

RESEARCH REPORTS (RR) 2022-23

INVESTIGATING THE EFFECTS OF ELECTRON BOUNCE-CYCLOTRON RESONANCE ON PLASMA DYNAMICS IN CAPACITIVE DISCHARGES OPERATED IN THE PRESENCE OF A WEAK TRANSVERSE MAGNETIC FIELD

SARVESHWAR SHARMA, SUDIP SENGUPTA, ABHIJIT SEN, SANKET PATIL, ALEXANDER KHRABROV and IGOR KAGANOVICH

IPR/RR-1402/2022 APRIL 2022

PLASMA FIREBALL-MEDIATED ION IMPLANTATION FOR NONVOLATILE MEMORY APPLICATION

SUDHEER, VIVEK PACHCHIGAR, BISWARUP SATPATI, SOORAJ K. P., SEBIN AUGUSTINE, SUKRITI HANS and MUKESH RANJAN

IPR/RR-1403/2022 APRIL 2022

COPPER ELECTROPLATING TECHNIQUE FOR DEVELOPMENT OF HTS CURRENT LEADS BOTTOM JOINTS USING MgB_2 WIRES

NITIN BAIRAGI, D. SONARA, H. NIMAVAT, V. L. TANNA, U. PRASAD and D. RAJU

IPR/RR-1404/2022 APRIL 2022

A METHODOLOGY FOR QUANTIFICATION OF MATERIAL DAMAGE FROM TRANSMUTATIONS IN FUSION MATERIALS USING APPROPRIATE MODELS AND TOOLS

AKASH GARG and P. V. SUBHASH

IPR/RR-1405/2022 APRIL 2022

COMPARATIVE STUDY OF REFRACTIVE OPTICS BASED ENDOSCOPE AND WOUND IMAGING FIBER BUNDLE

SURAJ KUMAR GUPTA, VISHNU K. CHAUDHARI and MANOJ KUMAR

IPR/RR-1406/2022 APRIL 2022

EQUILIBRIUM RECONSTRUCTION OF PLASMA DISCHARGE IN THE ADITYA TOKAMAK

DEEPTI SHARMA, D. RAJU, SAMEER KUMAR, R. SRINIVASAN, MANOJ KUMAR, JOYDEEP GHOSH, R. L. TANNA and ADITYA-U TOKAMAK TEAM

IPR/RR-1407/2022 APRIL 2022

PARAMETER-SPACE FOR A ST-REACTOR ROADMAP

S. P. DESHPANDE and P. N. MAYA

IPR/RR-1408/2022 MAY 2022

ELECTROSTATIC SIMULATION MODEL OF DIELECTRIC BARRIER DISCHARGE PLASMA ACTUATORS FOR FLOW CONTROL APPLICATIONS

SHAHRUKH BAREJIA, JYOTI AGARWAL, R. SRINIVASAN and S. JAKHAR

IPR/RR-1409/2022 MAY 2022

DRIVEN NONLINEAR STRUCTURES IN FLOWING DUSTY PLASMAS

PINTU BANDYOPADHYAY and ABHIJIT SEN

IPR/RR-1410/2022 MAY 2022

SYNTHESIS AND PROCESS OPTIMISATION OF HMDS-MODIFIED SILICA NANOPOWDER SPRAY COATING FOR OIL-WATER SEPARATION

JANKI SHAH, VIVEK PACHCHIGAR and MUKESH RANJAN

IPR/RR-1411/2022 JUNE 2022

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S. PUROHIT, M. K. GUPTA, M. B. CHOWDHURI, I. MANSURI, M. BHANDARKAR, B. K. SHUKLA, K. SHAH, R. MANCHANDA, U. C. NAGORA, S. K. PATHAK, K. A. JADEJA, R. L. TANNA, J. GHOSH and ADITYA TEAM

IPR/RR-1412/2022 JUNE 2022

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IPR/RR-1413/2022 JUNE 2022

CFD ANALYSIS OF PREHEATING STAGE OF THE PLASMA PROCESSING CHAMBER AND
COMPARISON OF RESULTS WITH THE EXPERIMENTAL DATA
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COUPLING OF "COLD" ELECTRON PLASMA WAVE VIA STATIONARY ION INHOMOGENEITY TO
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DESIGN OF SEMI-AUTOMATIC UHV COMPATIBLE ROTATING FILTER MECHANISM FOR SOFT-X-
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PATEL, R. KUMAR, S. AICH, S. K. PATHAK, R. L. TANNA, J. GHOSH and ADITYA-U TEAM
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IPR/RR-1419/2022 JUNE 2022

