

Contents

Proceedings of the 16th International Conference on Plasma–Surface Interactions in Controlled Fusion Devices

Preface	vii
Committees	ix
Contents	xi

Section 1. Material migration and transport

Material migration in divertor tokamaks, <i>G.F. Matthews</i>	
Tungsten redistribution patterns in ASDEX Upgrade, <i>K. Krieger, J. Likonen, M. Mayer, R. Pugno, V. Rohde, E. Vainonen-Ahlgren and ASDEX Upgrade Team</i>	55
Experimental observations and modelling of carbon transport in the inner divertor of JET, <i>A. Kirschner, V. Philippis, D.P. Coster, S.K. Erents, H.G. Esser, G. Federici, A.S. Kukushkin, A. Loarte, G.F. Matthews, J. Roth, U. Samm and JET EFDA Contributors</i>	60
On dust in tokamak edge plasmas, <i>S.I. Krasheninnikov, T.K. Soboleva, Y. Tomita, R.D. Smirnov and R.K. Janev</i>	65
Experimental study of different carbon dust growth mechanisms, <i>C. Arnas, C. Dominique, P. Roubin, C. Martin, C. Laffon, P. Parent, C. Brosset and B. Pégourié</i>	69
Chemical erosion of DIII-D lower divertor tiles, <i>G.M. Wright, A.A. Haasz, J.W. Davis and R.G. Macaulay-Newcombe</i>	74
OEDGE modeling of ^{13}C deposition in the inner divertor of DIII-D, <i>J.D. Elder, P.C. Stangeby, D.G. Whyte, S.L. Allen, W.R. Wampler, A.G. McLean, D.G. Whyte, W.P. West, P.C. Stangeby, N.H. Brooks, D.L. Rudakov, V. Phillips, M. Rubel, G.F. Matthews, A. Nagy, R. Ellis and A.S. Bozek</i>	79
^{13}C transport studies in L-mode divertor plasmas on DIII-D, <i>S.L. Allen, W.R. Wampler, A.G. McLean, D.G. Whyte, W.P. West, P.C. Stangeby, N.H. Brooks, D.L. Rudakov, V. Phillips, M. Rubel, G.F. Matthews, A. Nagy, R. Ellis and A.S. Bozek</i>	84
Methane screening in JET reverse field experiments, <i>J.D. Strachan, B. Alper, G. Corrigan, S.K. Erents, C. Giroud, A. Korotkov, H. Leggate, G.F. Matthews, R.A. Pitts, J. Spence and M. Stamp</i>	89
Carbon dust formation from re-deposited layers in high-density hydrogen/helium plasmas in the NAGDIS-II device, <i>N. Ohno, Y. Kobayashi, T. Sugimoto and S. Takamura</i>	94
Modelling of deposition of hydrocarbon films underneath the divertor and in the pumping ducts of ITER, <i>G. Federici, M. Mayer, G. Strohmayer, V. Chuyanov and C. Day</i>	99
Simulation study on influence of chemically eroded higher hydrocarbons on SOL impurity transport and effect of dynamical material mixing on erosion/deposition of tungsten surfaces exposed to boundary plasmas, <i>R. Kawakami and T. Mitani</i>	104
Simulation study on influence of chemically eroded higher hydrocarbons on SOL impurity transport and effect of dynamical material mixing on erosion/deposition of tungsten surfaces exposed to boundary plasmas, <i>R. Kawakami and T. Mitani</i>	104
ITER divertor performance in conditions of carbon erosion, <i>A.S. Kukushkin, H.D. Pacher, D.P. Coster, G.W. Pacher and D. Reiter</i>	
Studies on ^{13}C deposition in ASDEX Upgrade, <i>E. Vainonen-Ahlgren, J. Likonen, T. Renvall, V. Rohde, R.</i>	

DIVIMP modeling of impurity flows and screening in Alcator C-Mod, <i>T. Chung, I.H. Hutchinson, B. Lipschultz, B. LaBombard and S. Lisgo</i>	109
Motion and lifetime of dust grains in a tokamak plasma, <i>J.D. Martin, M. Coppins and G.F. Counsell</i>	114
Carbon erosion and deposition on the ASDEX Upgrade divertor tiles, <i>M. Mayer, V. Rohde, J. Likonen, E. Vainonen-Ahlgren, K. Krieger, X. Gong, J. Chen and ASDEX Upgrade Team</i>	119
DIVIMP modeling of the toroidally symmetrical injection of $^{13}\text{CH}_4$ into the upper SOL of DIII-D, <i>A.G. McLean, J.D. Elder, P.C. Stangeby, S.L. Allen, J.A. Boedo, N.H. Brooks, M.E. Fenstermacher, M. Groth, S. Lisgo, A. Nagy, D.L. Rudakov, W.R. Wampler, J.G. Watkins, W.P. West and D.G. Whyte</i>	124
Time resolved deposition measurements in NSTX, <i>C.H. Skinner, H. Kugel, A.L. Roquemore, J. Hogan, W.R. Wampler and The NSTX team</i>	129
Measurements of carbon, deuterium and boron deposition in DIII-D, <i>W.R. Wampler, S.L. Allen, A.G. McLean and W.P. West</i>	134
Section 2. Divertor physics	
OSM-EIRENE modeling of neutral pressures in the Alcator C-Mod divertor, <i>S. Lisgo, P. Börner, C. Boswell, D. Elder, B. LaBombard, B. Lipschultz, C.S. Pitcher, D. Reiter, P.C. Stangeby, J.L. Terry and S. Wiesen</i>	139
Edge and divertor physics with reversed toroidal field in JET, <i>R.A. Pitts, P. Andrew, X. Bonnin, A.V. Chankin, Y. Corre, G. Corrigan, D. Coster, I. Duran, T. Eich, S.K. Erents, W. Fundamenski, A. Huber, S. Jachmich, G. Kirnev, M. Lehnen, P.J. Lomas, A. Loarte, G.F. Matthews, J. Rapp, C. Silva, M.F. Stamp, J.D. Strachan, E. Tsitrone and contributors to the EFDA-JET workprogramme</i>	146
Local island divertor experiments on LHD, <i>T. Morisaki, S. Masuzaki, A. Komori, N. Ohyabu, M. Kobayashi, Y. Feng, F. Sardel, K. Narihara, K. Tanaka, K. Ida, B.J. Peterson, M. Yoshinuma, N. Ashikawa, M. Emoto, H. Funaba, M. Goto, K. Ikeda, S. Inagaki, O. Kaneko, K. Kawahata, S. Kubo, J. Miyazawa, S. Morita, K. Nagaoka, Y. Nagayama, H. Nakaniishi, K. Ohkubo, Y. Oka, M. Osakabe, T. Shimozuma, M. Shoji, Y. Takeiri, S. Sakakibara, R. Sakamoto, K. Sato, K. Toi, K. Tsumori, K.Y. Watababe, H. Yamada, I. Yamada, Y. Yoshimura, O. Motojima and LHD Experimental Group</i>	154
