

## RESEARCH REPORTS (RR) 2020-21

EXPERIMENTAL OBSERVATION OF PINNED SOLITONS IN A FLOWING DUSTY PLASMA  
GARIMA ARORA, P. BANDYOPADHYAY, M. G. HARIPRASAD and A. SEN  
IPR/RR-1161/2020      APRIL 2020

EXPOSURE OF INDIAN RAFM UNDER VARIATION OF He<sup>+</sup> FLUX AND TARGET TEMPERATURE IN THE CIMPLE-PSI LINEAR DEVICE  
TRINAYAN SARMAH, PUBALI DIHINGIA, MIZANUR RAHMAN, J. GHOSH, P. CHAUDHURI, DIVESH N. SRIVASTAVA, B. SATPATI, SANJIV KUMAR, M. KAKATI AND G. DE TEMMERMAN  
IPR/RR-1162/2020      APRIL 2020

CONSTRUCTING CESIUM BASED LEAD-FREE PEROVSKITE PHOTODETECTOR ENABLING SELF-POWERED OPERATION WITH EXTENDED SPECTRAL RESPONSE  
AMREEN A. HUSSAIN  
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INVESTIGATION OF PHYSICOCHEMICAL PROPERTIES OF PLASMA ACTIVATED WATER AND ITS BACTERICIDAL EFFICACY  
VIKAS RATHORE, DIVYESH PATEL, SHITAL BUTANI and SUDHIR KUMAR NEMA  
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EXPERIMENTAL INVESTIGATIONS ON BUBBLE DETECTION IN WATER-AIR TWO-PHASE VERTICAL COLUMNS  
A. SARASWAT, A. PRAJAPATI, R. BHATTACHARYAY, P. CHAUDHURI and S. GEDUPUDI  
IPR/RR-1165/2020      APRIL 2020

TURBOEXPANDER WHEEL DESIGN FOR HELIUM LIQUEFACTION PLANT  
SWAPNIL NARAYAN RAJMANE, MANOJ KUMAR GUPTA and ANANT KUMAR SAHU  
IPR/RR-1166/2020      MAY 2020

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MITHUN KARMAKAR, BHAVESH PATEL, NIKHIL CHAKRABARTI and SUDIP SENGUPTA  
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INVESTIGATION OF ELECTRO-THERMAL CHARACTERISTICS OF A NOVEL DC PLASMA TORCH OPERATING UNDER LOW PRESSURE CONDITION USING THEORY OF DYNAMIC SIMILARITY  
RAM KRUSHNA MOHANTA and G. RAVI  
IPR/RR-1168/2020      MAY 2020

EXPLORATION OF QUIESCENT PLASMA FOR WAVE STUDIES IN MPD  
MEENAKSHEE SHARMA, A. D. PATEL, N. RAMASUBRAMANIAN, Y. C. SAXENA, P. K. CHATTOPADHYAYA and R. GANESH  
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EXCITATION OF LOWER HYBRID WAVE BY LASER PLASMA INTERACTION  
AYUSHI VASHISTHA, DEVSHREE MANDAL and AMITA DAS  
IPR/RR-1170/2020      MAY 2020

A DDPM-DEM-CFD FLOW CHARACTERISTIC ANALYSIS OF PEBBLE BED FOR FUSION BLANKET  
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IPR/RR-1171/2020      MAY 2020

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IPR/RR-1172/2020      MAY 2020

APPLICATION OF THE FUNCTION PARAMETERIZATION METHOD FOR THE DETERMINATION OF PLASMA CENTER IN ADITYA-U TOKAMAK

SAMEER KUMAR, KUMUDNI TAHILIANI, DANIEL RAJU, S. K. PATHAK, JAYESH RAVAL, PRAVEENLAL EDAPPA, PRAVEENA KUMARI, DEVILAL KUMAVAT, M. V. GOPALAKRISHNA, ROHIT KUMAR and ADITYA-U TEAM

