsu, H.;** Effects of Hydrogen Atmosphere on Mechanical Properties and Surface and Surface Conditions of a Reduced Activation Ferritic Steel F82H
- P2-C070 Petersen, C.;** Thermal Fatigue Behavior of Low Activation Ferrite-Martensite Steels
- P2-C071 Coppola, R., Ehrlich, K., Magnani, M., Materna-Morris, E., Valli, M.;** Microstructural Characterization of F82H-Mod. Martensitic Steel using Small Angle Neutron Scattering
- P2-C072 Benamati, G., Bertini, L., Beghini, M., Valentini, R.;** Effect of Hydrogen on Tensile Properties of Martensitic Steels for Fusion Application
- P2-C073 Lyakishev, N.P., Kashin, V.I., Dyomina, E.V., Ivanov, L.I., Platov, Y.M., Prusakova, M.D., Kolotov, V.P., Alenina, M.N.;** The Possibility of Commercial Production of Low-Activation Structural Steels for Energetics in Russian Federation
- P2-C074 Alamo, A., Castaing, A., Nee, F., Perche, L.;** Tensile and Impact Properties of FeCrWtV Low Activation Materials Steels
- P2-C075 Brachet, J.-C., Gavard, L., Boussidan, C., Lepoittevin, C., Denis, S., Servant, C.;** Modeling of Phase Transformations Occurring in Low Activation Martensitic Steels
- P2-C076 Belyaeva, L.A., Petersen, C., Rybin, V.V.;** Post Irradiation Thermocyclic Loading of Ferritic-Martensitic Structural Materials
- P2-C077 Ioltukhovskiy, A.G., Leontyeva-Smirnova, M.V., Kazennov, Y.I., Medvedeva, E.A., Tselishchev, A.V., Shamardin, V.K., Povstyanko, A.V., Ostrovsky, S.E., Dvoryasin, A.M., Porollo, S.I., Vorobyev, A.N., Khabarov, V.S.;** Influence of Operation Conditions on Structure and Properties of 12% Cr Steels-Candidate Structural Materials for Fusion Reactors
- P2-C078 Kohyama, A., Kohno, Y., Mukouda, I., Kimura, A., Wan, F.;** Production of Low Activation Steel; JLF-1, Large Heats - Current Status and Future Plan -
- P2-C079 Kursevich, I.P., Lapin, A.N., Rybin, V.V.;** Effect of Neutron Irradiation at Low Temperature on the Embrittlement of the Reduced-Activation Ferritic Steels
- P2-C080 Piloni, L., Attura, F., Filacchioni, Carosi, A., Amato, S.;** Physical Metallurgy of BATMAN II Ti-Bearing Martensitic Alloys
- P2-C082 Schäfer, L.;** Influence of Delta Ferrite and Carbide Dendrites on the Impact and Tensile Properties of a Martensitic Chromium Steel
- P2-C083 Schäfer, L., Schirra, M.;** Influence of Thermal Aging on Tensile and Impact Bending Properties of the Steel Grades OPTIFER and F82H mod.
- P2-C084 Kumar, A.S., Sidener, S.E., Hamilton, M.L.;** Dynamic Finite Element Modeling of the Upper Shelf Energy of Neutron Irradiated Ferritic Steels

Vanadium Alloys (2)

- P2-C085 Candra, Y., Fukumoto, K., Kimura, A., Matsui, H.;** Microstructural Evolution and Hardening of Neutron Irradiated Vanadium Alloys at Low Temperature in JMTR
- P2-C086 Fukumoto, K., Matsui, H.;** Effect of Dynamically Charged Helium on Microstructure of Vanadium Binary Alloys under Neutron Irradiation
- P2-C087 Gazda, J., Meshii, M.M., Chung, H.M.;** Microstructure of V-4Cr-4Ti after Low-Temperature Irradiation by Ions and Neutrons
- P2-C088 Chung, H.M., Tsai, H.-C., Smith, D.L.;** Effects of Low-Temperature Neutron Irradiation on the Impact Properties of Vanadium-Base Alloys
- P2-C089 Chung, H.M., Park, J.H., Strain, R.V., Tsai, H.-C., Smith, D.L.;** Mechanical Properties and Microstructural Characteristics of Laser and Electron-Beam Welds of V-4Cr-4Ti
- P2-C090 Wiffen, F.W., Kazakov, V.A., Rowcliff, A.W., Smith, D.L., Chakin, V.P., Rusanov, A.E., Tsai, H.-C., Teikovtsev, A.A., Markina, N.V., Greenwood, L.R.;** Experience of BOR-60 Reactor Use for Radiation Testings of V-Cr-Ti System Alloys in Li Environment
- P2-C091 Tsai, H.C., Johnson, W.R., Chung, H.M., Smith, D.L., Smith, J.P.;** Performance of V-4Cr-4Ti Material Exposed to the D-III-D Tokamak Environment
- P2-C092 Tsai, H.C., Strain, R.V., Matsui, H., Smith, D.L.;** Irradiation Creep of Vanadium Alloys
- P2-C093 Natesan, K., Soppet, W.K., Uz, M.;** Effects of Oxygen and Oxidation on Tensile Behavior of V-(4-5)Cr-(4-5)Ti Alloys
- P2-C094 Kameda, J., Bloomer, T.E., Lyu, D.Y.;** Grain Boundary Segregation of Impurities in Neutron Irradiated and Thermally Aged Vanadium Alloys
- P2-C095 Shestakov, V.P., Kulsatov, T.V., Tazhibaeva, I.L., Romanenko, V.I., Klepiov, A.K., Chikhay, Y.V.;** Hydrogen Permeability of V-4Cr-4Ti Vanadium Alloy

