PEER-Reviewed Publications in Scientific Journals/Conference Proceedings/Book Chapter

2019-2020 (176 Reprints)

1. Beyond the Conventional Collisional Absorption of Laser Light in Under-Dense Plasma: A Particle-In-Cell Simulation Study
M. KUNDU
Pramana - Journal of Physics, 92, 50, 2019

2. Comparative Study of Discharge Characteristics and Associated Film Growth for Post-Cathode and Inverted Cylindrical Magnetron Sputtering
R. RANE, A. JOSHI, S. AKKIREDDY, S. MUKHERJEE
Pramana - Journal of Physics, 92, 55, 2019

3. Automation and Interlock System Design for Pb-Li Liquid-Metal Purification Experimental Facility
ABHISHEK SARASWAT, ANKUSH V. DEOGHAR, R. BHATTACHARYAY
Fusion Engineering and Design, 141, 43, 2019

4. Development of an Optimised Magnetic Field Source for Flowmeter Applications
SRIKANTA SAHU, ASHOK PRAJAPATI, MRITUNJAY KUMAR, RAJENDRAPRASAD BHATTACHARYAY
Flow Measurement and Instrumentation, 66, 190, 2019

5. Sensitivity Analysis on Predicted Microwave Performance of Mode Converters with Geometrical Tolerances for 42-Ghz Transmission Line Components
K. SATHYANARAYANA and S. V. KULKARNI
Fusion Science and Technology, 75, 234, 2019

6. Spatio-Temporal Evolution of Electric Field inside a Microwave Discharge Plasma during Initial Phase of Ignition and Its Effect on Power Coupling
C. MALLICK, M. BANDYOPADHYAY, and R. KUMAR
Physics of Plasmas, 26, 043507, 2019

7. Whistler Wave Propagation and Interplay between Electron Inertia and Larmor Radius Effects
GARIMA JOSHI, G. RAVI, and S. MUKHERJEE
Physics of Plasmas, 26, 042106, 2019

8. Sheath Formation in Collisional, Low Pressure, and Magnetized Plasma
R. MOULICK, S. ADHIKARI, and K. S. GOSWAMI
Physics of Plasmas, 26, 043512, 2019

9. Delta (δ) Ferrite Formation in the Welds of Aluminized 9Cr-1Mo Steels
A. B. ZALA, N. I. JAMNAPARA, V. J. BADHEKA, C. SASMAL, S. SAM, M. RANJAN
Metallography, Microstructure, and Analysis, 8, 256, 2019

10. Coherent Nonlinear Oscillations in Magnetohydrodynamic Plasma
RUPAK MUKHERJEE, RAJARAMAN GANESH, and ABHIJIT SEN
Physics of Plasmas, 26, 042121, 2019

11. Development of a Test Bench of 2.45 Ghz ECR Ion Source for RFQ Accelerator
S. VALA, R. KUMAR, M. ABHANGI, R. KUMAR and M. BANDYOPADHYAY
Journal of Instrumentation, 14, C04006, 2019

12. Design and Development of Mirnov Coil Sensor for Eddy Currents Experiment on Toroidal Vessel
KANIKDEEP T. SINGH, HIMANSHU K PATEL and R. GANGRADEY
International Journal of Innovative Technology and Exploring Engineering, 8, 1398, 2019

13. Zero Bias Emission Current in Laser Heated Emissive Probe and Proper Choice of Probe-Tip Material
P. PANDIT, A. SARMA, J. GHOSH, VARA PRASAD KELLA, N. RAMAIYA, R. MANCHANDA, SANTOSH PANDYA, M. B. CHOWDHURI, and P. I. JOHN

Physics of Plasmas, 26, 053501, 2019

14. Electron Temperature Gradient Turbulence Induced Energy Flux in the Large Volume Plasma Device
PRABHAKAR SRIVASTAV, RAMESWAR SINGH, L. M. AWASTHI, A. K. SANYASI, P. K. SRIVASTAVA, RITESH SUGANDHI, and R. SINGH
Physics of Plasmas, 26, 052303, 2019

15. Effect of Cross Flow on Mass Suction in a Straight Louvered Funnel
AVIK BHATTACHARYA, A MADHUSUDAN ACHARI
Journal of Mechanical Engineering Research and Developments, 3, 133, 2019

16. Development of Real-Time Controller-Based Data Acquisition System for Indian Test Facility of ITER DNB
HIMANSHU TYAGI, RATNAKAR YADAV, KARTIK PATEL, MAINAK BANDYOPADHAY, M. J. SINGH, ARUN CHAKRABORTY, and NAGENDRA P. GAJJAR
IEEE Transactions on Plasma Science, 47, 2775, 2019

17. Investigation of Atomic and Molecular Processes in Hα Emission through Modelling of Measured Hα Emissivity Profile using DEGAS2 in the ADITYA Tokamak
RITU DEY, M.B. CHOWDHURI, JOYDEEP GHOSH, R. MANCHANDA, NANDINI YADAVA, N. RAMAIYA, S. BANERJEE, U.C. NAGORA, P.K. ATREY, J.V. RAVAL, Y. SHANKAR JOISA, R.L. TANNA, D.P. STOTLER and ADITYA TEAM
Nuclear Fusion, 59, 076005, 2019