IPR/RR-1173/2020 JUNE 2020

PRELIMINARY SAFETY ANALYSIS OF LOCA LIKE SCENARIO IN EHCL FACILITY USING RELAP/MOD4.0 CODE

K. T. SANDEEP, B. K. YADAV, A. GANDHI and PARITOSH CHAUDHARI

IPR/RR-1174/2020 JUNE 2020

CHARACTERISATION OF INDUCED VESSEL CURRENT DURING MIRNOV PROBE CALIBRATION EXPERIMENT IN ADITYA-U TOKAMAK

ROHIT KUMAR, J. GHOSH, R. L. TANNA, SUMAN AICH, TANMAY MACWAN, S. K. JHA and ADITYA-U TEAM

IPR/RR-1175/2020 JUNE 2020

OPTIMIZATION OF THE METALLIC VESSEL-WALL EFFECT ON THE MAGNETIC DIAGNOSTICS CALIBRATION IN ADITYA-U TOKAMAK

ROHIT KUMAR, SUMAN AICH, R. L. TANNA, PRAVEENLAL EDAPPALA, PRAVEENA KUMARI, S. K. JHA, TANMAY MACWAN, DEV KUMAWAT, M. V. GOPALAKRISHNA, J. GHOSH, D. RAJU and ADITYA-U TEAM

IPR/RR-1176/2020 JUNE 2020

DESIGN AND SIMULATION OF HIGH TEMPERATURE BLACKBODY CALIBRATION SOURCE FOR MICHELSON INTERFEROMETER DIAGNOSTIC

NEHA PARMAR, ABHISHEK SINHA and S. K. PATHAK

IPR/RR-1177/2020 JUNE 2020

DESIGN, DEVELOPMENT AND CALIBRATION OF MAGNETIC PROBES AND CHARACTERIZATION OF EDDY CURRENTS INDUCED ON A PLANAR SURFACE

M. V. GOPALA KRISHNA, KUMUDNI TAHILIANI, BHAVESH KADIA, PRAVEENLAL E.V., SAMEER KUMAR, DEVILAL KUMAWAT, SANTOSH PANDYA, ROHIT KUMAR, Y. S. S. SRINIVAS and S. K. PATHAK

IPR/RR-1178/2020 JUNE 2020

INVESTIGATION OF MULTICOMPONENT FORMATION AND ITS FOOTPRINTS ON MORPHOLOGICAL, ELECTRONIC AND MAGNETIC PROPERTIES OF THERMAL PLASMA SYNTHESIZED COBALT OXIDE NANOPARTICLES

ARKAPRAVA DAS, C. BALASUBRAMANIAN and PRACHI ORPE

IPR/RR-1179/2020 JUNE 2020

PHYSICAL ORIGIN OF SHORT SCALE PLASMA STRUCTURES IN THE AURORAL F REGION

N. BISAI and A. SEN

IPR/RR-1180/2020 JUNE 2020

PACKING CHARACTERIZATION OF DIFFERENT PEBBLE BED ASSEMBLIES USING DISCRETE ELEMENT METHOD SIMULATION

MAULIK PANCHAL and PARITOSH CHAUDHURI

IPR/RR-1181/2020 JULY 2020

DRIVING FREQUENCY EFFECT ON DISCHARGE PARAMETERS AND HIGHER HARMONIC GENERATION IN CAPACITIVE DISCHARGES AT CONSTANT POWER DENSITIES