- P2-C096 Evtikhin, V.A., Lyublinski, I.E., Vertkov, A.V.;** Compatibility of Vanadium Alloys and its Weld Joints in Homogeneous and Heterogeneous Liquid Lithium Systems
- P2-C097 Revyakin, Y.L., Chakin, V.P., Goncharenko, Y.D.;** In-Pile Research of Electro - Insulating Coatings Behaviour on V-4Cr-4Ti Alloy in BOR-60 Reactor Core
- P2-C098 Kazakov, V.A., Chakin, V.P., Goncharenko, Y.D., Ostrovsky, Z.E.;** Corrosion of Some V and Nb Alloys in Water under irradiation in Water
- P2-C101 Matsushima, T., Satou, M., Hasegawa, A., Abe, K., Kayano, H.;** Tensile Properties of a Series of V-4Cr-4Ti Alloys containing Small Amount of Si, Al and Y, and the Influence of Helium Implantation
- P2-C102 Satou, M., Chuto, T., Abe, K.;** Radiation Hardening of V-C, V-O, V-N Alloys Neutron-Irradiated to High Fluences
- P2-C103 Satou, M., Abe, K., Kayano, H., Matsui, H.;** Relationship between Radiation Hardening and Embrittlement of V-Ti-Cr-Si Type Alloys
- P2-C104 Fujiwara, M., Satou, M., Hasegawa, A., Abe, K.;** Rapid Oxidation and Its Effects on Mechanical Properties of V-Cr-Ti-Si Alloys
- P2-C105 Iwai, T., Sekimura, N., Garner, F.A.;** Effects of Helium on Large Void Swelling in V-5Fe
- P2-C106 Nemoto, Y., Ueda, K., Satou, M., Hasegawa, A., Abe, K.;** Analysis and Measurement of Residual Stress of Vanadium/Ceramics Joint for Fusion Reactor Applications
- P2-C107 Billone, M.C., Chung, H.M., Smith, D.L.;** Revision of the Tensile Database for V-Ti and V-Cr-Ti Alloys Tested at ANL

SiC/SiC Composites

- P2-C108 Araki, H., Suzuki, H., Noda, T.;** Microstructure and Bending Properties of SiCf/SiC Composites Prepared by CVI
- P2-C109 Donato, A., Ortona, A., Nannetti, A., Casadio, S., Botti, S.;** The SICFIL, a New SiC/SiC Ceramic Matrix Composite for Fusion Applications
- P2-C110 Ferraris, M., Salvo, M., Isola, C., Montorsi, M., Kohyama, A.;** Glass-ceramic Joining and Coating of SiC/SiC for Fusion Applications
- P2-C111 Youngblood, G.E., Jones, R.H., Kohyama, A., Snead, L.L.;** Radiation Response of Advanced SiC Fibers
- P2-C112 Jones, R.H., Youngblood, G.E., Henager, C.H., Lewinsohn, C.A.;** Fiber Creep Rate and High-Temperature Properties of SiC/SiC Composites
- P2-C113 Hasegawa, A., Saito, M., Abe, K.;** Bending Properties of SiC/SiC Composites and Their Helium Effect
- P2-C114 Saito, M., Hasegawa, A., Abe, K.;** Interface Strength of SiC/SiC Composites with and without Helium Using Micro-Indentation Test
- P2-C115 Osborne, M.C., Snead, L.L., Steiner, D.;** Low Level Neutron Irradiation-Induced Tensile and Density Changes in Nicalon™, Hi-Nicalon™, and Dow Corning SiC Fibers
- P2-C116 Fabbri, L., Frias Rebelo, A.J., Gandossi, L., Taylor, R., Fenici, P.;** Heat Transport Properties of 3-D SiCf/SiC Composites
- P2-C117 Hinoki, T., Kohyama, A., Sato, S., Noda, T.;** Effects of Fiber Coatings on Interfacial Shear Strength of SiC/SiC by Nano-indentation Technique
- P2-C118 Kohyama, A., Hinoki, T., Zhang, W., Tsunakawa, H., Katoh, Y.;** Interfacial Microstructure of SiC/SiC Before and After Deformation
- P2-C119 Scholz, H.W., Frias Rebelo, A.J., Rickerby, D.G., Lee, W.E., Evans, J.H., Fenici, P.;** Swelling Behaviour and TEM Studies of SiCf/SiC Composites After Fusion Relevant Alpha-Implantation
- P2-C120 Zhang, W., Hinoki, T., Kohyama, A., Noda, T., Muroga, T., Yu, J.;** Crack Initiation and Growth Characteristics in SiC/SiC under Indentation Test
- P2-C121 Frias Rebelo, A.J., Scholz, H.W., Tartaglia, G.P., Fenici, P.;** Comparison of the Mechanical Behavior of SiCf/SiC Composites following Neutron Irradiation and Helium Implantation
- P2-C122 Sickafus, K.E., Ustundag, E., Schwarz, R.B., Wetteland, C.J., T.D.Shen, Panda, P.C., Raj, R.;** Vanadium-Spinel Composites for Application in Hostile Environments
- P2-C123 Sayano, A., Sutoh, C., Suyama, S., Itoh, Y., Nakayama, S.;** Development of Reaction Sintered Silicon Carbide Matrix Composite
- P2-C124 Ueda, S., Nishio, S., Seki, Y., Kurihara, R., DREAM Design Team;** A Fusion Power Reactor Concept Using SiC/SiC Composites