18. Excitation of Kdv Magnetosonic Solitons in Plasma in the Presence of an External Magnetic Field
ATUL KUMAR, CHANDRASEKHAR SHUKLA, DEEPA VERMA, AMITA DAS and PREDHIMAN KAW
Plasma Physics and Controlled Fusion, 61, 065009, 2019

19. Observation of Electromagnetic Fluctuation induced Particle Transport in ETG Dominated Large Laboratory Plasma
PRABHAKAR SRIVASTAV, RAMESWAR SINGH, L M AWASTHI, A K SANYASI, P K SRIVASTAVA, RITESH SUGANDHI and R SING
Plasma Physics and Controlled Fusion, 61, 055010, 2019

20. Design of RF AGC Scheme for Improving Dynamic Range of Multichannel Heterodyne ECE Radiometer in SST-1 Tokamak
DHARMENDRA KUMAR, VARSHA SIJU, SURYA K. PATHAK
Fusion Engineering and Design, 142, 80, 2019

21. Collective Dynamics of Globally Delay-Coupled Complex Ginzburg-Landau Oscillators
BHUMIKA THAKUR and ABHIJIT SEN
Chaos, 29, 053104, 2019

22. In Vitro Assessment of Plasma and Nanochitosan in Wheat (Triticum Aestivum L.)
HIMANGINI JOSHI, RAJEEW KUMAR, D.S. PANDEY and CHETAN JARIWALA
Green Farming, 10, 350, 2019

23. Experimental Studies of Two Phase Flow Characteristics and Void Fraction Predictions In Steady State Horizontal Two-Phase Nitrogen Flow
GAURAV KUMAR SINGH, SUBRATA PRADHAN, VIPUL TANNA
Cryogenics, 100, 77, 2019

24. The Role of Apex Angle of a Cone-Shaped Hollow Cathode on Plasma Parameters
MONTU P. BHUVA and SHANTANU K. KARKARI
IEEE Transactions on Plasma Science, 47, 2929, 2019

25. Spatial Temperature Profile in a Magnetised Capacitively Coupled Discharge
SHIKHA BINWAL, JAY K JOSHI, SHANTANU KUMAR KARKARI, PREDHIMAN KRISHAN KAW, LEKHA NAIR, HUW LEGGATE, AOIFE SOMERS and MILES M TURNER
Walailak Journal of Science and Technology, 16, 385, 2019

26. Measurement of Plasma Stream Velocity in a Pulsed Plasma Accelerator
N. TALUKDAR, A. AHMED, S. BORTHAKUR, N. K. NEOG, T. K. BORTHAKUR, and J. GHOSH
Physics of Plasmas, 26, 062711, 2019

27. Design of Configurable Multi-Mode Trigger Unit
GIBIN CHACKO GEORGE, A. AMALIN PRINCE A, J.J.U. BUCH, SURYA K. PATHAK
Measurement, 139, 482, 2019

28. A Neutronic Experiment to Support the Design of an Indian TBM Shield Module for ITER
H L SWAMI, M ABHANGI, SANCHIT SHARMA, S TIWARI, A N MISTRY, V VASAVA, V MEHTA, S VALA, C DANANI, V CHAUDHARI and P CHAUDHURI
Plasma Science and Technology, 21, 065601, 2019

29. Evaluation of Tungsten as Divertor Plasma-Facing Material: Results from Ion Irradiation Experiments and Computer Simulations
P.N. MAYA, P. SHARMA, A. SATYAPRASAD, S. MUKHERJEE, A.K. TYAGI, S.S. VALA, P.V. SUBHASH, A. ATTRI, P. KULRIYA, P.K. BAJPAI, P.M. RAOLE, V. KARKI, M. SINGH, R. KUMAR, A. LAKHANI, P. KIKANI, P. RAYJADA, M. ABHANGI, KEDAR MAL, S.P. PATEL, T. TRIVEDI, K. SARAVANAN, S. KANNAN, C. DAVID, P.K. PUJARI, M. WARRIER, S. KHIRWADKAR and S.P. DESHPANDE
Nuclear Fusion, 59, 076034, 2019

30. Design, Development and Recent Experiments of the CIMPLE-PSI Device
MAYUR KAKATI, TRINAYAN SARMAH, NGANGOM AOMOA, GOPIKISHAN SABAVATH, PUBALI DIHINGIA, MIZANUR RAHMAN, J. GHOSH, Y.C. SAXENA, B. SATPATI, GAGAN SHARMA, AJAY GUPTA and G. DE TEMMERMAN
Nuclear Fusion, 59, 112008, 2019

31. Novel Approach of Pulsed-Glow Discharge Wall Conditioning in the ADITYA Upgrade tokamak
K.A. JADEJA, KIRAN PATEL, K.M. PATEL , B.G. ARAMBHADIYA, J. GHOSH, R.L. TANNA, K.S. ACHARYA, S.B. BHATT, M.B. CHOWDHURI, R. MANCHANDA, MINSHA SHAH, S. GHOSH, VARA PRASAD KELLA, TANMACWAN, HARSHITA RAJ, ROHIT KUMAR, SUMAN AICH, DEVILAL KUMAWAT, M.B. KALAL, RACHANA RAJPAL, C.N. GUPTA, P.K. CHATTOPADHYAY, B.R. KATARIA, Y.C. SAXENA and ADITYA-U TEAM
Nuclear Fusion, 59, 086005, 2019