SARVESHWAR SHARMA, NISHANT SIRSE, ANIMESH KULEY, ABHIJIT SEN and MILES M. TURNER

IPR/RR-1182/2020 JULY 2020

OBSERVATION OF ION ACCELERATION IN NANOSECOND LASER GENERATED PLASMA ON A NICKEL THIN FILM UNDER REAR ABLATION GEOMETRY

JINTO THOMAS, HEM CHANDRA JOSHI and AJAI KUMAR

IPR/RR-1183/2020 JULY 2020

NUMERICAL ANALYSIS FOR FLUID FLOW IN TURBOEXPANDER WHEEL OF HELIUM LIQUEFACTION PLANT

SWAPNIL NARAYAN RAJMANE, MANOJ KUMAR GUPTA and ANANTA KUMAR SAHU

IPR/RR-1184/2020 JULY 2020

NITROGEN AND WATER PUMPING STUDY ON A 400MM OPENING LN<sub>2</sub> COOLED SORPTION CRYOPUMP

SAMIRAN MUKHERJEE, PARESH PANCHAL, PRATIK NAYAK, VISHAL GUPTA, SUBHADIP DAS, JYOTISHANKAR MISHRA and RANJANA GANGRADEY

IPR/RR-1185/2020 JULY 2020

IMPACT OF THE OPERATION OF ACCELERATOR POWER SUPPLY ON THE DISTRIBUTION NETWORK

ARITRA CHAKRABORTY, AMAL S., KUMAR SAURABH, URMIL M. THAKER, PAUL D. CHRISTIAN and ASHOK MANKANI

IPR/RR-1186/2020 JULY 2020

DEVELOPMENT OF TECHNOLOGY FOR FABRICATION OF PROTOTYPE ION EXTRACTION GRID FOR FUSION RESEARCH

MUKTI RANJAN JANA and P. RAMSANKAR

IPR/RR-1187/2020 JULY 2020

TEMPERATURE DEPENDENT PHONON DYNAMICS STUDY FOR SOLGEL DERIVED PURE AND Sn DOPED CdO THIN FILMS

ARKAPRAVA DAS, DEOBRAT SINGH, D. KANJILAL, C. BALASUBRAMANIAN and RAJEEV AHUJA

IPR/RR-1188/2020 JULY 2020

ON THE EFFECTS OF H<sub>2</sub> AND Ar DURING PLASMA NITROCARBURIZING OF AISI 304L AND AISI 304 AUSTENITIC STAINLESS STEELS

JEET SAH, ALPHONSA JOSEPH, GHANSHYAM JHALA and SUBROTO MUKHERJEE

IPR/RR-1189/2020 JULY 2020

REAL-TIME FEEDBACK CONTROL SYSTEM FOR ADITYA-U HORIZONTAL PLASMA POSITION STABILISATION

ROHIT KUMAR, PRAMILA GAUTAM, SHIVAM GUPTA, R. L. TANNA, PRAVEENLAL EDAPPALA, MINSHA SHAH, VISMAY RAULJI, TANMAY MACWAN, RANJANA MANCHANDA, M. B. CHOWDHURI, NANDINI YADAVA, KUNAL SHAH, M. N. MAKWANA, V. BALAKRISHNAN, C. N. GUPTA, SUMAN AICH, DEVILAL KUMAWAT, HARSHIT RAJ, K. SATHYANARAYANA, JOYDEEP GHOSH, RACHNA RAJPAL, P. K. CHATTOPADHYAY, Y. C. SAXENA and THE ADITYA-U TEAM

IPR/RR-1190/2020 JULY 2020

VOID FRACTION MEASUREMENT SYSTEM FOR HORIZONTAL TWO PHASE LIQUID NITROGEN FLOW

GAURAV KUMAR SINGH, RAKESH PATEL, GAURAV PURWAR, HIREN NIMAVAT, RAJIV SHARMA, ROHIT PANCHAL and VIPUL TANNA

IPR/RR-1191/2020 JULY 2020

EFFECT OF TEMPERATURE ON THE EVOLUTION DYNAMICS OF VOIDS IN DYNAMIC FRACTURE OF SINGLE CRYSTAL IRON: A MOLECULAR DYNAMICS STUDY