- P2-C126 Umezawa, M., Mitsuno, S., Imai, Y., Kagawa, Y.;** Thermal Stability of BN Coated SiC Fiber / PIP SiC Composites
- P2-C127 Takeda, S., Urano, A., Sakamoto, J., Imai, Y.;** Microstructure and Oxidative Degradation Behavior of Silicon Carbide Fiber Hi-Nicalon Type S
- P2-C128 Okamura, K., Yamamura, T.;** R&D of High Performance SiC Fibers for Fusion
- Low Activation Criteria**
- P2-C129 Cheng, E.T.;** Concentration Limits of Natural Elements in Low Activation Fusion Materials
- P2-C130 Rocco, P., Zucchetti, M.;** Advanced Management Concepts for Fusion Waste
- P2-C131 Klueh, R.L., Grossbeck, M.L., Bloom, E.E.;** Analysis of Impurity Concentrations of Reduced-Activation Ferritic Steels and Vanadium Alloys
- P2-C135 Blokhin, A.I., Chernov, V.M., Votinov, S.N., Zavialsky, L.P.;** Activation and Helium Production in the (V-Ti-Cr)- and (Cr-Ni-Mo)-Alloys Irradiated by Fusion Neutron Spectrum
- P2-C136 Seki, Y., Ueda, S., Nishio, S.;** Impact of Low Activation Materials to Fusion Reactor Design
- P2-C137 Abe, F., Noda, T.;** Impurity Control in Heat Resisting Steels and Evaluation of Their Radioactivity

P2-D: Materials Database, ICF, Optic, Magnets and SCM, Material Processing etc, Welding

Materials Database

- P2-D138 Tanaka, S., Matera, R., Kalinin, G., Barabash, V., Mohri, K.;** ITER Materials R&D Data Bank
- P2-D139 Fabritsiev, S.A., Naberenkov, A.V.;** RF Materials Database for ITER
- P2-D140 Katsura, M., Yamamoto, T.A., Nakagawa, T., Nishimaki, K.;** Thermodynamics of the Formation of CH₄ by the Reaction of Carbon Materials by a Stream of NH₃
- P2-D141 Tsuji, H., Yokoyama, N., Fujita, M., Kurihara, Y., Kano, S., Tachi, Y., Shimura, K., Nakajima, R., Iwata, S.;** Present status of Data-Free-Way (Distributed Database System for Advanced Nuclear Materials)

Other Materials

- P2-D142 Sanz, J., Gonzalez, C., Juan, J.;** Long-Lived Activity of Elements: Effects of New Activation Cross Sections, and Their Uncertainties on the Selection of Materials for IFE Reactors

Optic Materials

- P2-D143 Morono, A., Hodgson, E.R.;** Radiation Effects on the Optical Properties of SiO₂
- P2-D145 Kakuta, T., Sakasai, K., Shikama, T., Narui, M., Segawa, T.;** Absorption and Fluorescence Phenomena on Optical Fibers under Heavy Neutron Irradiation
- P2-D146 Sato, F., Oyama, Y., Maekawa, F., Ikeda, Y.;** Photon Emission Induced by Fusion Neutron on Optical Window Materials
- P2-D150 Ivanin, I.A., Inkov, V.I., Tatsenko, M.V., Khokhlov, Y.A., Zavyalov, N.V.;** Measurement of Radiation Induced Absorption in Optical Materials at Absorbed Dose up to 10⁶ Gy
- P2-D151 Ibarra, A., Bravo, D., Garcia, M.A., Llopis, J., Lopez, F.J., Garner, F.A.;** Dose Dependence of Neutron Irradiation Effects on MgAl₂O₄ Spinels
- P2-D152 Kishimoto, K., Amekura, H., Kono, K., Lee, C.G.;** Radiation Resistance of Amorphous Silicon in Optoelectric Properties under Proton Bombardment

Magnets and Super-Conducting Materials

- P2-D155 Noujima, M., Kii, M., Shiyama, K., Kutsuwada, M., Matsumura, S., Kinoshita, C.;** Magnetic Relaxation in Bi₂Sr₂CaCu₂O_x Irradiated with 1MeV Electrons using Microwave Absorption Method
- P2-D156 Ishikawa, N., Chimi, Y., Iwase, A., Tsuru, K., Michikami, O.;** Defect Production and Recovery in High-Tc Superconductors Irradiated with Electrons and Ions at Low Temperature
- P2-D158 Yanagi, N., Mito, T., Takahata, K., Imagawa, S., Yamada, S., Nishimura, A., Iwamoto, A., Chikraishi, H., Tamura, H., Yamaguchi, S., Satow, T., Satoh, S., Motojima, O and LHD group;** Development of Superconductors for the Large Helical Device
- P2-D159 Mito, T., Maehata, K., Mizokami, M., Ishibashi, K., Takeo, M., Iwamoto, A., Hirano, N., Shintomi, T., Kimura, K., Sawamura, M., Yamada, S., Satoh, S., Motojima, O.;** Development of High-Tc Superconducting Current Feeders for a Large-Scale Superconducting Coil System