32. Study of Iron Impurity Behaviour in the ADITYA Tokamak
S. PATEL, A.K. SRIVASTAVA, M.B. CHOWDHURI, R. MANCHANDA, A. BHATTACHARYA, J.V. RAVAL, U. NAGORA, P.K. ATREY, R.L. TANNA, J. GHOSH and ADITYA TEAM
Nuclear Fusion, 59, 086019, 2019

33. Overview of Operation and Experiments in the ADITYA-U tokamak
R.L. TANNA, HARSHITA RAJ, J. GHOSH, ROHIT KUMAR, SUMAN AICH, TANMACWAN, D. KUMAWAT, K.A. JADEJA, K.M. PATEL, M.B. KALAL, D.S. VARIA, D.H. SADHARAKIYA, S.B. BHATT, K. SATHYANARAYANA, B.K. SHUKLA, P.K. CHATTOPADHYAY, M.N. MAKAWANA, K.S. SHAH, S. GUPTA, V. RANJAN, V. BALAKRISHNAN, C.N. GUPTA, V.K. PANCHAL, PRAVEENLAL EDAPPALA, B. ARAMBHADIYA, MINSHA SHAH, V. RAULJI, M.B. CHOWDHURI, S. BANERJEE, R. MANCHANDA, G. SHUKLA, K. SHAH, R. DEY, NANDINI YADAVA, SHARVIL PATEL, N. BISAI, D. RAJU, P.K. ATREY, S.K. PATHAK, U. NAGORA, J. RAVAL, Y.S. JOISA, MANOJ KUMAR, K. TAHILIAN, S.K. JHA, M.V. GOPALKRISHANA and A. SEN
Nuclear Fusion, 59, 112006, 2019

34 .Numerical Simulation of the Effect of Pellet Injection on ELMs
D. CHANDRA, A. SEN and A. THYAGARAJA
Plasma Physics and Controlled Fusion, 61, 085019, 2019

35. WC-281 Circular Waveguide Terminator Essential in Microwave Plasma Interaction Experiments for SYMPLE
JITENDRA KUMAR, RAJ SINGH, and V. P. ANITHA
Progress in Electromagnetics Research M, 82, 85, 2019

36. Design and Development of a D-Band Corrugated Horn Antenna for Millimeter-Wave Plasma Diagnostics
GUPTA J. VISHNU, DHAVAL PUJARA, and HITESH PANDYA
Progress in Electromagnetics Research Letters, 85, 101, 2019

37. Characterization of Hydrogen Plasma in a Permanent Ring Magnet Based Helicon Plasma Source for Negative Ion Source Research
A PANDEY, DEBRUP MUKHERJEE, DIPSHIKHA BORAH, M BANDYOPADHYAY, HIMANSHU TYAGI, RATNAKAR YADAV and A CHAKRABORTY
Plasma Physics and Controlled Fusion, 61, 065003, 2019

38. Processing of Porous Alumina by Foaming Method-Effect of Foaming Agent, Solid Loading and Binder
SOUMYA DEVAVARAPU, PARITOSH CHAUDHURI, AROH SHRIVASTAVA, SANTANU BHATTACHARYYA
Ceramics International, 45, 12264, 2019

39. Role of Hierarchical Protrusions in Water Repellent Superhydrophobic PTFE Surface Produced by Low Energy Ion Beam Irradiation
VIVEK PACHCHIGAR, MUKESH RANJAN and SUBROTO MUKHERJEE
Scientific Reports, 9, 8675, 2019

40. Design and Development of Resonant Loop Antenna for Mock-Up Ion Cyclotron Resonance Frequency System of Tokamak
A. JAIN, R. P. YADAV, S. B. KUMAR
IET Microwaves, Antennas and Propagation, 13, 976, 2019

41. Measurement of Complex Dielectric Constant using Optical Method
RAMONIKA SENGUPTA, ASHA ADHIYA, K. SATYA RAJA SEKHAR and RAJWINDER KAUR
IEEE Transactions on Instrumentation and Measurement, 68, 1814, 2019

42. Potential Application of Acoustic Emission Technique for Weld Structure Integrity Monitoring under Dynamic Loading
S.V. RANGANAYAKULU, R.K. BUDDU and P.V. SASTRY
Journal of Engineering Science and Technology, 14, 1344, 2019

43. Surfactant Prevented Growth and Enhanced Thermophysical Properties of CuO Nanofluid
JANKI SHAH, MUKESH RANJAN, K.P. SOORAJ, YOGESH SONVANE, SANJEEV K. GUPTA
Journal of Molecular Liquids, 283, 550, 2019

44. Plasma Surface Interaction using Nitrogen Plasma on AISI 304 Steel
SURAMONI BORTHAKUR, NAYAN TALUKDAR, NIROD KUMAR NEOG and TRIDIP KUMAR BORTHAKUR
Surface Engineering, 36, 498, 2019

45. Application of ANSYS FLUENT MHD Code for Liquid Metal Magnetohydrodynamic Studies
A. PATEL and R. BHATTACHARYAY
Nuclear Fusion, 59, 096024, 2019