SUNIL RAWAT and SHASHANK CHATURVEDI

IPR/RR-1192/2020 AUGUST 2020

EXPERIMENTAL STUDIES ON A MULTIPOLELINE-CUSP ION SOURCE WITH TWO GRID EXTRACTOR SYSTEM IN THE THRUSTER CONFIGURATION

BHARAT RAWAT, S. K. SHARMA, B. CHOKSI, P. BHARATHI, V. PRAHLAD and U. K. BARUAH

IPR/RR-1193/2020 AUGUST 2020

STUDY OF EFFECT OF ARC CURRENT AND OXYGEN PARTIAL PRESSURE ON STRUCTURAL, MORPHOLOGICAL AND ATOMIC ORDERING FOR PLASMA SYNTHESIZED IRON OXIDE NANOPOWDERS

ARKAPRAVA DAS, C. BALASUBRAMANIAN, P. B. ORPE, AUGUSTO MARCELLI and NAURANG SAINI

IPR/RR-1194/2020 AUGUST 2020

DEVELOPMENT AND ASSEMBLING OF APPLIED PLASMA PHYSICS EXPERIMENTS IN LINEAR (APPEL) DEVICE FOR PLASMA WALL INTERACTION STUDIES

Y. PATIL and S. K. KARKARI

IPR/RR-1195/2020 AUGUST 2020

INVESTIGATION OF RADIAL FIELD EFFECT ON THE ADITYA-U TOKAMAK PLASMA DISCHARGE  
ROHIT KUMAR, J. GHOSH, R. L. TANNA, TANMAY MACWAN, DEV KUMAWAT, SUMAN AICH, C. N. GUPTA, V. BALAKRISHNAN, KUNAL SHAH, MOTI MAKWANA, SHIVAM GUPTA, KUMARPAL JADEJA, KAUSHAL PATEL and ADITYA-U TEAM

IPR/RR-1196/2020 AUGUST 2020

DEVELOPMENT OF CFD MODEL FOR THE ANALYSIS OF A CRYOGENICS TWIN-SCREW HYDROGEN EXTRUDER SYSTEM

SHASHI KANT VERMA, VISHAL GUPTA, SAMIRAN SHANTI MUKHERJEE, RANJANA GANGRADEY and R. SRINIVASAN

PR/RR-1197/2020 AUGUST 2020

BOUNCING DYNAMICS OF WATER DROPLET ON ION IRRADIATION PRODUCED NANO /MICROSTRUCTURED SUPERHYDROPHOBIC PTFE SURFACES

VIVEK PACHCHIGAR, MUKESH RANJAN, SOORAJ K. P., SEBIN AUGUSTINE, DEVILAL KUMAWAT, KUMUDNI TAHILIANI and SUBROTO MUKHERJEE

IPR/RR-1198/2020 AUGUST 2020

OBSERVATIONS OF POINT DEFECT DYNAMICS IN THE RECRYSTALLIZATION AND GRAIN GROWTH OF COLD-ROLLED TUNGSTEN FOILS

P. N. MAYA, S. MUKHERJEE, P. SHARMA, A. SATYAPRASAD and P. K. PUJARI

IPR/RR-1199/2020 AUGUST 2020

DEPOSITION OF TIN AND TIALN THIN FILMS ON STAINLESS STEEL TUBE BY CYLINDRICAL MAGNETRON SPUTTERING METHOD

KUNAL TRIVEDI, RAMKRISHNA RANE, ALPHONSA JOSEPH and SHASHI ARYA

IPR/RR-1200/2020 AUGUST 2020

OXYGEN PLASMA INDUCED PHYSICO-CHEMICAL CHANGES ON SILICONE CATHETER SURFACES AND ITS IMPACT ON ADHESION OF E-COLI BACTERIAL CELLS