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CHARACTERIZING A Ka-BAND FMCW REFLECTOMETER
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MEASUREMENT OF ION BEAM PROFILES USING PARALLEL WIRES AND FARADAY CUP ARRAY
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IPR/RR-1426/2022 JULY 2022

SCALING OF MAGNETIC RECONNECTION PARAMETERS WITH AND WITHOUT IN-PLANE SHEAR
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ASSIST GLOW DISCHARGE CLEANING OF SST-1 AT LOW PRESSURE
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TOROIDAL FIELD COIL FOR AN ELECTRON PLASMA EXPERIMENT: SMARTEX-C
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ON THE EXCITATION OF ION ACOUSTIC SOLITON IN QUIESCENT PLASMA CONFINED BY MULTI-
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IPR/RR-1430/2022 JULY 2022

TRANSITION OF A 2-D CRYSTAL TO A NONEQUILIBRIUM TWO-PHASE COEXISTENCE
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IPR/RR-1431/2022 AUGUST 2022

LEAKY MODE RADIATION PROPERTIES OF DIELECTRIC LOADED HELIX
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IPR/RR-1432/2022 AUGUST 2022

ROLE OF ION BEAM PARAMETERS IN FORMATION OF FACETED RIDGES ON SODA-LIME GLASS
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P. and MUKESH RANJAN
IPR/RR-1433/2022 AUGUST 2022

PERFORMANCE EVALUATION AND TEST RESULTS OF 3.3 kA RATED HTS CURRENT LEADS AT
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NITIN BAIRAGI, V. L. TANNA, H. NIMAVAT, D. SONARA, R. PANCHAL, A. GARG, G. MAHESURIA,
R. PATEL, D. CHRISTIAN, P. PANCHAL, G. PURVAR, U. PRASAD and D. RAJU
IPR/RR-1434/2022 AUGUST 2022

SYNTHESIS & CHARACTERIZATION OF Ti_3AlC_2 WITH INSITU THERMAL STABILITY EVALUATION
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VYOM DESAI, AROH SRIVASTAVA, A. B. ZALA, TEJAS PAREKH, SUROJIT GUPTA and N. I.
JAMNAPARA
IPR/RR-1435/2022 AUGUST 2022

CONTINUOUS PRODUCTION FOR LARGE QUANTITY PLASMA ACTIVATED WATER USING
MULTIPLE PLASMA DEVICE SETUP
VIKAS RATHORE, CHIRAYU PATIL and SUDHIR KUMAR NEMA
IPR/RR-1436/2022 AUGUST 2022

ARGON IMPURITY TRANSPORT IN OHMIC DISCHARGES OF ADITYA-U

K. SHAH, S. PATEL, M. B. CHOWDHURI, K. A. JADEJA, G. SHUKLA, T. MACWAN, A. KUMAR, S. DOLUI, K. SINGH, R. L. TANNA, K. M. PATEL, R. DEY, R. MANCHANDA, N. RAMAIYA, R. KUMAR, S. AICH, N. YADAVA, S. PUROHIT, M. K. GUPTA, U. C. NAGORA, S. K. PATHAK, P. K. ATREY, K. B. K. MAYYA and J. GHOSH

IPR/RR-1437/2022 AUGUST 2022

THE ROLE OF PLASMA-ACTIVATED WATER ON THE GROWTH OF FRESHWATER ALGAE CHLORELLA PYRENOIDOSA AND CHLORELLA SOROKINIANA

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IPR/RR-1438/2022 AUGUST 2022

REVISITING INDUCTION DYNAMO IN 3-DIMENSIONAL MAGNETOHYDRODYNAMIC PLASMAS: DYNAMO TRANSITION FROM NON-HELICAL TO HELICAL FLOWS