46. Observation of Toroidal Acoustic Mode in a Current-Less Toroidal Plasma
UMESH KUMAR, R. GANESH, SATHYANARAYANA KRISHNAMACHARI, and Y. C. SAXENA
Physics of Plasmas, 26, 072307, 2019

47. Technologies for the Realization of Large Size RF Sources for Negative Neutral Beam Systems for ITER Challenges, Experience and the Path Ahead
JAYDEEP JOSHI, ARUN CHAKRABORTY, HITESH PATEL, M.J. SINGH, MAINAK BANDYOPADHYAY, EBERHARD PFAFF, JORG SCHAFER, CHRISTIAN ECKARDT, ARON METZ and MARKO GELFER
Nuclear Fusion, 59, 096007, 2019

48. Effect of Aluminide Coatings on Penetration and Microstructure of TIG Welded 9Cr-1Mo Steel for Fusion Blanket Applications

A.B. ZALA, N.I. JAMNAPARA, V.J. BADHEKA, S. SAM, M. RANJAN
Fusion Engineering and Design, 144, 172, 2019

49. Extent of Tritium Contamination of Cryogenic Helium Circuit in a Fusion Reactor: Mechanism and Probable Scenarios
VINIT SHUKLA, VIKAS J. LAKHERA, B. SARKAR
Fusion Engineering and Design, 144, 180, 2019

50. Numerical Simulation and Experiment of Error Filed Measurement using Luminous Trace of Electron Beam in SST- 1
SOMESWAR DUTTA, Y PARAVASTU, J DHONGDE, H CHUDASMA, S GEORGE, K DHANANI, A MAKWANA, C DODIYA, P VARMORA, D K SHARMA, A K SINGH, U KUMAR, D RAVAL, U PRASAD, Z KHAN, R SRINIVASAN and D RAJU
Plasma Science and Technology, 21, 105101, 2019

51. Studies on Virtual Electrode and Ion Sheath Characteristics in a Cylindrical Inertial Electrostatic Confinement Fusion Device
D. BHATTACHARJEE, D. JIGDUNG, N. BUZARBARUAH, S. R. MOHANTY, and H. BAILUNG
Physics of Plasmas, 26, 073514, 2019

52. Measurement of Asymmetric Electron Cloud in Cluster Nano-Plasma
SOUBHIK SARKAR, R. GOPAL, M. KUNDU, KRISHNENDU GOPE, M. ANAND, and M. KRISHNAMURTHY
Physics of Plasmas, 26, 070703, 2019

53. A Novel Cross-Polarizer Converter Formed by Twisted F-Shaped Chiral Metamaterial
D.K. SHARMA
Electromagnetics, 39, 407, 2019

54. Studies on Ti, Zn and Ti + Zn Bilayer Coatings on Interstitial Free Steel for Enhancement of Wear and Corrosion Resistance
M. K. DEBNATH, J. DUTTA MAJUMDAR, A. KUMAR, S. SETH, S. MUKHERJEE, I. MANNA
Journal of Materials Engineering and Performance, 28, 4434, 2019

55. Progress in the ITER Neutral Beam Test Facility
V. TOIGO, A. CHAKRABORTY, U. BARUAH, H. PATEL, N.P. SINGH, A. PATEL, H. DHOLA, B. RAVAL, V. GUPTA et.al.
Nuclear Fusion, 59, 086058, 2019

56. Role of Laser Absorption and Equation- of State Models on Ns Laser Induced Ablative Plasma and Shockwave Dynamics in Ambient Air: Numerical and Experimental Investigations
S. SAI SHIVA, CH. LEELA, P. PREM KIRAN,C. D. SIJOY,V. R. IKKURTHI and S. CHATURVEDI
Physics of Plasmas, 26, 072108, 2019

57. Positive Ion Impediment across Magnetic Field in a Partially Magnetized Plasma Column
SATADAL DAS and SHANTANU K KARKARI
Plasma Sources Science and Technology, 28, 075013, 2019

58. TM11 to HE11 Mode Converter in Overmoded Circular Corrugated Waveguide
AMIT PATEL, RIDDHI GOSWAMI, PUJITA BHATT, HIREN MEWADA, K. SATHYANARAYANA, S KULKARNI
IET Microwaves, Antennas and Propagation, 13, 1202, 2019

59. Electric Field Filamentation and Higher Harmonic Generation in Very High Frequency Capacitive Discharges
SARVESHWAR SHARMA, N SIRSE, A SEN, J S WU and M M TURNER
Journal of Physics D: Applied Physics, 52, 365201, 2019

60. Performance Evaluation of Various Diagnostics Developed for a Negative Ion Based Neutral Beam Injector Program in IPR

M. BANDYOPADHYAY, A.J. DEKA, D. MUKHOPADHYAY, P. SINGH, D. BORAH, A. PANDEY, H. TYAGI, R.K. YADAV, M. BHUYAN, P. BHARATHI, A.K. CHATTOPADHYAY, K. PANDYA, M.J. SINGH and A. CHAKRABORTY
Nuclear Fusion, 59, 085001, 2019

61. Phase Mixing of Lower Hybrid Modes in Cold Plasmas
SOURAV PRAMANIK, CHANDAN MAITY and MITHUN KARMAKAR
Physics of Plasmas, 26, 082111, 2019