PURVI DAVE, ASHUTOSH KUMAR, ABDULKHALIK M., BALASUBRAMANIAN C., SUKRITI HANS, and S. K. NEMA

IPR/RR-1201/2020 AUGUST 2020

EFFECT OF PROCESS PARAMETERS ON THE REACTIVITY AND ELECTRICAL CONDUCTIVITY OF PLASMA ACTIVATED WATER

VIKAS RATHORE and SUDHIR KUMAR NEMA

IPR/RR-1202/2020 AUGUST 2020

WAVE BREAKING LIMIT IN ARBITRARY MASS RATIO WARM PLASMAS

ASHISH ADAK, NIDHI RATHEE and SUDIP SENGUPTA

IPR/RR-1203/2020 AUGUST 2020

EFFECT OF MANIFOLD OF LLCB TBM ON THE MHD PRESSURE DROP

A. PATEL, S. RANJITHKUMAR, R. BHATTACHARYAY and P. SATYAMURTHY

IPR/RR-1204/2020 SEPTEMBER 2020

DESIGN OF NORMAL MODE CIRCULARLY POLARIZED HELICAL ANTENNA AT 5.3 GHz  
AJAY KUMAR PANDEY and SURYA KUMAR PATHAK  
IPR/RR-1205/2020 SEPTEMBER 2020

NUMERICAL AND COMPUTATIONAL ANALYSIS OF DISPERSION AND RADIATION PROPERTIES  
OF HELICAL ANTENNA LOADED WITH DIELECTRIC  
A. K. PANDEY and S. K. PATHAK  
IPR/RR-1206/2020 SEPTEMBER 2020

EFFECT OF POROSITY ON THERMAL CONDUCTIVITY OF  $\text{Li}_2\text{TIO}_3$  CERAMIC COMPACT  
AROH SHRIVASTAVA, RIDDHI SHUKLA and PARITOSH CHAUDHURI  
IPR/RR-1207/2020 SEPTEMBER 2020

DESIGN OF A 3.7 GHz TE<sub>10</sub>-TE<sub>30</sub> MODE CONVERTER USING STEPPED IMPEDANCE  
TRANSFORMER FOR CW APPLICATIONS  
YOGESH M. JAIN, SHREY THAKKER, P. K. SHARMA and HARISH V. DIXIT  
IPR/RR-1208/2020 SEPTEMBER 2020

DESIGN AND INVESTIGATION OF BROADBAND, POLARIZATION INSENSITIVE AND WIDE  
ANGLE METASURFACE ABSORBER BASED ON RESISTIVE-INK AND ITS APPLICATION FOR RCS  
REDUCTION  
PRIYANKA TIWARI, SURYA KUMAR PATHAK and ANITHA V.  
IPR/RR-1209/2020 SEPTEMBER 2020

RADIOACTIVATION ANALYSIS OF 14MeV NEUTRON GENERATOR FACILITY  
H. L. SWAMI, S. VALA, M. ABHANGI, RATNESH KUMAR, C. DANANI, R. KUMAR and R.  
SRINIVASAN  
IPR/RR-1210/2020 SEPTEMBER 2020

DISRUPTION MITIGATION USING ION CYCLOTRON WAVE IN ADITYA TOKAMAK  
J. GHOSH, R. L. TANNA, P. K. CHATTOPADHYAY, A. SEN, HARSHITA RAJ, PRAVESH DHYANI, S.  
V. KULKARNI, K. MISHRA, S. B. BHATT, K. A. JADEJA, K. M. PATEL, C. N. GUPTA, M. N.  
MAKWANA, K. SHAH, CHHAYA CHAVDA, V. K. PANCHAL, N. C. PATEL, SHISHIR PUROHIT, S.  
JOISA, C.V.S. RAO, D. RAJU, B. K. SHUKLA, PRAVEENLAL E. V., V. RAULJI, R. RAJPAL, P. K.  
ATREY, U. NAGORA, R. MANCHANDA, N. RAMAIYA, M. B. CHOWDHURI, S. K. JHA, R. JHA, Y. C.  
SAXENA, R. PAL and ADITYA TEAM  
IPR/RR-1211/2020 SEPTEMBER 2020

SERS BASED DETECTION OF DICHLORVOS PESTICIDE USING SILVER NANOPARTICLES  
ARRAYS: INFLUENCE OF ARRAYS WAVELENGTH/AMPLITUDE  
SEBIN AUGUSTINE, SOORAJ K. P., VIVEK PACHCHIGAR, C. MURALI KRISHNA and MUKESH  
RANJAN  
IPR/RR-1212/2020 SEPTEMBER 2020