Spectroscopic study of hydrogen particle behavior in attached and detached divertor plasmas of JT-60U, <i>H. Kubo, H. Takenaga, K. Sawada, T. Nakano, S. Kobayashi, S. Higashijima, N. Asakura and K. Shimizu</i>	161
Experimental study of negative ion profiles in H ₂ -MAR plasmas in divertor simulator MAP-II, <i>S. Kado, S. Kajita, D. Yamasaki, Y. Iida, B. Xiao, T. Shikama, T. Oishi, A. Okamoto and S. Tanaka</i>	166
First results from the dynamic ergodic divertor at TEXTOR, <i>M. Lehnen, S.S. Abdullaev, W. Biel, S.</i>	
Brezinsek, K.H. Finken, D. Harting, M. von Hellermann, M. Jakubowski, R. Jaspers, M. Kobayashi, H.R. Koslowski, A. Krämer-Flecken, G. Matsunaga, A. Pospieszczyk, D. Reiter, T. Van Rompu, U. Samm, O. Schmitz, G. Sergienko, B. Unterberg, R. Wolf, O. Zimmermann and the TEXTOR team	171
Heat deposition patterns on the target plates of the dynamic ergodic divertor, <i>M.W. Jakubowski, S.S. Abdullaev, K.H. Finken, M. Lehnen and the TEXTOR team</i>	176
Observations of macroscopic oscillations of the detachment front for injection of H ₂ , He, and Ne into the simulated baffled divertor, <i>A. Matsubara, T. Watanabe, T. Sugimoto, S. Sudo and K. Sato</i>	181
Three-dimensional proton trajectory analyses and simulation of neutral particle transport in an ICRF heated long pulse discharge on the large helical device, <i>M. Shoji, R. Kumazawa, K. Saito, T. Watanabe, Y. Nakamura, S. Masuzaki, S. Morita, M. Goto, N. Noda, N. Ohyabu and LHD Experimental Groups</i>	186
Influence of core-edge coupling and impurities on the operation regimes of a fusion reactor, <i>R. Stankiewicz and R. Zagórska</i>	191
Radiation belts in the Wendelstein-7AS stellarator, <i>U. Wenzel, H. Thomsen, Y. Feng, P. Grigull and K. McCormick</i>	196
Experimental investigations with respect to the applicability of the Bohm criterion, <i>T. Lunt, N. Ezumi, W. Bohmeyer and G. Fussmann</i>	201
Simulation of afterglow plasma evolution in an inertial fusion energy chamber, <i>B.K. Frolov, A.Yu. Pigarov, S.I. Krasheninnikov, R.W. Petzoldt and D.T. Goodin</i>	206
Angular dependence of energy and particle fluxes in a magnetized plasma, <i>B. Koch, W. Bohmeyer and G. Fussmann</i>	211
Variation in particle pumping due to changes in topology in high performance DIII-D plasmas, <i>T.W. Petrie, N.H. Brooks, M.E. Fenstermacher, C.M. Greenfield, M. Groth, A.W. Hyatt, A.W. Leonard, M.A. Mahdavi, G.D. Porter, M.E. Rensink, M.J. Schaffer, M.R. Wade, J.G. Watkins, N.S. Wolf and The DIII-D Team</i>	216
3D edge energy transport in stellarator configurations, <i>N. McTaggart, R. Zagórski, X. Bonnin, A. Runov, R. Schneider, T. Kaiser, T. Rognlien and M. Umansky</i>	221
Measured signatures of low energy, physical sputtering in the line shape of neutral carbon emission, <i>N.H. Brooks, R.C. Isler, D.G. Whyte, M.E. Fenstermacher, R.J. Groebner, P.C. Stangeby, W.W. Heidbrink, G.L. Jackson, M.A. Mahdavi, W.P. West and The DIII-D Team</i>	227
Spatial structure of detached plasmas in the ULS divertor simulator, <i>P.K. Browning, U. Fantz, K.J. Gibson, B. Mihaljevic and D. Wunderlich</i>	232
Modeling of parasitic plasma under the divertor roof baffle, <i>K. Matyash, R. Schneider, X. Bonnin, D. Coster, V. Rohde and H. Kersten</i>	237
The effect of field reversal on the JET MkIIIGB-SRP divertor performance in L-mode density limit dis-	

Section 3. Parallel transport and drifts	
EDGE2D code simulations of SOL flows and in-out divertor asymmetries in JET, <i>G.S. Kirnev, G. Corrigan, D. Coster, S.K. Erents, W. Fundamenski, G.F. Matthews and R.A. Pitts</i>	271
Effect of drifts on the high Mach flow associated with the divertor detachment, <i>K. Hoshino, A. Hatayama, R. Schneider and D.P. Coster</i>	276
Plasma profiles and flows in the high-field side scrape-off layer in Alcator C-Mod, <i>N. Smick, B. LaBombard and C.S. Pitcher</i>	281
Spectroscopic measurements of plasma flow in the SOL in C-Mod, <i>K. Marr, B. Lipschultz, B. LaBombard and J.L. Terry</i>	286
Generation of toroidal rotation by gas puff. Simulations of MAST experiments with B2SOLPS5.0, <i>V. Rozhansky, E. Kaveeva, S. Voskoboinikov, G. Counsell, A. Kirk, D. Coster and R. Schneider</i>	291
On the energy transfer between flows and turbulence in the plasma boundary of fusion devices, <i>E. Sánchez, C. Hidalgo, B. Gonçalves, C. Silva, M.A. Pedrosa, M. Hron, K. Erents and JET EFDA contributors</i>	296
Modelling and consequences of drift effects in the edge plasma of Alcator C-Mod, <i>X. Bonnin, D. Coster, R. Schneider, D. Reiter, V. Rozhansky and S. Voskoboinikov</i>	301
Effect of $B \times \nabla B$ direction on SOL energy transport in JET, <i>W. Fundamenski, P. Andrew, K. Erents, A. Huber, G. Kirnev, G. Matthews, R. Pitts, V. Riccardo, S. Sipilä and EFDA JET contributors</i>	305
Kinetic investigation of a collisionless scrape-off layer with a source of poloidal momentum, <i>J.P. Gunn</i>	310
Section 4. Cross-field transport	
Plasma edge cross-field transport: experiment and theory, <i>B.A. Carreras</i>	315
Velocity fields of edge/Scrape-Off-Layer turbulence in Alcator C-Mod, <i>J.L. Terry, S.J. Zweben, O. Grulke, M.J. Greenwald and B. LaBombard</i>	322
Simulation of plasma fluxes to material surfaces with self-consistent edge turbulence and transport for tokamaks, <i>T.D. Rognlien, M.V. Umansky, X.Q. Xu, R.H. Cohen and L.L. LoDestro</i>	327