62. Effect of Inhomogeneous Magnetic Field on Plasma Generation in a Low Magnetic Field Helicon Discharge
SONU YADAV, KSHITISH K. BARADA, SOUMEN GHOSH, JOYDEEP GHOSH and PRABAL K. CHATTOPADHYAY
Physics of Plasmas, 26, 082109, 2019

63. Simulations of Plasma Disruptions in ITER Due to Ingress of Be
INDRANIL BANDYOPADHYAYA and AMIT K. SINGH
Nuclear Fusion, 59, 096040, 2019

64. R&D Status of the Indian Test Facility for ITER Diagnostic Neutral Beam Characterization
M.J. SINGH, A.K. CHAKRABORTY, MAINAK BANDYOPADHYAY, JAYDEEP JOSHI, HITESH PATEL, KAUSHAL PANDYA, SEJAL SHAH, AGRAJIT GAHLAUT, ASHISH YADAV, DEEPAK PARMAR, DHEERAJ SHARMA, DHANANJAY SINGH, HIMANSHU TYAGI, KAUSHAL JOSHI, M.V. NAGARAJU, MANAS BHUYAN, MILIND PATEL, RATNAKAR YADAV, SURAJ PILLAI, D. BOILSON, J. CHAREYRE, B. SCHUNKE and C. ROTTI
Nuclear Fusion, 59, 096034, 2019

65. 3D Modelling of Loop Layout, Pipe Stress Analysis and Structural Responses of High-Pressure High-Temperature Experimental Helium Cooling Loop (EHCL)
A.K. VERMA, B.K. YADAV, A. GANDHI, A. SARASWAT, S. VERMA, E. RAJENDRA KUMAR
Fusion Engineering and Design, 145, 87, 2019

66. Characterization of in Situ Work Function and Cesium Flux Measurement Setup Suitable For Cesium Seeded Negative Ion Source Applications
P. SINGH, M. BANDYOPADHYAY, K. PANDYA, M. BHUYAN and A. CHAKRABORTY
Nuclear Fusion, 59, 106023, 2019

67. Hybrid Friction Stir Processing with Active Cooling Approach to Enhance Superplastic Behavior of AA7075 Aluminum Alloy
VIVEK PATEL, VISHVESH BADHEKA, WENYA LI, SATYAPRASAD AKKIREDDY
Archives of Civil and Mechanical Engineering, 19, 1368, 2019

68. Observation of Poloidal Asymmetry in Measured Neutral Temperatures in the Aditya-U Tokamak Plasma
NANDINI YADAVA, J. GHOSH, M.B. CHOWDHURI, R. MANCHANDA, SRIPATHI PUNCHITHAYA K, RITU DEY, HARSHITA RAJ, S. BANERJEE, R.L. TANNA, K.A. JADEJA, K. PATEL, ROHIT KUMAR, DEEPTI TRIPATHI and THE ADITYA-U TEAM
Nuclear Fusion, 59, 106003, 2019

69. Full-Wave Analysis and Computation of Radiation Characteristics for Reconfigurable Plasma Antennas
RASILA R. HIRANI, SURYA K. PATHAK, SHWETA N. SHAH
IEEE Transactions on Antennas and Propagation, 67, 5185, 2019

70. Overview of the JET Preparation for Deuterium-Tritium Operation with the ITER Like-Wall
E. JOFFRIN, M. ABHANGI, J. BUCH, D. CHANDRA, P. DUTTA, P.V. EDAPPALA, M. GHATE, A. KUNDU, B. MAGESH, R. MAKWANA, S. PANJA, S. PATHAK, V. PRAJAPATI, R. PRAKASH, S. RANJAN, K. RATHOD, P. SANTA, A. SINHA, M. STEPHEN, K. VASAVA
Nuclear Fusion, 59, 112021, 2019

71. Compressibility Effects on Quasistationary Vortex and Transient Hole Patterns Through Vortex Merger
RUPAK MUKHERJEE, AKANKSHA GUPTA and RAJARAMAN GANESH
Physica Scripta, 94, 115005, 2019

72. The Effect of Cyclic Olefin Copolymer Loading on Linear Low Density Polyethylene Blends: Characterization by Fourier-Transform Infrared Spectroscopy and X-Ray Diffraction
H. C. SHAH, S. K. NEMA
International Journal of Scientific and Technology Research, 8, 1019, 2019

73. Quantification of Atomic Hydrogen Anion Density in a Permanent Magnet Based Helicon Ion Source (HELEN) by using Pulsed Ring Down Spectroscopy
D. MUKHOPADHYAY, A. PANDEY, M. BANDYOPADHYAY, H. TYAGI, R. YADAV and A. CHAKRABORTY
Review of Scientific Instruments, 90, 083103, 2019

74. Kinetic Particle Simulations in a Global Toroidal Geometry
S. DE, T. SINGH, A. KULEY, J. BAO, Z. LIN, G. Y. SUN, S. SHARMA and A. SEN
Physics of Plasmas, 26, 082507, 2019

75. Coupling of Drift Wave with Dust Acoustic Wave
ATUL KUMAR, AMITA DAS and PREDHIMAN KAW
Physics of Plasmas, 26, 083702, 2019