LANDAU DAMPING IN ONE DIMENSIONAL PERIODIC INHOMOGENEOUS COLLISION-LESS  
PLASMAS  
SANJEEV KUMAR PANDEY and RAJARAMAN GANESH  
IPR/RR-1213/2020 SEPTEMBER 2020

ELECTROMAGNETIC WAVE TRANSPARENCY OF X MODE IN STRONGLY MAGNETIZED PLASMA  
DEVSHREE MANDAL, AYUSHI VASHISTHA and AMITA DAS  
IPR/RR-1214/2020 SEPTEMBER 2020

NEAR-ABSOLUTE EQUILIBRIUM OF A TOROIDAL ELECTRON PLASMA  
S. KHAMARU, R. GANESH and M. SENGUPTA  
IPR/RR-1215/2020 SEPTEMBER 2020

INACTIVATION OF CANDIDA ALBICANS AND CITRUS LIMON (LEMON) FUNGUS USING PLASMA ACTIVATED WATER

VIKAS RATHORE, DIVYESH PATEL, NIYATI SHAH, SHITAL BUTANI, HARIKRISHNA PANSURIYA and SUDHIR KUMAR NEMA

IPR/RR-1216/2020 SEPTEMBER 2020

PLASMA, IMPURITY AND NEGATIVE IONS ASSESSMENT IN ROBIN

KAUSHAL PANDYA, M. J. SINGH, HIMANSHU TYAGI, MANAS BHUYAN, DEBRUP MUKHOPADHYAY, MAINAK BANDYOPADHYAY, RATNAKAR YADAV, AGRAJIT GAHLAUT, MAHESH VUPUGALLA, KARTIK PATEL, HIREN MISTRI, BHAVESH PRAJAPATI and ARUN CHAKRABORTY

IPR/RR-1217/2020 SEPTEMBER 2020

SIMULATION OF RUNAWAY ELECTRON GENERATION IN FUSION GRADE TOKAMAK AND SUPPRESSION BY IMPURITY INJECTION

ANSH PATEL and SANTOSH P. PANDYA

IPR/RR-1218/2020 OCTOBER 2020

THERMO HYDRAULIC STUDY OF MgB<sub>2</sub> SUPERCONDUCTING BUS-BAR FOR SST-1 TOKAMAK

NITIN BAIRAGI and V. L. TANNA

IPR/RR-1219/2020 OCTOBER 2020

A SINGLE NEGATIVE META-MATERIAL ABSORBER AT 26.5 GHz IN THE Ka-BAND

B. RISCOB, YOGESH SHARMA, VARSHA SIJU, ABHISHEK SINHA and S. K. PATHAK

IPR/RR-1220/2020 OCTOBER 2020

PHASE OF PARTICLE PERTURBATIONS DETERMINES THE FATE OF RAYLEIGH-BENARD CONVECTION CELLS IN 2D YUKAWA LIQUIDS

PAWANDEEP KAUR and RAJARAMAN GANESH

IPR/RR-1221/2020 OCTOBER 2020

APPLICATIONS OF ATMOSPHERIC PRESSURE AIR PLASMA FOR ECOFRIENDLY PROCESSING OF TEXTILES AND ALLIED MATERIAL: REVIEW OF EXPERIMENTAL STUDIES AT INSTITUTE FOR PLASMA RESEARCH, INDIA