Edge fluctuation studies in Heliotron J, <i>T. Mizuchi, V.V. Chechkin, K. Ohashi, E.L. Sorokovoy, A.V. Chechkin, V.Yu. Gonchar, K. Takahashi, S. Kobayashi, K. Nagasaki, H. Okada, S. Yamamoto, F. Sano, K. Kondo, N. Nishino, H. Kawazome, H. Shidara, S. Kaneko, Y. Fukagawa, Y. Morita, S. Nakazawa, S. Nishio, S. Tsuboi and M. Yamada</i>	332
Numerical modelling of changes of edge plasma transport due to the presence of TEXTOR-DED, <i>H. Gerhauser, R. Zagórski, D. Reiser and M.Z. Tokar'</i>	337
Control of long range turbulent transport with biasing in the tokamak scrape-off-layer, <i>C.F. Figarella, Ph. Ghendrih, Y. Sarazin, G. Attuel, S. Benkadda, P. Beyer, G. Falchetto, E. Fleurence, X. Garbet and V. Grandgirard</i>	342
Statistical analysis of turbulent front propagation in the scrape-off-layer, <i>Ph. Ghendrih, Y. Sarazin, G. Attuel, S. Benkadda, P. Beyer, G. Darmet, G. Falchetto, C. Figarella, X. Garbet, V. Grandgirard and M. Ottaviani</i>	347
Plasma structures and transport in the SOL of the T-10 tokamak, <i>G.S. Kirnev, V.P. Budaev, S.A. Grashin, E.V. Gerasimov and L.N. Khimchenko</i>	352
3D Scrape-off layer modelling with BoRIS, <i>J. Riemann, M. Borchardt, R. Schneider and A. Mutzke</i>	357
Preliminary study of the influence of DED on carbon radiation and transport in the TEXTOR tokamak, <i>G. Telesca, K. Crombé, M. Tokar, B. Unterberg, G. Verdooolaege, R. Zagorski and G. Van Oost</i>	361
Benchmarking Tokamak edge modelling codes, <i>D.P. Coster, X. Bonnin, G. Corrigan, G.S. Kirnev, G. Matthews, J. Spence and contributors to the EFDA-JET work programme</i>	366
Multi-ion fluid simulation of tokamak edge plasmas including non-diffusive anomalous cross-field transport, <i>A.Yu. Pigarov, E.M. Hollmann, S.I. Krashennikov, T.D. Rognlien and W.P. West</i>	371
Statistical description of the radial structure of turbulence in the JET plasma boundary region, <i>B. Gonçalves, C. Hidalgo, C. Silva, M.A. Pedrosa and K. Erents</i>	376
Multi-machine comparisons of H-mode separatrix densities and edge profile behaviour in the ITPA SOL and Divertor Physics Topical Group, <i>A. Kallenbach, N. Asakura, A. Kirk, A. Korotkov, M.A. Mahdavi, D. Mossessian and G.D. Porter</i>	381
Simple Core-SOL-Divertor model and its application to operational space of HT-7U, <i>R. Hiwatari, Y. Kuzuyama, A. Hatayama, K. Okano, Y. Asaoka, S. Zhu and Y. Tomita</i>	386

Comparison of plasma parameters between QH and ELMing phases of the same discharges, <i>C.J. Lasnier, W.P. West, K.H. Burrell, J.S. deGrassie, E.J. Doyle and T.H. Osborne</i>	391	de Vries, H.G. Esser, H.-U. Fahrbach, J. Gafert, E. Gauthier, O. Gehre, M. Graham, G. Haas, A. Huber, K. Lawson, P.J. Lomas, M. Mantsinen, G. Matthews, M.-L. Mayoral, A. Meigs, Ph. Mertens, V. Mertens, I. Monakhov, J. Neuhauser, V. Philippss, V. Rohde, M. Santala, W. Suttrop, A. Walden, D.V. Eester, F. Wesner and ASDEX Upgrade Team and JET EFDA Contributors	456
Modelling of heat deposition onto the Tore Supra toroidal pumped limiter, <i>X. Bonnin, Ph. Ghendrih, E. Tsitrone and R. Mitteau</i>	395	Hydrogen absorption capability of a niobium panel for pumping neutral atoms in divertor region, <i>Y. Nakamura, A.I. Livshits, Y. Nakahara, Y. Hatano, A. Busnyuk and N. Ohyabu</i>	461
Magnetic structure at the edge of a compact stellarator (NCSX), <i>A. Grossman, T. Kaiser and P.K. Mioduszewski</i>	400	Modeling of three-dimensional neutral transport in tandem mirror plasmas using a Monte-Carlo code, <i>Y. Nakashima, Y. Higashizono, T. Ohki, M. Shoji, S. Kobayashi, Y. Kubota, M. Yoshikawa, M.K. Islam, K. Watanabe, T. Ogita, M. Yamada, R. Murakami and T. Cho</i>	466
Boundary conditions for the multi-ion magnetized plasma-wall transition, <i>D. Tskhakaya and S. Kuhn</i>	405	Pumping capability and particle balance in W7-X: a self-consistent 3D study, <i>D. Sharma, Y. Feng, F. Sardei, J. Kisslinger, H. Grote, P. Grigull and H. Renner</i>	471
Kinetic neutral transport effects in the pedestal of H-mode discharges in the DIII-D tokamak, <i>L.W. Owen, R.J. Groebner and M.A. Mahdavi</i>	410	Divertor regimes in NSTX, <i>V.A. Soukhanovskii, R. Maingi, A.L. Roquemore, J. Boedo, C. Bush, R. Kaita, H.W. Kugel, B.P. LeBlanc, S.F. Paul, G.D. Porter, N.S. Wolf and NSTX Research Team</i>	475
Comparison of limiter and emissive electrode bias on the tokamak ISTTOK, <i>C. Silva, I. Nedzelskiy, H. Figueredo, R.M.O. Galvão, J.A.C. Cabral and C.A.F. Varandas</i>	415	On the lifetime of wall conditioning layers, <i>H. Maier, K. Schmid and W. Eckstein</i>	480
Observations of fast ion loss to the plasma facing wall during quiescent H-modes on DIII-D, <i>W.P. West, C.J. Lasnier, J.G. Watkins, J.S. deGrassie, W. Heidbrink, K.H. Burrell and F.E. Cecil</i>	420	Pellet fuelling in Tore Supra long discharges, <i>A. Géraud, J. Bucalossi, T. Loarer, B. Pégourié, C. Grisolia, G. Gros and J. Gunn</i>	485
Assessment of the poloidal distribution of core plasma fueling and impurity sources in DIII-D, <i>M. Groth, L.W. Owen, G.D. Porter, N.H. Brooks, M.E. Fenstermacher, W.H. Meyer, A.W. Leonard, T.W. Petrie, D.L. Rudakov, G. Wang, J.G. Watkins and N.S. Wolf</i>	425	Analysis of the D α spectral line shape on the carbon limiter insertion experiments in Heliotron J, <i>H. Kawazome, K. Takahashi, S. Tsuboi, H. Arimoto, T. Mizuuchi, N. Nishino, H. Okada, K. Nagasaki, S. Kobayashi, S. Yamamoto, Y. Suzuki, K. Ohashi, S. Nakazawa, M. Kaneko, H. Shidara, Y. Fukagawa, S. Nishio, M. Yamada, H. Yamazaki, K. Kondo and F. Sano</i>	490