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- P2-D160 Suzuki, H., Araki, H., Noda, T.;** High Enrichment of Silicon-28 Isotope by Infrared Laser Irradiation
- P2-D161 Korostelev, A.B., Abramov, V.Ya., Rodin, M.E., Rodchenkov, B.S.;** Assessment of Metallurgical Quality and Mechanical Properties of the 316LN-IG Steel Produced by Different Technologies
- P2-D162 Sidorenkov, A.V., Abramov, V.Ya., Krestnikov, N.S., Zolotarev, V.B., Popkova, E.A.;** Investigation of Metallurgical Quality of Perspective Vanadium-Base Alloys at different Fabrication Technologies
- P2-D164 Morishita, K., Gilanyi, A., Sukegawa, T., Uesaka, M., Miya, K.;** Magnetic Nondestructive Evaluation of Accumulated Fatigue Damage in Ferromagnetic Steels for Nuclear Plant Component
- P2-D165 Fujii, K., Yamada, R.;** Thermal Shock Resistance of SiC Compositionally Graded C/C Composites
- P2-D166 Yoshida, K., Budiyo, Imai, M., Yano, T.;** Processing and Microstructure of Silicon Carbide Fiber-Reinforced Silicon Carbide Composite by Hot-Pressing
- P2-D167 Mochizuki, C., Mikami, M.;** Manufacturing Technique of Nb₃Al Super-conductive Sheet by Electrically-heated Powder Rolling
- P2-D169 Saint-Antonin, F., Barberi, D., Le Marois, G., Laille, A.;** Development and Characterization of Be/Glidcop Joint Obtained by Hot Isostatic Pressing for High Temperature Working Conditions
- P2-D170 Rigal, E.;** Fabrication of Double Wall Tubes for the water-cooled Pb-17Li Blanket for DEMO
- P2-D171 Smolik, G.R., McCarthy, K.A., Petti, D.A., Coates, K.;** Hydrogen Generation from Steam Reaction with Tungsten
- P2-D172 Tsuchiya, K., Watarumi, Y., Saito, S., Fuchinoue, K., Sawada, H., Kawamura, H.;** Fabrication Development and Preliminary Characterization of Li₂TiO₃ Pebbles by Sol-Gel Method
- P2-D173 Davyov, D.A. Solonin, M.I., Markuchkin, Y.E., Gorokhov, V.A., Gorlevsky, V.V., Nikolaev, G.N.;** Manufacture and Tests of the Porous Beryllium Mock-ups for the ITER Breeding Blanket
- P2-D174 Kohyama, A., Suzuki, T., Narui, M.;** Evaluation of Weld Crack Susceptibility for Neutron Irradiated Stainless Steel
- P2-D175 Leedy, K.D., Stubbins, J.F.;** Performance of Copper Alloy to Stainless Steel Bounded Panels for ITER First Wall Applications

Welding, etc.

- P2-D176 Fabritsiev, S.A., Pokrovsky, A.S.;** The Effect of Helium Accumulation and Radiation Damage on the Weldability of 316-Type steel
- P2-D177 Sawai, T., Shiba, K., Hishinuma, A.;** Microstructural Evolution of Welded Austenitic Stainless Steel Irradiated in HFIR Target Experiments
- P2-D178 Nishimura, S., Katsura, R., Saito, Y., Kono, W., Takahashi, H., Koshiishi, M., Kato, T., Asano, K.;** YAG Laser Welding of Neutron Irradiated Stainless Steels
- P2-D179 Kawano, S., Sumiya, R., Fukuya, K.;** Simulation of Helium Bubble Behavior of Neutron Irradiated Stainless Steel during Welding
- P2-D180 Seran, J., Alamo, A., Brachet, J.C., Averty, X., Rabouille, O., Royer, J.;** Influence of Neutron Irradiation on the Mechanical Properties of Homogeneous Austenitic/Austenitic and heterogeneous Austenitic/Martensitic Weldments
- P2-D183 Yasuda, R., Itasaka, K., Tanaka, K., Hasegawa, A., Satou, M., Abe, K.;** Diffusion Bonding of Vanadium with Oxide Ceramics of CaO, MgO, Al₂O₃ and MgO*Al₂O₃
- P2-D184 Nakahigashi, S., Kano, F., Nakamura, H., Uesugi, N., Mitamura, T., Terasawa, M., Irie, H., Fukuya, K.;** Effect of Weld Thermal Cycle on Helium Bubble Formation in Stainless Steels
- P2-D185 Kawano, S., Nakahigashi, S., Uesugi, N., Nakamura, H., Kono, W., Fukuya, K., Kano, F., Hasegawa, A., Abe, K.;** Weldability of helium-containing Stainless Steels using a YAG Laser

P3-A: ITER, Irradiation Facility and Technology**Next Fusion Device, e.g., ITER**

- P3-A002 Castro, R.G., Bartlett, A.D., Hollis, K.J., Watson, R.D., Nygren, R.E., Youchison, D.L., Slattery, K.T.;** Fabrication and High Heat Flux Testing of Plasma Sprayed Beryllium ITER First Wall Mock-ups