76. Conductor Backed CPW-Fed Dual-Mode Excited High Gain Cylindrical Cavity DRA for Unmanned Aircraft Systems (UAS) or Drone Data-Link Applications at C Band
PRAMOD KUMAR, SANTANU DWARI, SHAILENDRA SINGH, JITENDRA KUMAR and AMITESH KUMAR
IETE Technical Review (Institution of Electronics and Telecommunication Engineers, India), 36, 463, 2019

77. Dynamics of Neon Ions after Neon Gas Seeding into Tokamak Plasma
N. BISAI, M.B. CHOWDHURI, S. BANERJEE, HARSHITA RAJ, RITU DEY, R.L. TANNA, R. MANCHANDA, K.A. JADEJA, J. GHOSH and ADITYA TEAM
Nuclear Fusion, 59, 126013, 2019

78. Uncertainty Analysis of an SST-2 Fusion Reactor Design
STUART I. MULDREW, HANNI LUX, VINAY MENON, RADHAKRISHNAN SRINIVASAN
Fusion Engineering and Design, 146, 353, 2019

79. Effect of Prior Cold Deformation and Nitriding Conditions on Microstructure and Mechanical Properties of Plasma Nitrided IF Steel
M.K DEBNATH, J. D. MAJUMDAR, S. MUKHERJEE, I. MANNA
Metallurgical and Materials Transactions A, 50, 4319, 2019

80. Experimental Investigation of Test Particle Induced Micro-Structural Changes in a Finite Two-Dimensional Complex Plasma Crystal
M.G. HARIPRASAD, P. BANDYOPADHYAY, ARORA GARIMA and A. SEN
Physics of Plasmas, 26, 103701, 2019

81. Influence of Select Discharge Parameters on Electric Field Transients Triggered in Collisionless Very High Frequency Capacitive Discharges
SHARMA SARVESHWAR, SIRSE NISHANT, ABHIJIT SEN, MILES M. TURNER and ALBERT R. ELLINGBOE
Physics of Plasmas, 26, 103508, 2019

82. Observations of Toroidal Plasma Rotation Reversal in the Aditya-U Tokamak
G. SHUKLA, K. SHAH, M.B. CHOWDHURI, H. RAJ, T. MACWAN, R. MANCHANDA, U.C. NAGORA, R.L. TANNA, K.A. JADEJA, K. PATEL, K.B.K. MAYYA, P.K. ATREY, J. GHOSH, and THE ADITYA-U TEAM
Nuclear Fusion, 59, 106049, 2019

83. Profile Tolerances Influence on Cryostat Base Section
SARBJEET S. SANDHU, TARUN K. SHARMA, SHRISHAIL B. PADASALAGI, KUNAL S. BHATT, MAHESH PATEL, GIRISH K. GUPTA, MANISH K. PANDEY, AMIT PALALIYA

Fusion Engineering and Design, 146, Part B, 2534, 2019

84. Plasma Flow Equilibria in 2D Cylindrically Symmetric Expanding Magnetic Field
SNEHA GUPTA and DEVENDRA SHARMA
Physics of Plasmas, 26, 093501, 2019

85. Effect of Size and Shape of a Moving Charged Object on the Propagation Characteristics of Precursor Solitons
GARIMA ARORA, P. BANDYOPADHYAY, M. G. HARIPRASAD and A. SEN
Physics of Plasmas, 26, 093701, 2019

86. Development of Tungsten Armored High Heat Flux Plasma Facing Components for ITER like Divertor Application
K. PREMJIT SINGH, S.S. KHIRWADKAR, NIKUNJ PATEL, PRAKASH MOKARIA, KEDAR BHOPE, SUNIL BELSARE, VINAY MENON, K. DEEPU, MAYUR MEHTA, SUDHIR TRIPATHI, ALPESH PATEL, RAJAMANAR SWAMY, TUSHAR PATEL, KALPESH GALODIYA
Fusion Engineering and Design, 146, 2273, 2019

87. Investigation of Alumina Film Formed over Aluminized RAFM Steel by Plasma Assisted Heat Treatment
A.B. ZALA, N.I. JAMNAPARA, C.S. SASMAL, P. CHAUDHURI, M. RANJAN,
Fusion Engineering and Design, 146, 2002, 2019

88. Effect of Laser Shock Peening on High Cycle Fatigue Characteristics of 316LN Stainless Steel
PARDHU YELLA, K.V. RAJULAPATI, G.V. PRASAD REDDY, R. SANDHYA, P. PREM KIRAN, RAMESH K. BUDDU, K. BHANU SANKARA RAO
International Journal of Pressure Vessels and Piping, 176, 103972, 2019