Development of the plasma operational regime in the large helical device by the various wall conditioning methods, <i>K. Nishimura, N. Ashikawa, S. Masuzaki, J. Miyazawa, A. Sagara, M. Goto, B.J. Peterson, A. Komori, N. Noda, K. Ida, O. Kaneko, K. Kawahata, T. Kobuchi, S. Kubo, S. Morita, M. Osakabe, S. Sakakibara, R. Sakamoto, K. Sato, T. Shimozuma, Y. Takeiri, K. Tanaka, O. Motojima and LHD Experimental Group</i>	431	Development of NSTX particle control techniques, <i>H.W. Kugel, R. Maingi, M. Bell, D. Gates, K. Hill, B. LeBlanc, D. Mueller, R. Kaita, S. Paul, S. Sabbagh, C.H. Skinner, V. Soukhanovskii, B. Stratton and R. Raman</i>	495
The effect of co-deposition of hydrogen and metals on wall pumping in long duration plasma in TRIAM-1M, <i>M. Miyamoto, M. Tokitani, K. Tokunaga, T. Fujiwara, N. Yoshida, M. Sakamoto, H. Zushi, S. Nagata, K. Ono and TRIAM group</i>	436	Molecular deuterium sources in the outer divertor of JET, <i>A. Pospieszczyk, S. Brezinsek, G. Sergienko, P.T. Greenland, A. Huber, A. Meigs, Ph. Mertens, U. Samm, M. Stamp and S. Wiesen</i>	500
Fuelling efficiency of hydrocarbons in TJ-II plasmas, <i>I. García-Cortés, F.L. Tabarés, D. Tafalla, A. Hidalgo, J.M. Carmona, K.J. McCarthy and F. Medina</i>	441	Thermal wall load control using fast gas puffing in the TPE-RX reversed-field pinch, <i>H. Sakakita, Y. Yagi, H. Koguchi, Y. Hirano and T. Shimada</i>	505
Modeling of the pellet cloud structure in the presence of VB induced drift, <i>I.Yu. Senichenkov, I.Yu. Veselova, V.A. Rozhansky and R. Schneider</i>	446	Three-dimensional simulation of gas conductance measurement experiments on Alcator C-Mod, <i>D.P. Stotler and B. LaBombard</i>	510
Measurement and modeling of hydrogen vibrational and rotational temperatures in weakly-ionized hydrogen discharges, <i>E.M. Hollmann, A.Yu. Pigarov and K. Taylor</i>	451	Local effects of gas fuelling and their impact on transport processes in the plasma edge of the tokamak TEXTOR, <i>B. Unterberg, S. Brezinsek, G. Sergienko, C.C. Chu, P. Dumortier, J.D. Hey, D. Kalupin, A. Kreter, M. Lehnen, A.M. Messiaen, Ph. Mertens, A. Pospieszczyk, U. Samm, B. Schweer, M.Z. Tokar', G. Van Wassenhove and The TEXTOR team</i>	515

Neutral pressure behavior for diverted discharges in the Wendelstein 7-AS Stellarator, <i>K. McCormick, P. Grigull, R. Burhenn, H. Ehmler, Y. Feng, L. Giannone, G. Haas, F. Sardei and The NBI-, ECRH- and W7-AS Teams</i>	520	Composition and hydrogen isotope retention analysis of co-deposited C/Be layers, <i>M.J. Baldwin, K. Schmid, R.P. Doerner, A. Wiltner, R. Seraydarian and Ch. Linsmeier</i>	590
Particle control issues of a compact stellarator with external vacuum vessel, <i>P. Mioduszewski and The QPS Group</i>	525	Dynamic hydrogen isotope behavior and its chemical states in SiC by XPS and TDS technique, <i>Y. Oya, Y. Onishi, H. Kodama, K. Okuno and S. Tanaka</i>	595
The response of the Tore Supra edge plasma to supersonic pulsed gas injection, <i>R. Pánek, J.P. Gunn, J. Bucalossi, I. Ďuran, A. Geraud, M. Hron, T. Loarer, B. Pégourié, J. Stöckel and E. Tsitrone</i>	530	Deuterium retention and release from molybdenum exposed to a Penning discharge, <i>R.A. Causey, C.L. Kunz and D.F. Cowgill</i>	600
Fueling of QH-mode plasmas on DIII-D with pellets and gas, <i>L.R. Baylor, T.C. Jernigan, K.H. Burrell, S.K. Combs, E.J. Doyle, P. Gohil, C.M. Greenfield, C.J. Lasnier and W.P. West</i>	535	Hydrogen retention of carbon dust produced in JT-60, <i>H. Yoshida, Y. Yamauchi, Y. Hirohata, T. Arai, S. Suzuki, M. Akiba, N. Miya and T. Hino</i>	604
Role of wall implantation of charge exchange neutrals in the deuterium retention for Tore Supra long discharges, <i>E. Tsitrone, D. Reiter, T. Loarer, C. Brosset, J. Bucalossi, L. Begrambekov, C. Grisolia, A. Grosman, J. Gunn, J. Hogan, R. Mitteau, B. Pégourié, P. Ghendrih, R. Reichle and P. Roubin</i>	539	Hydrogen retention in divertor tiles used in JT-60 for hydrogen discharge period, <i>Y. Hirohata, T. Shibahara, T. Tanabe, T. Arai, Y. Gotoh, Y. Oya, H. Yoshida, Y. Morimoto, J. Yagyu, K. Masaki, K. Okuno, T. Hino and N. Miya</i>	609
Recoil energy distribution of hydrogen isotopes adsorbed on tungsten, <i>R. Bastasz and J.A. Whaley</i>	544	Thermal desorption behavior of deuterium implanted into polycrystalline diamond, <i>H. Kimura, M. Sasaki, Y. Morimoto, T. Takeda, H. Kodama, A. Yoshikawa, M. Oyaizdu, K. Takahashi, K. Sakamoto, T. Imai and K. Okuno</i>	614
Comparison of deuterium and hydrogen experiments in the Sustained Spheromak Physics Experiment, <i>R.D. Wood, D.N. Hill, E.B. Hooper, H.S. McLean, D. Ryutov and S. Woodruff</i>	548	Depth distribution of deuterium in single- and polycrystalline tungsten up to depths of several micrometers, <i>V.Kh. Alimov, J. Roth and M. Mayer</i>	619
Section 6. Tritium retention		Tritium particle balance and retention during DT discharges in JET, <i>T. Loarer, J. Bucalossi, G. Matthew, V. Philipps and JET-EFDA Collaborators</i>	624