- P3-A003 Kuroda, T., Sato, S., Takatsu, H.;** Development of Be/Cu-alloy and Be/SS Joining Technology by HIP
- P3-A004 Sato, S., Hatano, T., Kuroda, T., Furuya, K., Tokami, I., Hara, S., Osaki, T., Sato, S., Takatsu, H.;** Optimization of HIP Bonding Conditions for ITER Shielding Blanket/First Wall Made from Austenitic Stainless Steel and Dispersion Strengthened Copper Alloy
- P3-A005 Visca, E., Libera, S., Orsini, A., Riccardi, B., Sacchetti, M.;** Thermal Fatigue Equipment to Test Joints of Materials for High Heat Flux Components
- P3-A006 Gotoh, Y., Okamura, H., Kajiuira, S., Kumagai, M., Ando, T., Akiba, M., Suzuki, S., Suzuki, T.;** Development of Material Testing of OF-Cu/DS-Cu/OF-Cu Triplex Tube and Trial Fabrication of a Vertical Target Mock-up for ITER Divertor
- P3-A007 Kitamura, K., Nagata, K., Shibui, M., Tachikawa, N., Araki, M.;** Effects of Interface Edge Configuration on Residual Stress in the Bonded Structures for a Divertor Application
- P3-A008 Nishi, H., Kikuchi, K.;** Influence of Brazing Conditions on the Strength of Brazed Joints of Alumina Dispersion Strengthened Copper to 316 Stainless Steel
- P3-A009 Nagakawa, J.;** Calculation of Radiation-Induced Deformation in the ITER Vacuum Vessel
- P3-A010 Hassanein, A., Grebenshikov, Ju., Konkashbaev, I., Kozhevnikov, V.;** Tritium Behavior in the Eroded Dust and Debris of Plasma-Facing Materials
- P3-A011 Van Osch, E.V., de Vries, M.I., Horsten, M.G.;** Irradiation Testing of 316-IG Austenitic Stainless Steel for ITER
- P3-A012 Davis, J.W., Barabash, V.R., Plöchl, L., Makhankov, A.;** Assessment of Tungsten for ITER Plasma Facing Components
- P3-A013 Makino, T., Iwadachi, T.;** Interface Formation and Strength of Be/DSCu Diffusion Bonding
- P3-A014 Suzuki, S., Suzuki, T., Araki, A., Nakamura, K., J. Boscary, M. Akiba.;** Development of Divertor Plate with CFCs bonded onto DSCu cooling tube for Fusion Reactor Application
- P3-A015 Davis, J.W., Kalinin, G.M.;** Material Property and Design Requirements for Copper Alloys Used in ITER
- P3-A016 Forty, C.B.A., Firth, J.D., Butterworth, G.J.;** Influence of Materials Choice on Occupational Radiation Exposure in ITER
- P3-A018 Xiao, B., Huang, Q., Qiu, L.;** The Radiation of the Center Conductor Post in the Low Aspect Ratio Transmutation Reactor
- P3-A019 Kalinin, G., Matera, R.;** Comparative Analysis of Copper Alloys for the Heat Sink of Plasma Facing Components in ITER
- P3-A020 Belous, V., Kalinin, G., Lorenzetto.;** Assessment of the Corrosion Behavior of Structural Materials in the Water Coolant of ITER
- P3-A021 Kalinin, G., Matera, R., Dietz, J., Ioki, K., Mohri, K., Tivey, R.;** Assessment of Structural Materials and Joints for ITER In-Vessel Components

Irradiation Facility and Technology, e.g., IFMIF

- P3-A022 Konashi, K., Shibayama, T., Teshigawara, M., Kurishita, H., Kayano, H.;** Proton Irradiation Method to Simulate Radiation Damage in Fusion Environment
- P3-A023 Palmer, A.J., Ingram, F.W., Stites, D.J.;** Temperature Controlled Material Irradiation in the Advanced Test Reactor
- P3-A024 Antonucci, C., Daum, E., Haines, J.R., Jitsukawa, I., Moslang, A., Noda, K., Zinkle, S.;** Overview of the IFMIF Test Facility
- P3-A025 Sugimoto, M., Jameson, R.A., Teplyakov, V., Berwald, D., Blind, B., Bruhwiler, D., Deitinghoff, H., Ferdinand, R., Kinsho, M., Klein, H., Lagniel, J-M., Miyahara, A., Oliver, M., Peacock, M., Piechowiak, E., Pozimski, Y., Rathke, J., Tanabe, Y., Volk, K.;** Accelerator Conceptual Design of the International Fusion Materials Irradiation Facility
- P3-A026 Mansur, L.K., Farrell, K., Lee, E.H., Wechsler, M.S.;** Radiation Effects in Spallation Neutron Sources: Relevance to Fusion Reactors
- P3-A027 Narui, M., Sagawa, T., Shikama, T.;** Temperature Control in Fission Irradiation for Fusion Materials Development
- P3-A028 Shibayama, T., Narui, M., Kayano, H., Shikama, T., Sagawa, T.;** In-situ Measurements of Electromotive Force on Semiconductors under Fission Reactor Irradiation
- P3-A029 Matsui, Y., Niimi, M., Yamaura, T., Hoshiya, T., Tsukada, T., Tsuji, H.;** Irradiation Techniques in Pressurized Water Using Hybrid Type of Saturated Temperature Capsule in JMTR

- P3-A030 Hamada, S., Miwa, Y., Yamaki, D., Katano, Y., Nakazawa, T., Noda, K.;** Development of a Triple Beam Irradiation Facility
- P3-A031 Daum, E., Wilson, P.P.H., Ehrlich, K., Fischer, U.;** Characterization of the Irradiation Parameters in the IFMIF High Flux Test Region
- P3-A032 Katsuta, H., Kato, Y., Konishi, S., Miyauchi, Y., Smith, D., Hua, T., Green, L., Benamati, G., Cevolani, S., Rörig, H., Schutz, W.;** Present Status of the Conceptual Design of IFMIF Target Facility
- P3-A033 Kato, Y., Katsuta, H., Konishi, S., Ogoshi, M., Hua, T., Green, L., Cevolani, S.;** Impurity Control in Liquid Lithium Loop for IFMIF Target Facility
- P3-A034 Haines, J.R., Jitsukawa, I., Möslang, A., Noda, K., Viola, R., Zinkle, S.J.;** Design Concept of the IFMIF Test Assemblies
- P3-A035 Qualls, A.L., Muroga, T.;** Design of A Varying Temperature Irradiation Experiment for Operation in HFIR
- P3-A036 Gomes, I.;** US Contribution for the Neutronics Analysis in the IFMIF's CDA Activities
- P3-A037 Daum, E., Möslang, A., Wilson, P.P.H.;** Characterization of the Volume for High Dose Irradiations with IFMIF
- P3-A038 Konishi, S., Martone, M., Monti, S., Maekawa, H., Yamaki, D., Möslang, A., Katsuta, H., Noda, K.;** Overview of the IFMIF Safety System and Conventional Facility
- P3-A039 Nakamura, H., Itoh, K., Kukita, Y., Ida, M., Kato, Y., Maekawa, H., Katsuta, H.;** Experimental and Analytical Studies on High Speed Plane Jet Along Concave Wall Simulating IFMIF Li Target Flow