NISHA CHANDWANI, VISHAL JAIN, PURVI DAVE, HEMEN DAVE, P. B. JHALA and SUDHIR K. NEMA

IPR/RR-1222/2020 OCTOBER 2020

INVESTIGATION OF DISPERSION AND RADIATION CHARACTERISTICS OF PLASMA LOADED HELICAL ANTENNA

AJAY KUMAR PANDEY and SURYA KUMAR PATHAK

IPR/RR-1223/2020 OCTOBER 2020

PRESSURE AND TEMPERATURE DEPENDENT STRUCTURAL PROPERTIES OF CU-NI ALLOY NANOPARTICLES SYNTHESIZED BY ARC-PLASMA

SUBRAT DAS, ARKAPRAVA DAS, MATTIA GABOARD, SIMONE POLLASTRI, C. BALASUBRAMANIAN and BOBY JOSEPH

IPR/RR-1224/2020 OCTOBER 2020

MEASUREMENT OF  $^{90}\text{Zr}(n,2n)^{89}\text{Zr}$  AND  $^{90}\text{Zr}(n,p)^{90}\text{mY}$  REACTION CROSS-SECTIONS IN NEUTRON ENERGY RANGE OF 10.95 TO 20.02 MeV

MAYUR MEHTA, N. L. SINGH, R. K. SINGH, SIDDHARTH PARASHARI, P. V. SUBHASH, H. NAIK, R. D. CHAUHAN, R. MAKWANA, S. V. SURYANARAYANA, S. MUKHERJEE, A. GANDHI, J. VARMUZA and K. KATOVSK

IPR/RR-1226/2020 OCTOBER 2020

DESIGN AND ANALYSIS OF A PULSE POWER SUPPLY FOR DIVERTER COILS IN ADITYA-U TOKAMAK

VAIBHAV RANJAN, Y. S. S. SRINIVAS, ROHIT KUMAR, R. L. TANNA, JOYDEEP GHOSH, A. VARDHARAJULU, SURYAKANT GUPTA and P. K. CHATTOPADHYAY  
IPR/RR-1227/2020    NOVEMBER 2020