Retention characteristics of hydrogen isotopes in JT-60U, <i>K. Masaki, K. Sugiyama, T. Hayashi, K. Ochiai, Y. Gotoh, T. Shibahara, Y. Hirohata, Y. Oya, N. Miya and T. Tanabe</i>	553	Effects of background gas impurities during D ⁺ irradiation on D trapping in single crystal tungsten, <i>M. Poon, R.G. Macaulay-Newcombe, J.W. Davis and A.A. Haasz</i>	629
Tritium recovery in ITER by radiative plasma terminations, <i>D.G. Whyte and J.W. Davis</i>	560	Tritium distribution on plasma-facing tiles from ASDEX Upgrade, <i>K. Sugiyama, T. Tanabe, K. Krieger, R. Neu and N. Bekris</i>	634
The removal of co-deposited hydrocarbon films from plasma facing components using high-power pulsed flashlamp irradiation, <i>K.J. Gibson, G.F. Counsell, C. Curran, M.J. Forrest, M.J. Kay and K.G. Watkins</i>	565	Fuel removal from bumper limiter tiles by using a pulsed excimer laser, <i>B. Emmoth, S. Khartsev, A. Pisarev, A. Grishin, U. Karlsson, A. Litnovsky, M. Rubel and P. Wienhold</i>	639
Laser desorption of deuterium retained in re-deposited carbon layers at TEXTOR and JET, <i>B. Schweer, A. Huber, G. Sergienko, V. Philipps, F. Irrek, H.G. Esser, U. Samm, M. Kempenaars, M. Stamp, C. Gowers and D. Richards</i>	570	Controlled irradiation of CFC samples in the scrape-off layer of Tore Supra, <i>J.P. Gunn, L. Begrambekov, C. Brosset, A. Gordeev, T. Loarer, E. Miljavina, P. Shigin, H. Khodja, P. Oddon, J.-Y. Pascal and S. Vartanian</i>	644
Tritium distribution in JET Mark IIA type divertor tiles analysed by BIXS, <i>Y. Torikai, M. Matsuyama, N. Bekris, M. Glugla, P. Coad, W. Naegele, A. Erbe, N. Noda, V. Philipps and K. Watanabe</i>	575	Helium irradiation effects on retention behavior of deuterium implanted into boron coating film by PCVD, <i>H. Kodama, M. Oyaizdu, A. Yoshikawa, H. Kimura, Y. Oya, M. Matsuyama, A. Sagara, N. Noda and K. Okuno</i>	649
Multi-scale modeling of hydrogen isotope transport in porous graphite, <i>M. Warrier, R. Schneider, E. Salonen and K. Nordlund</i>	580	Hydrogen release behavior from graphite under pulsed laser irradiation, <i>T. Shibahara, Y. Sakawa and T. Tanabe</i>	654
A new versatile facility: Vehicle-1 for innovative PFC concepts evaluation and its first experiments on hydrogen recycling from solid and liquid lithium, <i>Y. Hirooka, H. Ohgaki, Y. Ohtsuka and M. Nishikawa</i>	585	Characterisation of flakes generated in JET after DD and DT plasma operations, <i>N. Bekris, J.P. Coad, R.-D. Penzhorn, S. Knipe, L. Doerr, R. Rolli and W. Nägele</i>	659
Deuterium concentration in deposited carbon layers in Tore Supra, <i>C. Brosset, H. Khodja and Tore Supra team</i>		Deuterium concentration in deposited carbon layers in Tore Supra, <i>C. Brosset, H. Khodja and Tore Supra team</i>	664

Section 7. Transient events: physics and control

Power deposition onto plasma facing components in poloidal divertor tokamaks during type-I ELMs and disruptions, <i>T. Eich, A. Herrmann, G. Pautasso, P. Andrew, N. Asakura, J.A. Boedo, Y. Corre, M.E. Fenstermacher, J.C. Fuchs, W. Fundamenski, G. Federici, E. Gauthier, B. Goncalves, O. Gruber, A. Kirk, A.W. Leonard, A. Loarte, G.F. Matthews, J. Neuhauser, R.A. Pitts, V. Riccardo and C. Silva</i>	727
Edge localized modes control: experiment and theory, <i>M. Becoulet, G. Huysmans, P. Thomas, E. Joffrin, F. Rimini, P. Monier-Garbet, A. Grosman, P. Ghendrih, V. Parail, P. Lomas, G. Matthews, H. Wilson, M. Gryaznevich, G. Counsell, A. Loarte, G. Saibene, R. Sartori, A. Leonard, P. Snyder, T. Evans, P. Gohil, R. Moyer, Y. Kamada, N. Oyama, T. Hatae, K. Kamiya, A. Degeling, Y. Martin, J. Lister, J. Rapp, C. Perez, P. Lang, A. Chankin, T. Eich, A. Sips, J. Stober, L. Horton, A. Kallenbach, W. Suttrop, S. Saarelma, S. Cowley, J. Lönnroth, M. Shimada, A. Polevoi and G. Federici</i>	732
Effects of ELMs and disruptions on ITER divertor armour materials, <i>G. Federici, A. Zhitlukhin, N. Arkhipov, R. Giniyatulin, N. Klimov, I. Landman, V. Podkovyrov, V. Safronov, A. Loarte and M. Merola</i>	737
Suppression of large edge localized modes in high confinement DIII-D plasmas with a stochastic magnetic boundary, <i>T.E. Evans, R.A. Moyer, J.G. Watkins, P.R. Thomas, T.H. Osborne, J.A. Boedo, M.E. Fenstermacher, K.H. Finken, R.J. Groebner, M. Groth, J. Harris, G.L. Jackson, R.J. La Haye, C.J. Lasnier, M.J. Schaffer, G. Wang and L. Zeng</i>	742
Interaction of ELMs and fast particles with in-vessel components in ASDEX Upgrade, <i>A. Herrmann, J. Neuhauser, V. Rohde, R. Dux, T. Eich, C.J. Fuchs, M.Y. Ye and ASDEX Upgrade team</i>	747
Energy flow during disruptions in JET, <i>J.I. Paley, P. Andrew, S.C. Cowley, W. Fundamenski, A. Huber and JET EFDA Contributors</i>	751
Tungsten erosion under plasma heat loads typical for ITER type I ELMs and disruptions, <i>I.E. Garkusha, A.N. Bandura, O.V. Byrka, V.V. Chebotarev, I.S. Landman, V.A. Makhraj, A.K. Marchenko, D.G. Solyakov, V.I. Tereshin, S.A. Trubchaninov and A.V. Tsarenko</i>	756
Parallel and radial transport of ELM plasma in the SOL and divertor of JT-60U, <i>N. Asakura, M. Takechi, N. Oyama and T. Nakano</i>	761
Far scrape-off layer and near wall plasma studies in DIII-D, <i>D.L. Rudakov, J.A. Boedo, R.A. Moyer, N.H. Brooks, R.P. Doerner, T.E. Evans, M.E. Fenstermacher, M. Groth, E.M. Hollmann, S. Krasheninnikov, C.J. Lasnier, M.A. Mahdavi, G.R. McKee, A. McLean, P.C. Stangeby, W.R. Wampler, J.G. Watkins, W.P. West, D.G. Whyte and C.P.C. Wong</i>	766