P3-B: Damage Production, Cascade Formation, Mechanical Properties

Damage Production and Accumulation

- P3-B040 Faulkner, R.G., Bacon, D.J., Song, S., Flewitt, P.E.J.;** Neutron Energy spectrum and Temperature Effects on Freely Migrating Defect Concentrations and Grain Boundary Segregation in α -Fe
- P3-B041 Koptelov, E.A., Ishino, S.;** Radiation Rate Dependence of Interstitial Clustering Under Intense Irradiation
- P3-B042 Yuya, H., Ohtsuka, H., Maeta, H., Matsumoto, N., Sugai, H., Yamakawa, K., Iwase, A., Matsui, T., Suzuki, T., Jinchoh, M.;** Diffuse X-ray Scattering Studies of Radiation Defects in Ni and Dilute Ni Alloys
- P3-B043 Kawatsura, K., Hasegawa, T., Terazawa, N., Masuda, N., Arai, S., Aoki, Y., Yamamoto, S., Narumi, K., Naramoto, H.;** Anomalous Depth Profile of implanted Ni Atoms and Disorder Distribution in Single Crystal MgO under Low Temperature Ion Implantation
- P3-B044 Kawatsura, K., Shimatani, N., Terazawa, N., Arai, S., Aoki, Y., Yamamoto, S., Narumi, K., Naramoto, H., Horino, Y., Mokuno, Y., Fujii, K.;** Radiation-induced Amorphization and Recrystallization of α -SiC Single Crystal
- P3-B045 Kawatsura, K., Takahashi, R., Masuda, N., Arai, S., Aoki, Y., Yamamoto, S., Narumi, K., Naramoto, H., Horino, Y., Mokuno, Y., Fujii, K., Aruga, T.;** Optical and RBS Study on Radiation-induced Effect in MgO Single Crystal by 200 keV and 1.0 MeV Ni Ion Implantation
- P3-B046 Kawatsura, K., Nakae, T., Arai, S., Horino, Y., Mokuno, Y., Fujii, K., Mitamura, T., Terasawa, M., Uchida, H., Koterazawa, K., Aruga, T.;** Radiation Damage and Radiation-induced Segregation in Single Crystal Stainless Steel by RBS and PIXE Channeling
- P3-B047 Okudaira, M., Matsumura, S., Kinoshita, C.;** Instability and Microstructural Change of Ordered Precipitates under Irradiation with Energetic Particles
- P3-B048 Golubov, S., Singh, B.N., Trinkaus, H.;** Calculation of Recoil Energy Effects on Defect Accumulation in Terms of Production Bias and Loop Glide
- P3-B049 Kuramoto, E., Tsutsumi, T., Koyanagi, M.;** Computer Simulation of the Interaction between an Edge Dislocation and Interstitial Cluster in Fe and Ni
- P3-B050 Lizunov, Y., Möslang, A., Ryazanov, A., Vladimirov, P.;** Comparison of Damage Production in Fusion Ceramics Under Light Ion- Neutron- and Electron Irradiation
- P3-B187 de la Rubia, T.D., Soneda, N., Alonso, E.;** Atomistic Simulations of Freely Migrating Defect Production in fcc and bcc metals
- P3-B052 Kozlov, A.V., Kirsanov, V.V.;** A Technique to Predict Properties Changes of ITER Magnetic System Metal Materials, Based on Experimental Data Obtained at IVV-2M Research Reactor

- P3-B053 Kamiyama, H., Ohno, K., Maruyama, Y., Li, Z-Q., Kawazoe, Y., Matsui, H.;** All Electron First Principle Calculation of Vacancy and Self-interstitial Atoms in BCC Iron Crystal

Cascade Formation and Damage Efficiency

- P3-B054 Morishita, K., de la Rubia, T.D.;** A Molecular Dynamics Simulation Study of Displacement Cascades in Vanadium
- P3-B055 Yamakawa, K., Shimomura, Y.;** Formation Mechanism of Clustered Small Loops(Rafts) in Fission-Neutron Irradiated Mo at High Temperatures
- P3-B056 Yamakawa, K., Shimomura, Y.;** Damage Structures in Fission-Neutron Irradiated Ni Based Alloys at High Temperatures
- P3-B057 Heinisch, H.L., Singh, B.N.;** Stochastic Annealing Simulation of Copper Under Continuous Neutron Irradiation
- P3-B058 Nakamichi, H., Kinoshita, C., Rehn, L.E., Okamoto, P.R.;** Interaction of Frenkel Pairs and Displacement Cascades in Copper during Self-Ion and/or Electron Irradiation at 670K
- P3-B059 Kitajima, K.;** Statistical Theory of the Evolution of Defect Clusters under Irradiation with Cascades
- P3-B060 Fielitz, P., Macht, M-P., Naundorf, V., Wollenberger, H.;** Atom Transport Efficiency in Heavy Ion Irradiated Metals