SHISHIR BISWAS and RAJARAMAN GANESH

IPR/RR-1439/2022 AUGUST 2022

APPLICATION OF SIMILARITY THEORY TO PREDICT OPERATIONAL CHARACTERISTICS OF A DC PLASMA TORCH UNDER LOW PRESSURE CONDITION

RAM KRUSHNA MOHANTA, DEVILAL KUMAWAT, G. RAVI and KUMUDNI TAHILIANI

IPR/RR-1440/2022 AUGUST 2022

SELECTIVE GENERATION OF REACTIVE OXYGEN SPECIES IN PLASMA ACTIVATED WATER USING CO₂ PLASMA

VIKAS RATHORE and SUDHIR KUMAR NEMA

IPR/RR-1441/2022 SEPTEMBER, 2022

NUMERICAL STUDY OF DBD PLASMA BASED INLINE TEXTILE TREATMENT SYSTEM

JYOTI AGARWAL, SHAHRUKH BAREJIA, R. SRINIVASAN, NISHA CHANDWANI, VISHAL JAIN, S. C. JAKHAR, MANIKA SHARMA and S. K. NEMA

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ELECTROSTATIC ANALYSIS OF SST-1 PF-3 MAGNET VACUUM BARRIER AND ITS VOLTAGE BREAKDOWN ANALYSIS

JYOTI AGARWAL, DEVEN KUMAR H. KANABAR, SHAHRUKH BAREJIA, SWATI ROY, R. SRINIVASAN, UPENDRA PRASAD and RAJU DANIEL

IPR/RR-1443/2022 SEPTEMBER 2022

A SIMPLE BEAM SWITCHING CYLINDRICAL DIELECTRIC RESONATOR ANTENNA USING HELIX

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IPR/RR-1444/2022 SEPTEMBER 2022

DESIGN AND SIMULATION OF FREQUENCY SELECTIVE SURFACE (FSS) NOTCH FILTER FOR MICHELSON INTERFEROMETER DIAGNOSTIC

JAINAM BELANI, ABHISHEK SINHA and SURYA K. PATHAK

IPR/RR-1445/2022 SEPTEMBER 2022

TRAPPING OF WAVES IN A FLOWING DUSTY PLASMA

KRISHAN KUMAR, P. BANDYOPADHYAY, SWARNIMA SINGH and A. SEN

IPR/RR-1446/2022 SEPTEMBER 2022

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IPR/RR-1447/2022 SEPTEMBER 2022

GYROKINETIC SIMULATIONS OF ELECTROSTATIC MICROTURBULENCE IN ADITYA-U TOKAMAK

TAJINDER SINGH, DEEPTI SHARMA, TANMAY MACWAN, SARVESHWAR SHARMA, JOYDEEP GHOSH, ABHIJIT SEN, ZHIHONG LIN and ANIMESH KULEY

IPR/RR-1448/2022 SEPTEMBER 2022

DYES DEGRADATION USING ATMOSPHERIC PRESSURE DIELECTRIC BARRIER DISCHARGE PENCIL PLASMA JET
VIKAS RATHORE, AKANKSHA PANDEY, SHRUTI PATEL, HEMAN DAVE and SUDHIR KUMAR NEMA
IPR/RR-1449/2022 OCTOBER 2022

DESIGN, FABRICATION AND TESTING OF FORCE FLOW COOLED HIGH-TEMPERATURE SUPERCONDUCTING CABLE
UPENDRA PRASAD, PIYUSH RAJ, MAHESH GHATE, DEVEN KANABAR, NAYAN SOLANKI, UMESH PAL, ANEES BANO, ARUN PANCHAL, DHAVAL BHAVSAR and MSD
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IPR/RR-1451/2022 NOVEMBER 2022

COMPARATIVE WETTABILITY STUDY OF BULK PTFE AND PVD-GROWN PTFE THIN FILM AFTER LOW ENERGY ION IRRADIATION
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IPR/RR-1452/2022 NOVEMBER 2022

EFFECT OF CONVECTIVE TRANSPORT IN EDGE/SOL PLASMAS OF ADITYA-U TOKAMAK
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IPR/RR-1453/2022 NOVEMBER 2022