Determination of the particle and energy fluxes in the JET far SOL during ELMs using the reciprocating probe diagnostic, <i>C. Silva, B. Goncalves, C. Hidalgo, K. Erents, A. Loarte, G. Matthews and M. Pedrosa</i>	771
ELMs and the H-mode pedestal in NSTX, <i>R. Maingi, S.A. Sabbagh, C.E. Bush, E.D. Fredrickson, J.E. Menard, D. Stutman, K. Tritz, M.G. Bell, R.E. Bell, J.A. Boedo, D.A. Gates, D.W. Johnson, R. Kaita, S.M. Kaye, H.W. Kugel, B.P. LeBlanc, D. Mueller, R. Raman, A.L. Roquemore, V.A. Soukhanovskii and T. Stevenson</i>	776
Integrated exhaust control with divertor parameter feedback and pellet ELM pacemaking in ASDEX Upgrade, <i>A. Kallenbach, P.T. Lang, R. Dux, C. Fuchs, A. Herrmann, H. Meister, V. Mertens, R. Neu, T. Pütterich, T. Zehebauer and The ASDEX Upgrade Team</i>	781
Direct measurement of the impurity dynamics during an ELM cycle, <i>M.R. Wade, K.H. Burrell, J.T. Hogan, A.W. Leonard, T.H. Osborne, P. Snyder and D. Coster</i>	786
SOL and pedestal density profile evolution during DIII-D ELMy and ELM-suppressed H-mode operation, <i>L. Zeng, G. Wang, E.J. Doyle, T.L. Rhodes, W.A. Peebles, M.E. Fenstermacher, T.E. Evans and R.A. Moyer</i>	791
ELMs and strike point jumps, <i>E.R. Solano, S. Jachmich, F. Villone, N. Hawkes, Y. Corre, R.A. Pitts, A. Loarte, B. Alper, K. Guenther, A. Korokto, M. Stamp, P. Andrew, S.A. Arshad, J. Conboy, T. Bolzonella, E. Rachlew, M. Kempenaars, A. Cenedese, D. Testa and JET EFDA contributors</i>	796
Langmuir probe measurements in the lower x-point vicinity of the ASDEX Upgrade divertor, <i>M. Tsallas, N. Tsois, V. Rohde, J. Neuhauser and The ASDEX Upgrade Team</i>	801
Radiation distribution and energy balance during type-I ELMs in ASDEX Upgrade, <i>J.C. Fuchs, T. Eich, A. Herrmann, K.F. Mast and The ASDEX Upgrade Team</i>	805
Simulation of tokamak armour erosion and plasma contamination at intense transient heat fluxes in ITER, <i>I.S. Landman, B.N. Bazylev, I.E. Garkusha, A. Loarte, S.E. Pestchanyi and V.M. Safronov</i>	810
Erosion of tungsten armor after multiple intense transient events in ITER, <i>B.N. Bazylev, G. Janeschitz, I.S. Landman and S.E. Pestchanyi</i>	815
ELM-induced plasma transport in the DIII-D SOL, <i>J.A. Boedo, D.L. Rudakov, E.M. Hollmann, R.A. Moyer, G.R. McKee, K. Burrell, T.E. Evans, A.W. Leonard, W.P. West, M.E. Fenstermacher, M. Groth, S.L. Allen, L. Zeng, G. Wang, J.G. Watkins and The DIII-D Team</i>	820
Influence of ELMs on operation of ICRF antennas in ASDEX Upgrade, <i>V.I. Bobkov, F. Braun, D.A. Hartmann, P. Lamalle, I. Monakhov, J.-M. Notterdaeme, P. Wouters, E. Würsching and ASDEX Upgrade Team</i>	825
Effect of B-field dependent particle drifts on ELM behavior in the DIII-D boundary plasma, <i>M.E. Fenstermacher, A.W. Leonard, G.D. Porter, J.A. Boedo, N.H. Brooks, D.S. Gray, M. Groth, E.M. Hollmann, C.J. Lasnier, T.W. Petrie and L. Zeng</i>	830

Thermographic power accounting in MAST, <i>F. Lott, A. Kirk, G.F. Counsell, J. Dowling, D. Taylor, T. Eich and A. Herrmann</i>	786	Neu, J. Neuhauser, H. Maier, R. Pugno, T. Pütterich, V. Rohde and ASDEX Upgrade Team	852
Modelling of thermal shock experiments of carbon based materials in JUDITH, <i>O.V. Ogorodnikova, S. Pestchanyi, Y. Koza and J. Linke</i>	791	Low-energy tritium ion erosion of graphite, <i>R.G. Macaulay-Newcombe, A.A. Haasz and J.W. Davis</i>	857
Section 8. Long pulse and advanced operation		Influence of beryllium plasma seeding on the erosion of carbon, <i>K. Schmid, M. Baldwin and R. Doerner</i>	862
Steady state heat exhaust in Tore Supra: operational safety and edge parameters, <i>R. Mitteau and Tore Supra team</i>	795	Studies of a-C: D film inhibition by nitrogen injection in laboratory plasmas and divertors, <i>F.L. Tabarés, D. Tafalla, V. Rohde, M. Stamp, G. Matthews, G. Esser, V. Philipps, R. Doerner and M. Baldwin</i>	867
Study of plasma wall interactions in the long-pulse NB-heated discharges of JT-60U towards steady-state operation, <i>H. Takenaga, N. Asakura, S. Higashijima, T. Nakano, H. Kubo, S. Konoshima, N. Oyama, A. Isayama, S. Ide, T. Fujita, Y. Miura and The JT-60 team</i>	802	Effects of large area liquid lithium limiters on spherical torus plasmas, <i>R. Kaita, R. Majeski, M. Boaz, P. Efthimion, G. Getelfinger, T. Gray, D. Hoffman, S. Jardin, H. Kugel, P. Marfuta, T. Munsat, C. Neumeyer, S. Raftopoulos, V. Soukhanovskii, J. Spaleta, G. Taylor, J. Timberlake, R. Woolley, L. Zakharov, M. Finkenthal, D. Stutman, L. Delgado-Aparicio, R.P. Seraydarian, G. Antar, R. Doerner, S. Luchkhardt, M. Baldwin, R.W. Conn, R. Maingi, M. Menon, R. Causey, D. Buchenauer, M. Ulrickson, B. Jones and D. Rodgers</i>	872
Overview of goals and performance of ITER and strategy for plasma-wall interaction investigation, <i>M. Shima- da, A.E. Costley, G. Federici, K. Ioki, A.S. Kukushkin, V. Mukhovatov, A. Polevoi and M. Sugihara</i>	808	High temperature erosion of beryllium, <i>R.P. Doerner, M.J. Baldwin, S.I. Krasheninnikov and K. Schmid</i>	877
A new look at JET operation with Be as plasma facing material, <i>A. Loarte, G. Saibene, R. Sartori, D.J. Campbell, P.J. Lomas, G.F. Matthews and EFDA-JET workprogramme collaborators</i>	816	Dynamic transition between erosion and deposition on a tungsten surface exposed to edge plasmas containing carbon impurities, <i>K. Ohya, T. Tanabe, A. Kirschner, T. Hirai, V. Philipps, M. Wada, T. Ohgo and N. Noda</i>	882