Mechanical Properties and Microstructures

- P3-B063 Saralidze, Z.K.;** Non Diffusional Radiation Creep due to Direct Action of Radiation on Dislocation Pinning Centers
- P3-B064 Megusar, J., Garner, F.A.;** Response of Dynamically Compacted Tungsten to Very High Fluence Neutron Irradiation at 425-600°C in FFTF
- P3-B065 Neklyudov, I. M., Parkhomenko, A.A., Kamyshanchenko, N.V., Krasilnikov, V.V.;** Influence of Irradiation on the Dislocation Kinetics, Allowing for their Velocity Distribution
- P3-B066 Mizubayashi, H., Tateishi, K., Tanimoto, H., Nakata, K.;** High Cycle Fatigue Tests of Modified 316 Stainless Steel under 20 MeV Proton Irradiation and Thermal-Pulses
- P3-B067 Jitsukawa, S., Naito, A., Segawa, J.;** Effect of Size and Configuration of 3-point Bend Bar Specimens on the J-R Curves
- P3-B068 Tedeski, G., Odette, G.R., Lucas, G.E.;** Development of Superposition Rules for Hardening in Alloys Containing Multiple Defect Populations
- P3-B069 Niimi, M., Hoshiya, T., Jitsukawa, S., Tsukada, T., Matsui, Y., Ohmi, M., Mimura, H., Ooka, N., Hide, K.;** Properties of Precipitation Hardened Steel Irradiated at 323K in The Japan Materials Testing Reactor
- P3-B071 Robertson, C., Boulanger, L.;** Dislocation Arrangements Induced by Nano-Indentation in Ion Irradiated 316L Stainless Steel
- P3-B072 Matsukawa, Y., Suda, T., Ohnuki, S.;** Mechanical Property and Microstructure of Neutron-Irradiated TiNi Shape Memory Alloy
- P3-B073 Ando, M., Katoh Y., Tanigawa, H., Kohyama, A.;** Microstructural Examination of Ion -Irradiated Materials Following Micro-zone Deformation
- P3-B074 Katoh Y., Tanigawa, H., Muroga, T., Iwai, T., Kohyama, A., Motojima, O.;** The Influence of Helium Co-Implantation on Ion-Induced Hardening of Low Activation Ferritic Steel as Evaluated by Micro-Indentation Technique
- P3-B077 Tanigawa, H., Kohyama, A., Katoh, Y., Kohno, Y.;** Applied Stress Effects on Interstitial Type Frank Loop Evolution in Irradiated Single Crystal Fe-Ni-Cr
- P3-B078 Onishi, K., Kosugi, T., Fukumoto, K., Iwai, T., Matsui, H.;** Effects of Atomic Size Factor of Solutes on Radiation-Induced Swelling in Vanadium and Niobium Alloys during Ion Irradiation
- P3-B080 Nikolaenko, V.A., Karpuchin, V., Krasikov, E., Kusnetsov, V.;** Justification of the New Approach to the Testing of the Candidate ITER Materials in Fission Reactors
- P3-B083 Müller, G., Chen, Y., Spätig, P., Schaeublin, R., Victoria, M.;** Mechanical Properties and Microstructures of Proton-irradiated Molybdenum, Molybdenum alloys and Pure Iron
- P3-B085 Yasuda, R., Satou, M., Hasegawa, A., Abe, K.;** Influence of Neutron Irradiation on Mechanical Properties of Vanadium/Ceramics Joints
- P3-B086 Okada, A., Maeda, H., Hamada, K., Ishida, I.;** Defect Structure Development in a Pure Iron and Dilute Iron Alloys Irradiated with Neutrons and Electrons

P3-C: Temperature Cycling, Microstructural Evolution, H, He Effects**Temperature Cycling, etc.**

- P3-C087 Kasada, R., Kimura, A., Matsui, H., Hasegawa, M., Narui, M.;** Effects of Varying Temperature Irradiation on the Neutron Irradiation Hardening of Reduced Activation 9Cr-2W Martensitic Steels
- P3-C088 Nita, N., Fukumoto, K., Kimura, A., Matsui, H.;** Effect of Temperature Change on Microstructural Evolution of Vanadium Alloys under Neutron Irradiation in JMTR
- P3-C089 Akasaka, N., Hattori, K., Onose, S., Ukai, S.;** Effects of Temperature Changes on Void Swelling in P,Ti-Modified 316 Stainless Steel
- P3-C090 Ochiai, K., Watanabe, H., Muroga, T., Yoshida, N., Matsui, H.;** Microstructural Evolution in Vanadium during Ion Irradiation at Constant and Varying Temperature
- P3-C091 Watanabe, H., Muroga, T., Yoshida, N.;** Microstructural Evolution during Neutron Irradiation with Stepwise Change of Temperature
- P3-C092 Matsui, H., Fukumoto, K., Yoshida, N., Watanabe, H.;** Temperature Cycling Irradiation Experiments: Implications for Fusion Material Technology