INVESTIGATION OF THERMAL MIXING MECHANISM IN T-JUNCTION FOR FUSION TOKAMAK APPLICATION
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KELVIN-HELMHOLTZ INSTABILITY IN A COMPRESSIBLE DUST FLUID FLOW
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IPR/RR-1455/2022 NOVEMBER 2022

RF PLASMA DISCHARGE USING SPIRAL ANTENNA IN MULTI-DIPOLE LINE CUSP MAGNETIC FIELD
M.A. ANSARI, AMIT D. PATEL, A. DAS ALLI, PRABAL K. CHATTOPADHYAY, N. RAMASUBRAMANIAN, DANIEL RAJU and RAJ SINGH
IPR/RR-1456/2022 NOVEMBER 2022

GYROKINETIC SIMULATION OF MULTI-SCALE ION TEMPERATURE GRADIENT INSTABILITIES IN THE ADITYA-U TOKAMAK
AMIT K. SINGH, J. MAHAPATRA, J. CHOWDHURY, D. AGGARWAL, T. HAYWARD-SCHNEIDER, R. GANESH, E. LANTI and L. VILLARD
IPR/RR-1457/2022 NOVEMBER 2022

SOURCE PERFORMANCE OPTIMIZATION IN CESIATED MODE IN ROBIN
K. PANDYA, M. J. SINGH, M. BHUYAN, M. BANDYOPADHYAY, H. TYAGI, V. MAHESH, A. GAHLAUT, K. PATEL, R. K. YADAV, S. SHAH, B. PRAJAPATI, H. MISTRI and A. CHAKRABORTY
IPR/RR-1458/2022 DECEMBER 2022

INFLUENCE OF γ 'N AND ϵ 'N PHASES ON THE PROPERTIES OF AISI 304L AFTER LOW-TEMPERATURE PLASMA NITROCARBURIZING
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IPR/RR-1459/2022 DECEMBER 2022

FABRICATION ASPECTS AND PERFORMANCE CHARACTERIZATION OF SANDWICH CONFIGURATION FLOW CHANNEL INSERTS FOR LIQUID METAL APPLICATIONS UP TO 600°C
ABHISHEK SARASWAT, RAJENDRAPRASAD BHATTACHARYAY, PARITOSH CHAUDHURI and SATEESH GEDUPUDI

IPR/RR-1460/2022 DECEMBER 2022

OFF-TARGET FLOWS AND SHOULDER FORMATION IN 3D SIMULATIONS OF INBOARD LIMITED SCRAPE-OFF-LAYER PLASMA TRANSPORT OF ADITYA-U TOKAMAK

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IPR/RR-1461/2022 DECEMBER 2022

PENICILLIN ANTIBIOTIC (AMPICILLIN AND CLOXACILLIN) DEGRADATION USING NON-THERMAL PENCIL PLASMA JET

VIKAS RATHORE, AKANKSHA PANDEY, SHRUTI PATEL, JIGNASA SAVJANI, SHITAL BUTANI, HEMAN DAVE and SUDHIR KUMAR NEMA

IPR/RR-1462/2022 DECEMBER 2022

SPATIAL MAPPING OF LOW PRESSURE CLUSTER JETS USING RAYLEIGH SCATTERING

MILAAN PATEL, GEETHIKA B. R., JINTO THOMAS and HEM JOSHI

IPR/RR-1463/2022 DECEMBER 2022

NANOFLUIDS: CRITICAL ISSUES AND ECONOMIC PERSPECTIVE

SAYANTAN MUKHERJEE, SYLWIA WCIŚLIK, PURNA CHANDRA MISHRA and PARITOSH CHAUDHURI

IPR/RR-1464/2022 DECEMBER 2022

IMPACT OF EDGE BIASING ON THE CROSS-FIELD TRANSPORT AND POWER SPECTRA

VIJAY SHANKAR, N. BISAI, SHRISH RAJ and A. SEN

IPR/RR-1465/2022 DECEMBER 2022

DESIGN AND ANALYSIS OF A 170 GHz ANTENNA FOR MILLIMETER-WAVE APPLICATIONS

SHEETAL PUNIA, SUMAN DANANI and HITESH B. PANDYA

IPR/RR-1466/2022 DECEMBER 2022

STUDY THE EFFECT OF ELECTRODE MATERIAL, ITS SURFACE, AND DIELECTRIC MATERIAL ON PLASMA AND PROPERTIES OF PLASMA-ACTIVATED WATER