EVOLUTION OF TRIANGULAR FEATURES UNDER RIPPLE PATTERNS ON ION IRRADIATED SILICON (100) SURFACE

SUKRITI HANSA and MUKESH RANJAN  
IPR/RR-1228/2020    NOVEMBER 2020

FEASIBILITY STUDY ON JOINING OF INCONEL 625 -INCONEL 625 MATERIAL FOR HIGH TEMPERATURE RECUPERATOR APPLICATION

K. P. SINGH, VIVEK BHARAKHADA, ALPESH PATEL, KEDAR BHOPE and SAMIR S. KHIRWADKAR  
IPR/RR-1229/2020    NOVEMBER 2020

CFD SIMULATIONS TO STUDY THE EFFECT OF FUEL DROPLET SIZE AND PRE VAPORIZATION ON THE SUSTAINABILITY OF DETONATION WAVE

SUNIL BASSI, SANJAY K. SONI and SHASHANK CHATURVEDI  
IPR/RR-1230/2020    NOVEMBER 2020

DRIVEN DUST VORTEX CHARACTERISTICS IN PLASMA WITH EXTERNAL TRANSVERSE AND WEAK MAGNETIC FIELD

MODHUCHANDRA LAISHRAM  
IPR/RR-1231/2020    NOVEMBER 2020

STATUS OF SST-1 EXPERIMENTS

SST-1 TEAM  
IPR/RR-1232/2020    DECEMBER 2020

AN ENHANCED OPERATING REGIME FOR HIGH FREQUENCY CAPACITIVE DISCHARGES

SANKET PATIL, SARVESHWAR SHARMA, SUDIP SENGUPTA, ABHIJIT SEN and IGOR KAGANOVICH  
IPR/RR-1233/2020    DECEMBER 2020

PARAMETRIC INVESTIGATION FOR MODULATION INSTABILITY OF ION WAVE IN NEGATIVE ION PLASMA SOURCES

PALLABI PATHAK and M. BANDYOPADHYAY  
IPR/RR-1234/2020    DECEMBER 2020

SIMULATION OF 2D BALLISTIC DEPOSITION OF POROUS NANOSTRUCTURED THIN-FILMS

S. BUKKURU, H. HEMANI, S. M. HAQUE, J. ALPHONSA, K. DIVAKAR RAO and M. WARRIE  
IPR/RR-1235/2020    DECEMBER 2020

A CFD FLOW CHARACTERISTIC ANALYSIS OF PURGE GAS USING DDPM-DEM-CFD AND POROUS MEDIA APPROACH FOR FUSION BLANKET

CHIRAG SEDANI, MAULIK PANCHAL and PARITOSH CHAUDHURI  
IPR/RR-1236/2020    DECEMBER 2020

FABRICATION AND HIGH HEAT FLUX TESTING OF TUNGSTEN COATED MEDIUM SCALE PLASMA FACING COMPONENT

S. KANPARA, S. KHIRWADKAR, S. BELSARE, K. BHOPE, R. SWAMY, S. TRIPATHI, P. MOKARIA, N. PATEL, T. PATEL, M. MEHTA and K. GALODIYA  
IPR/RR-1237/2020    DECEMBER 2020

EXACT SOLUTION OF HARTEMANN-LUHMANN EQUATION OF MOTION FOR A CHARGED PARTICLE INTERACTING WITH AN INTENSE ELECTROMAGNETIC WAVE/PULSE

SHIVAM KUMAR MISHRA and SUDIP SENGUPTA  
IPR/RR-1238/2020    DECEMBER 2020

FAST RECIPROCATING LANGMUIR PROBE SYSTEM ON SST-1 TOKAMAK

M. V. GOPALA KRISHNA, PRAMILA, KUMUDNI TAHILIANI, AMARDAS ALLI, R. JHA, PRABHAT KUMAR, D. RAJU, S. K. PATHAK and MANOJ KUMAR GUPTA  
IPR/RR-1239/2020 DECEMBER 2020

CAVITATION AND CHARGE SEPARATION IN LASER-PRODUCED COPPER AND CARBON PLASMA IN TRANSVERSE MAGNETIC FIELD

NARAYAN BEHERA, AJAI KUMAR and R. K. SINGH  
IPR/RR-1240/2020 DECEMBER 2020

INVESTIGATIONS ON GROWTH OF WHISTLERS WITH ENERGY OF ENERGETIC ELECTRONS

A. K. SANYASI, PRABHAKAR SRIVASTAV, L. M. AWASTHI, P. K. SRIVASTAVA, R. SUGANDHI and D. SHARMA  
IPR/RR-1241/2020 DECEMBER 2020

INVESTIGATION OF  $eg-t_2g$  SUB BAND SPLITTING VIA CRYSTAL FIELD AND BAND ANTICROSSING INTERACTION IN  $NixCd_{1-x}O$  THIN FILMS

ARKAPRAVA DAS, PARASMANI RAJPUT, ANUMEET KAUR, GAYATRI DHAMALE, C. BALASUBRAMANIAN, D. KANJILAL and S. N. JHA  
IPR/RR-1242/2020 DECEMBER 2020

INVESTIGATION OF RECYCLING AND IMPURITIES INFLUXES IN ADITYA-U TOKAMAK PLASMAS

NANDINI YADAVA, MALAY BIKAS CHOWDHURI, JOYDEEP GHOSH, RANJANA MANCHANDA, TANMAY MACWAN, NILAM RAMAIYA, ANKUR PANDYA, SRIPATHI PUNCHITHAYA K., MAYIL, KUMARPALSINH A. JADEJA, UMESH C. NAGORA, S. K. PATHAK, MINSHA SHAH, PRAMILA GAUTAM, ROHIT KUMAR, SUMAN AICH, KAUSHAL M. PATEL, RAKESH L. TANNA and ADITYA-U TEAM  
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JAGANNATH MAHAPATRA, ARKAPRAVA BOKSHI, RAJARAMAN GANESH and ABHIJIT SEN  
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SATADAL DAS and SHANTANU K. KARKAR  
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A. K. SANYASI, PRABHAKAR SRIVASTAV, L. M. AWASTHI, P. K. SRIVASTAVA and R. SUGANDHI  
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