89. SPIDER in the Roadmap of the ITER Neutral Beams
G. SERIANNI, V. TOIGO, M. BIGI, M. BOLDRIN, G. CHITARIN, S. DAL BELLO, L. GRANDO, A. LUCHETTA, D. MARCUZZI, R. PASQUALOTTO, N. POMARO, P. ZACCARIA, L. ZANOTTO, P. AGOSTINETTI, M. AGOSTINI, V. ANTONI, D. APRILE, M. BARBISAN, M. BATTISTELLA, M. BROMBIN, R. CAVAZZANA, M. DALLA PALMA, M. DAN, A. DE LORENZI, R. DELOGU, M. DE MURI, S. DENIZEAU, M. FADONE, F. FELLIN, L. FERBEL, A. FERRO, E. GAIO, G. GAMBETTA, F. GASPARINI, F. GNESOTTO, P. JAIN, A. MAISTRELLO, G. MANDUCHI, S. MANFRIN, G.IORI, N. MARCONATO, M. MORESCO, T. PATTON, M. PAVEI, S. PERUZZO, N. PILAN, A. PIMAZZONI, R. PIOVAN, C. POGGI, M. RECCHIA, A. RIZZOLO, G. ROSTAGNI, E. SARTORI, M. SIRAGUSA, P. SONATO, E. SPADA, S. SPAGNOLO, M. SPOLAORE, C. TALIERCIO, P. TINTI, M. UGOLETTI, M. VALENTE, A. ZAMENGO, B. ZANIOL, M. ZAUPA, C. BALTADOR, M. CAVENAGO, D. BOILSON, C. ROTTI, P. VELTRI, T. BONICELLI, F. PAOLUCCI, S. MURIEL, A. MASIELLO, A. CHAKRABORTY, H. PATEL, N.P. SINGH, U. FANTZ, B. HEINEMANN, W. KRAUS, M. KASHIWAGI, K. TSUMORI
Fusion Engineering and Design, 146, 2539, 2019

90. Commissioning of Electron Cyclotron Resonance Heating (ECRH) System on Tokamak Aditya-U
BRAJ K. SHUKLA, JATIN PATEL, HARDIK MISTRY, HARSHIDA PATEL, DHARMESH PUROHIT, K.G. PARMAR, RAJAN BABU, JOYDEEP GHOSH, RAKESH TANNA, KUMAR PALSINH JADEJA, KAUSHAL PATEL, MOTI MAKWANA, C.N. GUPTA, MAHESH KUSHWAH
Fusion Engineering and Design, 146, 2083, 2019

91. Design and Development of Wireless Control System Architecture for ITER-India Gyrotron Test Facility
DEEPAK MANDGE and NAGENDRA P. GAJJAR
International Journal of Sensors, Wireless Communications and Control, 9, 345, 2019

92. 28-GHz ECHCD System with Beam Focusing Launcher on the QUEST Spherical Tokamak
H. IDEI, T. ONCHI, T. KARIYA, T.I. TSUJIMURA, S. KUBO, S. KOBAYASHI, M. SAKAGUCHI, T. IMAI, M. HASEGAWA, K. NAKAMURA, K. MISHRA, M. FUKUYAMA, M. YUNOKI, S. KOJIMA, O. WATANABE, K. KURODA, K. HANADA, Y. NAGASHIMA, A. EJIRI, N. MATSUMOTO, M. ONO, A. HIGASHIJIMA, T. NAGATA, S. SHIMABUKORO, Y. TAKASE, A. FUKUYAMA, S. MURAKAMI
Fusion Engineering and Design, 146, 1149, 2019

93. Prototype TM01 Mode Launcher by using Pagoda-Shaped Geometry in Circular Waveguide for Microwave Plasma Interaction Experiments at SYMPLE

JITENDRA KUMAR, RAJ SINGH and V.P ANITHA
International Journal of RF and Microwave Computer-Aided Engineering, 29, e21957, 2019

94. Evolution of Dust Ion Acoustic Soliton in the Presence of Superthermal Electrons
D. DUTTA, S. ADHIKARI, R. MOULICK and K. S. GOSWAMI
Physica Scripta, 94, 125210, 2019

95. Neutral and Ion Composition of Laser Produced Lithium Plasma Plume in Front and Back Ablation of Thin Film
A. MONDAL, R. K. SINGH and H. C. JOSHI
Journal of Analytical Atomic Spectrometry, 34, 1822, 2019

96. Solitary and Shock Wave in Magnetized Collisional Pair-Ion Plasmas
ASHISH ADAK and SUDIP SENGUPTA
European Physical Journal D, 73, 197, 2019

97. Manufacturing Experience and Commissioning of Large Size (Volume >180 M3) UHV Class Vacuum Vessel for Indian Test Facility (INTF) for Neutral Beam
J. JOSHI, A. YADAV, K. JOSHI, D. SINGH, H. PATEL, S. ULAHANNAN, A. VINAYKUMAR, M. GIRISH, M. KHAN, MANOHAR, M. SINGH, M. BANDYOPADHYAY, A. CHAKRABORTY
Fusion Engineering and Design, 146, 1377, 2019

98. Spatial Profile of Neutral Temperature Measurement in Aditya-U Tokamak Plasmas
NANDINI YADAVA, JOYDEEP GHOSH, MALAY BIKAS CHOWDHURI, RANJANA MANCHANDA, SRIPATHI PUNCHITHAYA K., RITU DEY, KUMARPALSINH A. JADEJA, RAKESH L. TANNA, DEEPTI TRIPATHI AND ADITYA-U TEAM
Atoms, 7, 7030087, 2019

99. A Novel and Efficient Hardware Accelerator Architecture for Signal Normalization
GIBIN CHACKO GEORGE, ABHISHEK MOITRA, SRIYASH CACULO, A. AMALIN PRINCE, J. J. U. BUCH and SURYA K. PATHAK
Circuits, Systems, and Signal Processing, 39, 2425, 2019