VIKAS RATHORE and SUDHIR KUMAR NEMA

IPR/RR-1467/2022 DECEMBER 2022

TOWARDS THE REALIZATION OF AN ALTERNATIVE PATHWAY FOR EFFICIENT PRODUCTION OF HYDROGEN THROUGH PLASMA ELECTROLYSIS

AMREEN A. HUSSAIN, RAMKRISHNA RANE, AKSHAY VAID, ALPHONSA J. PALAKEL and GHYANSHYAM JHALA

IPR/RR-1468/2022 DECEMBER 2022

CFD ANALYSIS OF WATER COOLED GATE VALVE ASSEMBLY FOR SAFE HANDLING OF BIO-MEDICAL WASTE INSIDE WASTE FEEDING LINES OF PLASMA PYROLYSIS SYSTEM

DEEPAK SHARMA, ATIKKUMAR MISTRY, PARITOSH CHAUDHURI and S. K. NEMA

IPR/RR-1469/2022 DECEMBER 2022

STUDY OF THERMAL PERFORMANCE OF UPGRADED PRIMARY CHAMBER OF PLASMA PYROLYSIS SYSTEM USING CFD ANALYSIS

DEEPAK SHARMA, ATIKKUMAR MISTRY, A. SANGHARIYAT, C. PATIL, P. CHAUDHURI and S. K. NEMA

IPR/RR-1470/2022 DECEMBER 2022

ION ACOUSTIC SOLITON IN A TWO ELECTRON TEMPERATURE/SPECIES QUIESCENT

PLASMA CONFINED BY MULTI-POLE LINE CUSP MAGNETIC FIELD

ZUBIN SHAIKH, A. D. PATEL, P.K. CHATTOPADHYAY, JOYDEEP GHOSH, H.H. JOSHI and N. RAMASUBRAMANIAN

IPR/RR-1471/2022 DECEMBER 2022

REAL TIME MEASUREMENT OF AC AND DC ELECTRON TEMPERATURE USING COUPLED CENTER TAPPED EMISSIVE AND LANGMUIR PROBE (CCTELP)

A.K. SANYASI, L. M. AWASTHI, P. K. SRIVASTAVA, AYAN ADHIKARI and R. SUGANDHI

IPR/RR-1472/2023 JANUARY 2023

REMOVAL OF AN ANOMALY IN EDGE ION TEMPERATURE ESTIMATION USING SPECTROSCOPY IN ADITYA-U TOKAMAK

NANDINI YADAVA, J. GHOSH, M. B. CHOWDHURI, ANKUR PANDYA, S. PATEL, RITU DEY, SRIPATHI PUNCHITHAYA K., R. MANCHANDA, NILAM RAMAIYA, K. A. JADEJA, R. L. TANNA, S. K. PATHAK and ADITYA-U TEAM

IPR/RR-1473/2023 JANUARY 2023

LASER INDUCED BREAKDOWN SPECTROSCOPY (LIBS) FROM PHENOMENOLOGICAL ASPECTS TO APPLICATION FIELD: A SHORT REVIEW

JINTO THOMAS and HEM CHANDRA JOSHI

IPR/RR-1474/2023 JANUARY 2023

STUDIES OF PHYSIO-CHEMICAL CHANGES OF DIELECTRIC BARRIER DISCHARGE PLASMA TREATED ARAMID FIBERS

SADAF JETHVA, FALGUNI BHABHOR, CHIRAYU PATIL, VYOM DESAI, ARUNSINH ZALA, NISHA CHANDWANI, BALASUBRAMANIAN C. and N. I. JAMNAPARA

IPR/RR-1475/2023 JANUARY 2023

GAP PLASMON MODE COUPLING OF ALL-SPUTTERING GROWN SILVER NANOPARTICLES AND ALUMINIUM THIN FILMS FOR MANIFOLD IMPROVEMENT IN THE NEAR-FIELD AND SERS EFFICIENCY