Experience gained from high heat flux actively cooled PCFs in Tore Supra, <i>A. Grosman, P. Bayetti, C. Brosset, J. Bucalossi, J.J. Cordier, A. Durocher, F. Escoubiac, Ph. Ghendrih, D. Guilhem, J. Gunn, T. Loarer, M. Lipa, R. Mitteau, B. Pegourie, R. Reichle, J. Schlosser, E. Tsitrone and J.C. Vallet</i>	821	Blister formation and deuterium retention on tungsten exposed to low energy and high flux deuterium plasma, <i>K. Tokunaga, M.J. Baldwin, R.P. Doerner, N. Noda, Y. Kubota, N. Yoshida, T. Sogabe, T. Kato and B. Schedler</i>	887
Strongly radiating type-III ELMy H-mode in JET – an integrated scenario for ITER, <i>J. Rapp, G.F. Matthews, P. Monier-Garbet, R. Sartori, Y. Corre, T. Eich, R. Felton, W. Fundamenski, C. Giroud, A. Huber, S. Jachmich, P. Morgan, M. O'Mullane, H.R. Koslowski, M. Stamp and contributors to the EFDA-JET work programme</i>	826	Increased recombination of CH ₃ radicals on stainless steel, <i>A.E. Gorodetsky, R.Kh. Zalavutdinov, A.P. Zakharov, S.P. Vnukov, I.G. Varshavskaya, A.N. Makankov, I.V. Mazul and G. Federici</i>	892
High energy electron deposition within vertical ports, during lower hybrid current drive on Tore Supra, <i>F. Saint-Laurent, G. Martin, V. Basiuk, E. Faudot, C. Grisolia, S. Heuraux and M. Lipa</i>	831	Density functional theory and molecular dynamic studies of hydrogen interaction with plasma-facing graphite surfaces and the impact of boron doping, <i>Y. Ferro, A. Jelea, F. Marinelli, C. Brosset and A. Allouche</i>	897
Long-pulse discharges by synergy of LHW and IBW heating in the HT-7 tokamak, <i>X. Gao, J. Li, Y. Yang, J.K. Xie, J.R. Luo, J.Y. Zhao, X.Z. Gong, L.Q. Hu, X.D. Zhang, Y.J. Shi, B.N. Wan, K. Tanaka, R. Sakamoto, Y.P. Zhao, G.L. Kuang, J.S. Hu, M. Asif, Y.X. Jie, H.Q. Liu, J. Liu, Q. Xu, L. Gao and The HT-7 Team</i>	835	Influence of microstructure of tungsten on solid state reaction rate with amorphous carbon film, <i>Y. Hatano, M. Takamori, K. Nogita, K. Matsuda, S. Ikeno and K. Watanabe</i>	902
Section 9. Surface interaction physics		Thermal properties of plasma exposed carbon and heat flux calculations on a spatial scale of a few microns, <i>A. Herrmann</i>	907
Redeposition of hydrocarbon layers in fusion devices, <i>W. Jacob</i>	839	Molecular dynamics simulation of Li surface erosion and bubble formation, <i>Z. Insepov and A. Hassanein</i>	912
Carbon erosion and a-C:H layer formation at ASDEX Upgrade, <i>V. Rohde, M. Mayer, J. Likonen, R. Neu, T. Pütterich, E. Vainonen-Ahlgren and ASDEX Upgrade Team</i>	847	Experimental investigations of castellated monoblock structures in TEXTOR, <i>A. Litnovsky, V. Philipps, P. Wienhold, G. Sergienko, B. Emmoth, M. Rubel, U. Breuer and E. Wessel</i>	917
Plasma surface interaction with tungsten in ASDEX Upgrade, <i>R. Dux, A. Herrmann, A. Kallenbach, R.</i>		Measurements of chemical erosion of ATJ graphite by low energy D ₂ ⁺ impact, <i>F.W. Meyer, H.F. Krause and L.I. Vergara</i>	922
		Characteristic changes of deuterium retention on tungsten surfaces due to low-energy helium plasma pre-exposure, <i>D. Nishijima, T. Sugimoto, H. Iwakiri, M.Y. Ye, N. Ohno, N. Yoshida and S. Takamura</i>	927

Energy and fluence dependences of helium retention in stainless steel, <i>Y. Nobuta, Y. Yamauchi, Y. Hirohata, T. Hino, N. Ashikawa, K. Nishimura, A. Sagara, S. Masuzaki, T. Ozaki, N. Noda, A. Komori, O. Motojima and LHD Experimental Group</i>	932	Characterization of dust collected from NSTX and JT-60U, <i>J.P. Sharpe, P.W. Humrickhouse, C.H. Skinner, the NSTX Team, T. Tanabe, K. Masaki, N. Miya, the JT-60U Team and A. Sagara</i>	1000
Microscopic and macroscopic damage in metals exposed to LHD divertor plasmas, <i>M. Tokitani, M. Miyamoto, D. Koga, K. Tokunaga, T. Fujiwara, N. Yoshida, S. Masuzaki, N. Ashikawa, T. Morisaki, M. Shoji, A. Komori and LHD Experimental Group</i>	937	Investigations of chemical erosion of carbon materials in hydrogen and deuterium low pressure plasmas, <i>P. Starke, U. Fantz and M. Balden</i>	1005
Angular resolved energy distributions of low energy light ions reflected from a polycrystalline Mo surface, <i>H. Yamaoka, Y. Matsumoto, M. Nishiura, K. Nishimura, M. Sasao and M. Wada</i>	942	Hydrogen blister formation and cracking behavior for various tungsten materials, <i>Y. Ueda, T. Funabiki, T. Shimada, K. Fukumoto, H. Kurishita and M. Nishikawa</i>	1010
Impact of low energy helium irradiation on plasma facing metals, <i>N. Yoshida, H. Iwakiri, K. Tokunaga and T. Baba</i>	946	Incident-mass dependence of temperature-enhanced ion-induced sputtering in liquid metals, <i>M.D. Coventry and D.N. Ruzic</i>	1015
Formation of a surface alloy in the beryllium–tungsten system, <i>A. Wiltner and Ch. Linsmeier</i>	951	Modification of tungsten layers by arcing, <i>M. Laux, W. Schneider, B. Jüttner, S. Lindig, M. Mayer, M. Balden, I. Beilis and B. Djakov</i>	1019
Study of optical properties of $\text{Mo}_x\text{C}_{1-x}$ films, <i>G. De Temmerman, M. Ley, J. Boudaden and P. Oelhafen</i>	956	Investigation of the high temperature erosion of nickel under 5keV neon irradiation, <i>E. Vietzke and V. Philipps</i>	1024