Microstructural Evolution

- P3-C093 Watanabe, S., Sakaguchi, N., Mochizuki, S., Takahashi, H.;** Defect-Flow-Induced Heterogeneous Dislocation Formation and Solute Redistribution near A Grain Boundary in Austenitic Stainless Steel under Electron Irradiation
- P3-C094 Sakaguchi, N., Watanabe, S., Takahashi, H.;** A Model of Segregation and Microstructural Evolution near Grain Boundary under Irradiation
- P3-C095 Spätig, P., Schaublin, R., Gyger, S., Victoria, M.;** Evolution of the Mechanical Properties of the F82H Ferritic/Martensitic Steel after 590 MeV Proton Irradiation and Its Relation to the Defect Microstructure
- P3-C096 Schaublin, R., Spätig, P., Victoria, M.;** Chemical Behaviour of the Low Activation Ferritic/Martensitic Steel F82H
- P3-C097 Okada, A., Matsumoto, T., Hamada, K., Ishida, I., Abe, Y.;** Electron Irradiation Effects of Ni-Ti Shape Memory Alloys
- P3-C098 Sakairi, H., Yagi, E., Koyama, A.;** Annealing of Cu₃Au Irradiated with Protons, α -Particles at C Ions at Liquid Nitrogen Temperature
- P3-C100 Song, M., Tang, X., Furuya, K., Noda, T.;** High-Resolution Transmission Electron Microscopy of Defects and Clusters in 316 SS and Pure Al Irradiated with 15keV Helium Ions at Room Temperature
- P3-C101 Koyanagi, M., Ohsawa, K., Kuramoto, E.;** MD Study of Dynamic Behavior of Small Interstitial Cluster in Fe
- P3-C102 Abe, H., Kuramoto, E.;** Interaction of Solutes with Irradiation-Induced Defects of Electron-Irradiated Dilute Iron Alloys
- P3-C103 Hojou, K., Otsu, H., Furuno, S., Nishita, K.N., Sasajima, N., Izui, K.;** In-situ Observation of Damage Evolution in TiC Crystals during Hydrogen and Helium Dual-ion Beam Irradiation
- P3-C104 Ono, K., Arakawa, K., Yoshida, N.;** Dynamical Process of Defects Clustering in Ni under the Irradiation of Low Energy Helium Ions
- P3-C105 Fukushima, H., Ochiai, K., Shimomura, Y.;** Voids in Fast-Neutron-Irradiated Cu, Ni and Cu-Ni Concentrated Alloys Studied by TEM and Positron Annihilation Methods
- P3-C106 Shimomura, Y., Mukouda, I., Sugio, K.;** Formation of Voids in FCC Metals Neutron Irradiated at High Temperature
- P3-C107 Mukouda, I., Shimomura, Y.;** Damage Evolution in Neutron-irradiated Cu, Ni and Austenitic Alloys with Temperature Controlled Capsule at JMTR Reactor
- P3-C108 Chimi, Y., Iwase, A., Ishikawa, N.;** Defect Accumulation Behavior in Iron Irradiated with Energetic Ions and Electrons at ~ 80 K
- P3-C109 Müller, S., Abromeit, C., Wanderka, N., Wollenberger, H.;** Disordering Kinetics of the γ Phase Ni₃Al under Ion Irradiation
- P3-C110 Abromeit, C., Camus, E., Matsumura, S.;** Dissolution Profiles of Ordered Particles under Irradiation: Theoretical Modelling and Atom Probe Results

- P3-C111 Horiki, M., Yoshiie, T., Iseki, M., Kiritani, M.;** Invisible and Visible Point Defect Clusters in Neutron Irradiated Iron
- P3-C112 Ezawa, T., Tanimura, J., Tanabe, T.;** Radiation-induced Segregation and Precipitation in Al-Zn Alloys Irradiated by Deuterium Ions
- P3-C113 Xu, Q., Yoshida, N., Yoshiie, T.;** Nucleation and Growth of Dislocation Loops in Austenitic Stainless Steels Irradiated by Fission and Fusion Neutrons
- P3-C114 Niwase, K.;** Void Formation Close to Stacking Fault Tetrahedra in Electron Irradiated Pure Ag and Cu at Low Temperatures
- P3-C115 Ohnuki, S., Garner, F.A., Takahashi, H.;** Effect of Transmutation on Microstructure in V-Cr-Ti Alloys Irradiated in HFIR
- P3-C116 Pechekin, V.A., Konobeev, Y.V., Rudnev, S.I.;** An Analysis of Void Swelling Dose Dependence in V-Fe Alloys Irradiated at 625°C with 50 keV V⁺-Ions to Doses Ranging from 2.5 to 40 dpa
- P3-C118 Igata, N., Korolev, D.N., Ryazanov, A.;** Effect of Gas Atoms on Incubation Stage of Swelling in Austenitic Stainless Steel
- P3-C119 Borodin, V.A., Ryazanov, A.I.;** The effect of Impurities on the Swelling of Vanadium
- P3-C121 Takeuchi, M., Muto, S., Tanabe, T., Kurata, H., Hojou, K.;** Structural Change in Graphite under Electron Irradiation at Low Temperature
- P3-C122 Muto, S., Tanabe, T., Takeuchi, M., Kobayashi, Y., Furuno, S., Hojou, K.;** TEM Analyses of Surface Ridge Network in a Ion-Irradiated Graphite Thin Film
- P3-C123 Voyevodin, V.N., Neklyudov, I.M., Bryk, V.V., Borodin, O.V.;** Microstructure Evolution and Radiation Stability of Alloys and Steels

H,He Effects

- P3-C124 Iwase, A., Rehn, L.E., Baldo, P.M., Funk, L.;** Effects of He Implantation on Radiation Induced Segregation in Cu-Au and Ni-Si Alloys
- P3-C125 Garner, F.A., Oliver, B.M., Greenwood, L.R.;** The Dependence of Helium Generation Rate on Nickel Content of Fe-Cr-Ni Alloys Irradiated at High dpa Levels in Fast Reactors
- P3-C126 Ryazanov, A., Matsui, H.;** Physical Mechanism of Helium Release during Deformation of Vanadium Alloys Doped with Helium
- P3-C127 Yagi, E.;** Formation of Heavy Inert Gas Bubbles in Materials
- P3-C128 Kamigaki, N., Furuno, S., Hojo, K., Hashimoto, E., Izui, K., Kino, T.;** Evolution of Structural Damage in High-Purity Aluminum Alloys Irradiated with Inert Gas Ions
- P3-C129 Tsukuda, N., Ishimatsu, M.;** Martensitic Transformation in Helium Implanted Type 316 Austenitic Steel
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