MAHESH SAINI, VIVEK PACHCHIGAR, SEBIN AUGUSTINE, UMESH KUMAR GAUR, K. P. SOORAJ and MUKESH RANJAN

IPR/RR-1476/2023 JANUARY 2023

LARGE VOLUME PLASMA DEVICE-UPGRADE: A VERSATILE PLASMA SYSTEM FOR ELECTRON EMITTER, BEAM AND WAVE BASED DIAGNOSTICS

A. K. SANYASI, P. K. SRIVASTAVA, AYAN ADHIKARI, L. M. AWASTHI and R. SUGANDHI

IPR/RR-1477/2023 JANUARY 2023

DEVELOPMENT OF A FAST SOLENOID VALVE ASSISTED MECHANICAL LAUNCHER FOR CRYOGENIC PELLETS

J. S. MISHRA, P. PANCHAL, S. MUKHERJEE, V. GUPTA, H. S. AGRAVAT, P. NAYAK and R. GANGRADEY

IPR/RR-1478/2023 JANUARY 2023

ARGON, NEON, AND NITROGEN IMPURITY TRANSPORT IN THE EDGE AND SOL REGIONS OF A TOKAMAK

SHRISH RAJ, N. BISAI, VIJAY SHANKAR and A. SEN

IPR/RR-1479/2023 JANUARY 2023

ENGINEERING ANALYSIS OF PROTOTYPE CENTER STACK STRUCTURE FOR SPHERICAL TOKAMAK

RANJITH KUMAR SANTHARAM, ADITYA KUMAR VERMA, PRASADA RAO PEDADA, SHIJU SAM, YELLAMRAJU S. S. SRINIVAS and RAJENDRA KUMAR ELLAPPAN

IPR/RR-1480/2023 JANUARY 2023

CONFINEMENT-INDUCED DYNAMICAL STRUCTURAL REARRANGEMENT IN QUASI-2D DUSTY PLASMA

SWARNIMA SINGH, P. BANDYOPADHYAY, KRISHAN KUMAR and A. SEN

IPR/RR-1481/2023 JANUARY 2023

FLUX AND ENERGY ASYMMETRY IN A LOW PRESSURE CAPACITIVELY COUPLED PLASMA DISCHARGE EXCITED BY SAWTOOTH-LIKE WAVEFORM – A HARMONIC STUDY

SARVESHWAR SHARMA, NISHANT SIRSE and MILES M. TURNER

IPR/RR-1482/2023 JANUARY 2023

DEVELOPMENT OF LAB SCALE CONDUCTION COOLED HTS MAGNETS
PIYUSH RAJ, ANEES BANO, ARUN PANCHAL, PANKAJ VARMORA, DEVEN KANABAR, BHADRESH
PARGHI and UPENDRA PRASAD
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3D COMPUTATIONAL FLUID DYNAMICS ANALYSIS OF PINI ION SOURCE BACK PLATE UNDER
HIGH HEAT FLUX CONDITION
TEJENDRA PATEL, MUKTI RANJAN JANA and UJJWAL BARUAH
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O-MODE REFLECTOMETRY ON ADITYA-U
J. J. U. BUCH, S. K. PATHAK, K. M. PATEL and ADITYA-U TEAM
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WHISTLER HEAT-FLUX INSTABILITY GOVERNED INTERACTION OF ANISOTROPIC BEAM
ELECTRONS IN ELECTROMAGNETIC VLASOV SIMULATIONS
ANJAN PAUL and DEVENDRA SHARMA
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OXIDE-BASED SYNAPTIC EMULATOR USING PLASMA FIREBALL
SUDHEER, VIVEK PACHCHIGAR, RUPAM MANDAL, SOORAJ K. P., BISWARUP SATPATI,
TAPOBRATA SOM and MUKESH RANJAN
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NEUTRONIC SIMULATION OF MEDICAL RADIOISOTOPE ^{99}Mo AND ^{177}Lu PRODUCTION IN IPR 14
MeV NEUTRON GENERATOR FACILITY
H. L. SWAMI, A. SAXENA, S. VALA, M. ABHANGI, RATNESH KUMAR and RAJESH KUMAR
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INVESTIGATION OF TEMPORAL EVOLUTION OF HARD X-RAY SPECTRUM FROM NEON-SEEDED
PLASMA OF ADITYA-U TOKAMAK
SHISHIR PUROHIT, MANOJ KUMAR GUPTA, MALAY BIKAS CHOWDHURI, UMESH NAGORA,
YASHIKA TAUNK, ABHISHEK KUMAR, KAJALGARG, SURYA KUMAR PATHAK,
KUMARPALJADEJA, ROHIT KUMAR, KUMUDNI TAHILIANI, SAMEER KUMAR, KAUSHAL PATEL,
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INTERACTION OF A PRECURSOR SOLITON WITH WAKE STRUCTURE IN A FLOWING DUSTY
PLASMA
KRISHAN KUMAR, P. BANDYOPADHYAY, SWARNIMA SINGH and A. SEN
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EXPERIMENTAL MEASUREMENT OF P-Q CHARACTERISTICS OF AN ELECTROMAGNETIC PUMP
FOR HEAVYLIQUID METALS
S. SAHU, H. TAILOR, A. PRAJAPATI, S. GUPTA, S. VERMA and R. BHATTACHARYAY
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PLASMA SOURCES AND DIAGNOSTIC SOLUTIONS FOR NEGATIVE ION RESEARCH
SHANTANU KUMAR KARKARI
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RUNAWAY ELECTRON MITIGATION WITH PULSED LOCALIZED VERTICAL MAGNETIC FIELD
PERTURBATION IN ADITYA TOKAMAK
R. L. TANNA, S. PATEL, J. GHOSH, CHETNA CHAUHAN, A. AMARDAS, P. K. CHATTOPADHYAY, K.
A. JADEJA, Y. S. JOISA, U. C. NAGORA, P. K. ATREY, M. B. CHOWDHURI, R. MANCHANDA, Y. C.
SAXENA and THE ADITYA TEAM
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DEVELOPMENT OF A NOVEL APPARATUS TO MEASURE EMISSIVITY OF HIGH ROUGHNESS MATERIALS AT 82 K