Thermal behaviour of redeposited layer under high heat flux exposure, <i>E. Gauthier, S. Dumas, J. Marheus, M. Missirlian, Y. Corre, L. Nicolas, P. Yala, P. Coad, P. Andrew, S. Cox and The JET-EFDA contributors</i>	960	Molecular dynamics modeling of deuterium in liquid lithium surfaces, <i>H.-T. Qiu and D.N. Ruzic</i>	1029
Formation of D inventories and structural modifications by deuterium bombardment of tungsten thin films, <i>I. Bizyukov, K. Krieger, N. Azarenkov, S. Levchuk and Ch. Linsmeier</i>	965	Measurement of hydrogen absorption in flowing liquid lithium in the flowing lithium retention experiment (FLIRE), <i>R. Stubbers, W. Olczak, M. Nieto and D.N. Ruzic</i>	1033
Flux dependence of carbon erosion and implication for ITER, <i>J. Roth, A. Kirschner, W. Bohmeyer, S. Brezinsek, A. Cambe, E. Casarotto, R. Doerner, E. Gauthier, G. Federici, S. Higashijima, J. Hogan, A. Kallenbach, H. Kubo, J.M. Layet, T. Nakano, V. Philipps, A. Pospieszczyk, R. Preuss, R. Pugno, R. Ruggieri, B. Schweer, G. Sergienko and M. Stamp</i>	970	Divertor impurity sources; effects of hot surfaces and thin films on impurity production, <i>M.F. Stamp, P. Andrew, S. Brezinsek, A. Huber and JET EFDA Contributors</i>	1038
An extended formula for the energy spectrum of sputtered atoms from a material irradiated by light ions, <i>T. Ono, Y. Aoki, T. Kawamura and T. Kenmotsu, Y. Yamamura</i>	975	Damage process of high purity tungsten coatings by hydrogen beam heat loads, <i>S. Tamura, K. Tokunaga, N. Yoshida, M. Taniguchi, K. Ezato, K. Sato, S. Suzuki, M. Akiba, Y. Tsunekawa and M. Okumiya</i>	1043
Deuterium-induced chemical erosion of carbon-metal layers, <i>M. Balden, E. de Juan Pardo, I. Quintana, B. Cieciwa and J. Roth</i>	980	Modeling and analysis of mixed-material surface evolution and sputtering, <i>A.M. Yacout and A. Hassanein</i>	1048
Carbon chemical erosion in H-mode discharges in ASDEX Upgrade divertor IIb: flux dependence and local redeposition, <i>R. Pugno, K. Krieger, A. Kirschner, A. Kallenbach, D.P. Coster, R. Dux, U. Fantz, J. Likonen, H.W. Müller, J. Neuhauser, V. Rohde, E. Vainonen-Ahlgren and ASDEX Upgrade Team</i>	985	PSI modeling of liquid lithium divertors for the NSTX tokamak, <i>J.N. Brooks, J.P. Allain, T.D. Rognlien and R. Maingi</i>	1053
Raman spectroscopy and X-ray diffraction studies of some deposited carbon layers in Tore Supra, <i>P. Roubin, C. Martin, C. Arnas, Ph. Colombar, B. Pégourié and C. Brosset</i>	990	Section 10. Plasma diagnostics	
Possible effects of RF field near ICRF antenna on density control during long pulse discharge in LHD, <i>K. Saito, R. Kumazawa, T. Mutoh, T. Seki, T. Watari, Y. Nakamura, M. Sakamoto, N. Noda, T. Watanabe, M. Shoji, S. Masuzaki, S. Morita, M. Goto, Y. Torii, N. Takeuchi, F. Shimpo, G. Nomura, M. Yokota, A. Kato, Y. Zhao and LHD Experimental Group</i>	995	Identification of molecular carbon sources in the JET divertor by means of emission spectroscopy, <i>S. Brezinsek, A. Pospieszczyk, M.F. Stamp, A. Meigs, A. Kirschner, A. Huber, Ph. Mertens and JET-EFDA contributors</i>	1058
Surface temperature measurements of carbon materials in fusion devices, <i>D. Hildebrandt, D. Naujoks and D. Sünder</i>		Hot spot effect on infrared spectral luminance emitted by carbon under plasma particles impact, <i>E. Delchambre, R. Reichle, R. Mitteau, M. Missirlian and P. Roubin</i>	1064
High-speed 2-D image measurement for plasma-wall interaction studies, <i>N. Nishino, K. Takahashi, H. Kawazome, Y. Fukagawa, T. Mizuchi, K. Kondo, F. Sano, K. Nagasaki, H. Okada, S. Kobayahi and S. Yamamoto</i>		1069	
			1073

Investigation of Mach probe geometry effects in weakly magnetized plasmas, <i>T. Shikama, S. Kado, A. Okamoto, S. Kajita and S. Tanaka</i>	1077	Koubiti, Y. Marandet, V.S. Lisitsa, N. Ohno, S. Takamura and D. Nishijima	1101
Rovibrational distribution of H ₂ in low temperature plasma: the dependence on the plasma parameters, <i>B. Xiao, S. Kado, S. Kajita, D. Yamasaki and S. Tanaka</i>	1082	Ion sensitive probe measurement in the linear plasma device PSI-2, <i>N. Ezumi, Zh. Kiss'ovski, W. Bohmeyer and G. Fussmann</i>	1106
Correlation of the intensity ratio of C ₂ /CH molecular bands with the flux ratio of C ₂ H _y /CH ₄ particles, <i>U. Fantz, S. Meir and ASDEX Upgrade Team</i>	1087	Kinetic (PIC) simulations for a plane probe in a collisional plasma, <i>S. Teodoru, D. Tskhakaya Jr., S. Kuhn, D.D. Tskhakaya Sr., R. Schrittwieser, C. Ioniță and G. Popa</i>	1111
Investigation of the role of temperature fluctuations on spectral line shapes, <i>Y. Marandet, H. Capes, L. Godbert-Mouret, M. Koubiti and R. Stamm</i>	1092	Exposure of metal mirrors in the scrape-off layer of TEXTOR, <i>P. Wienhold, A. Litnovsky, V. Philipps, B. Schweer, G. Sergienko, P. Oelhafen, M. Ley, G. De Temmerman, W. Schneider, D. Hildebrandt, M. Laux, M. Rubel and B. Ennemoth</i>	1116
A novel diagnostic for time-resolved spectroscopic argon and lithium density measurements, <i>L. Schmitz, P. Calderoni, A. Ying and M.A. Abdou</i>	1096	Author index	1121
Neutral helium line emission for edge plasma conditions, <i>F.B. Rosmej, R. Stamm, S. Fritzsche, H. Capes, M.</i>		Subject index	1147
		Subject index for PSI-16	1183