AVIJIT DEWASI, RANJANA GANGRADEY, SAMIRAN SHANTI MUKHERJEE, VISHAL GUPTA, ROHAN DUTTA, ABHINAV B. DESAI, JYOTI S. MISHRA, PARESH PANCHAL, PRATIK A. NAYAK and HEMANG S. AGRAVAT

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EFFECT OF ANNEALING GAS ON GRAIN GROWTH OF CZTS LAYER: STUDY ON DEVICE EFFICIENCY

SAGAR AGRAWAL, C. BALASUBRAMANIAN and SUBROTO MUKHERJEE

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SIMPLE TIGHT ASPECT RATIO MACHINE ASSEMBLY TO STUDY ECR PRODUCE MAGNETIZED TOROIDAL PLASMA

T. RAM, JAGABANDHU KUMAR, P. K. SHARMA, RAJU DANIEL, P. R. PARMAR, K. K. AMBULKAR, A. L. THAKUR, A. KUNDU, V. D. RAULJI, B. ARAMBHADIYA, ABHIJEET KUMAR, PRAVEENLAL EDAPPALA, PRAMILA, H. D. MANDLIYA, URMIL THAKER and SUPRIYA A. NAIR

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METHOTREXATE DEGRADATION IN ARTIFICIAL WASTEWATER USING NON-THERMAL PENCIL PLASMA JET

VIKAS RATHORE, SHRUTI PATEL, AKANKSHA PANDEY, JIGNASA SAVJANI, SHITAL BUTANI, HEMAN DAVE and SUDHIR KUMAR NEMA

IPR/RR-1497/2023 FEBRUARY 2023

EXTENDED PASCHEN MODEL FOR ESTIMATING BREAKDOWN VOLTAGE OF BINARY AND TERNARY GAS MIXTURES

SHAHRUKH BAREJIA, S. JAKHAR, JYOTI AGARWAL, MANIKA SHARMA and R. SRINIVASAN

IPR/RR-1498/2023 FEBRUARY 2023

SELF-ORGANIZED ORDERED Ag NANOPARTICLES WERE GROWN ON LOW AMPLITUDE RIPPLES OF SODA LIME GLASS SUBSTRATE TO DETECT METANIL YELLOW IN TURMERIC SOLUTION

SEBINAUGUSTINE, SOORAJ K. P., MAHESH SAINI, SUKRITI HANS, BASANTA KUMAR PARIDA, VIVEK PACHCHIGAR and MUKESH RANJAN

IPR/RR-1499/2023 FEBRUARY 2023

STUDY OF OHMIC BREAKDOWN PHASE OF ADITYA TOKAMAK

S. PATEL, R. L. TANNA, J. GHOSH, P. K. CHATTOPADHYAY, M. B. CHOWDHURI, R. MANCHANDA, N. RAMAIYA, K. A. JADEJA, K. M. PATEL, M. N. MAKWANA, K. S. SHAH, U. C. NAGORA, K. B. K. MAYYA and ADITYA TEAM

IPR/RR-1500/2023 FEBRUARY 2023

LASER CLUSTER INTERACTION IN EXTERNAL MAGNETIC FIELD: EMERGENCE OF NEARLY MONO-ENERGETIC WEAKLY RELATIVISTIC ELECTRON BEAM

KALYANI SWAIN, S. S. MAHALIK and M. KUNDU

IPR/RR-1501/2023 FEBRUARY 2023

INVESTIGATIONS OF MAGNETIZED PLASMA EVOLUTION IN LVPD-UPGRADE HAVING UNIFORM SOURCE AND SPATIALLY VARIABLE TRANSPORT

AYAN ADHIKARI, A. K. SANYASI, L. M. AWASTHI, P. K. SRIVASTAVA, ANSHU VERMA, MAINAK BANDOPADHYAY and RITESH SUGANDHI

IPR/RR-1502/2023 FEBRUARY 2023

INFLUENCE OF CHAMBER PRESSURE ON THE OUTPUT CHARACTERISTICS OF A LOW-PRESSURE DC PLASMA SPRAY TORCHES: AN EXPERIMENTAL INVESTIGATION

RAM KRUSHNA MOHANTA, DEVILAL KUMAWAT, G. RAVI and KUMUDNI TAHILIAN

IPR/RR-1503/2023 MARCH 2023

PREPARATION, STABILIZATION, AND THERMAL CHARACTERISATION OF CUO/WATER
NANOFLUIDS APPLICABLE TO DOMESTIC SOLAR WATER HEATER
DRASHTI SHAH, SAYANTAN MUKHERJEE, AROH SHRIVASTAVA, PARITOSH CHAUDHARI,
RONAK PATEL and SANDEEP RIMZA
IPR/RR-1504/2023 MARCH 2023

EFFECT OF FLOW SHEAR ON THE ONSET OF DYNAMOS
SHISHIR BISWAS and RAJARAMAN GANESH
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SIMULATION AND IMPLEMENTATION OF A 350kV, 50mA HIGH VOLTAGE DC GENERATOR FOR
PARTICLE ACCELERATOR APPLICATIONS
AMAL S., ASHOK D. MANKANI, POOJA JOSHI, ARITRA CHAKROBORTY, PAUL D CHRISTIAN,
KUMAR SAURABH and UJJWAL K. BARUAH
IPR/RR-1506/2023 MARCH 2023

MAGNETIZED MULTI-COMPONENT PLASMAS SHEATH CHARACTERISTICS WITH THREE
ISOTHERMAL ION SPECIES AKSHAYA KUMAR SHAW, AMULYA KUMAR SANYASI and
DEVENDRA SHARMA
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EXPERIMENTAL STUDIES ON THE ROLES OF CHARGE EXCHANGE IONS AND SPACE CHARGE
NEUTRALIZATION IN A RING CUSP ION SOURCE
BHARAT SINGH RAWAT, S. K. SHARMA, V. PRAHLAD, B. CHOKSI and U. K. BARUAH
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STUDY OF MAGNETIZED PLASMA SHEATH PROPERTIES IN PRESENCE OF TWO GROUP
ELECTRONS AND TWO ISOTHERMAL ION SPECIES
AKSHAYA KUMAR SHAW, DEVENDRA SHARMA and SATYANANDA KAR
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ENHANCING THE PROPERTIES OF PLASMA ACTIVATED WATER USING AN AIR BUBBLE
DIFFUSER
VIKAS RATHORE, NIRAV I. JAMNAPARA and SUDHIR KUMAR NEMA
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