100. Poloidal Rotation and Edge Ion Temperature Measurements Using Spectroscopy Diagnostic on Aditya-U Tokamak
GAURAV SHUKLA, MALAY B. CHOWDHURI, KAJAL SHAH, NANDINI YADAVA, RANJANA MANCHANDA, KUMARPALSINH A. JADEJA, RAKESH L. TANNA, BALAMURALI KRISHNA MAYYA K., JOYDEEP GHOSH and ADITYA-U TEAM
Atoms, 7, 93, 2019

101. Evaluation of Oxygen Transport Coefficient in Aditya Tokamak using Radial Profile of O4+ Emissivity and Importance of Atomic Data Used therein
MALAY BIKAS CHOWDHURI, JOYDEEP GHOSH, RITU DEY, SHARVIL PATEL, NANDINI YADAVA, RANJANA MANCHANDA, IZUMI MURAKAMI and ADITYA TEAM
Atoms, 7, 90, 2019

102. A Study of the O^{4+} Emissivity Profiles with Two Separate Photon Emissivity Coefficient Databases and a Comparison of the Impurity Diffusion Coefficients in the Aditya Tokamak
AMRITA BHATTACHARYA, JOYDEEP GHOSH, MALAY B. CHOWDHURI, PRABHAT MUNSHI, IZUMI MURAKAMI and THE ADITYA TEAM
Plasma and Fusion Research, 14, 1403155, 2019

103. Progress of ITER-India Activities for ITER Deliverables-Challenges and Mitigation Measures
A.K. CHAKRABORTY, UJJWAL BARUAH, APARAJITA MUKHERJEE, S.L. RAO, VINAY KUMAR, NARINDER P. SINGH, AJITH KUMAR, GIRISH GUPTA, HITENSINH VAGHELA, H.A. PATHAK, HITESH PANDYA, SHRISHAIL PADASALAGI, INDRANIL BANDYOPADHYAY, and SHISHIR DESHPANDE
Nuclear Fusion, 59, 112024, 2019

104. Modeling of the Hα Emission from ADITYA Tokamak Plasmas

RITU DEY, MALAY B. CHOWDHURI, JOYDEEP GHOSH, RANJANA MANCHANDA, NANDINI YADAVA, UMESHKUMAR C. NAGORA, PARVEEN K. ATREY, JAYESH V. RAVAL, Y. SHANKARA JOISA, RAKESH L. TANNA and ADITYA TEAM
Atoms, 7, 95, 2019

105. Design Approach for a Miniaturized Pseudospark-Based High-Current- Density Sheet Electron Beam Source
NIKITA GURJAR, AFAQUE M. HOSSAIN, RISHU SINGH, R. K. SHARMA, V. P. ANITHA, RAJ SINGH, and NIRAJ KUMAR
IEEE Transactions on Electron Devices, 66, 4398, 2019

106. Rapid Investigation Expiry Drug Green Corrosion Inhibitor on Mild Steel in NaCl Medium
N. PALANIAPPAN, J. ALPHONSA, I.S. COLE, K. BALASUBRAMANIAN, I.G. BOSCO
Materials Science and Engineering, 249, 114423, 2019

107. Surface Characteristics of Plasma Treated and Titanium Nitride (Tin) Deposited Aluminum Alloy
SANTOSH BALANAND, SHANTANU BHOWMIK, MADHAV DATTA, RAMKRISHNA RANE, SUBROTO MUKHERJEE
Materials Performance and Characterization, 8, 468, 2019

108. Multiple Steady State Co-Rotating Dust Vortices in Streaming Plasma
MODHUCHANDRA LAISHRAM, DEVENDRA SHARMA and PING ZHU
Journal of Physics D: Applied Physics, 53, 025204, 2019

109. SIW Resonator Fed Horn Mounted Compact DRA with Enhanced Gain for Multiband Applications
PRAMOD KUMAR, JITENDRA KUMAR, SHAILENDRA SINGH, UTKARSH and SANTANU DWARI
International Journal of Microwave and Wireless Technologies, 11, 821, 2019

110. Multiphysics Analysis of the Passive Active Multijunction (PAM) Launcher for LHCD System of ADITYA-Upgrade Tokamak
YOGESH M. JAIN, P.K. SHARMA, HARISH V. DIXIT
Fusion Engineering and Design, 147, 111225, 2019

111. Development of 42-Ghz, 200-Kw Gyrotron for Indian Tokamak System Tested in the Regime of Short Pulselength
ANIRBAN BERA, NARENDRA K. SINGH, NITIN KUMAR , DHARMENDRA RATHI, K. SATYNARYANA, UDAYBIR SINGH, SANJAY V. KULKARNI, ALOK K. MISHRA, VISHANT, HASINA KHATUN, MUKESH K. ALARIA, ATUL VARIA, KIRIT PARMAR, BHAVESH KADIA, Y. S. S. SRINIVAS, MITESH KEVADIA, OM RANJAN,NALINI PAREEK, RAJAN BABU, SUBRATO DAS, P. K. JAIN, ASHOK K. SINHA, M. V. KARTIKEYAN and SHREENIWAS JOSHI
IEEE Transactions on Plasma Science, 47, 4658, 2019

112. Influence of Cold Hollow Cathode Geometry on the Radial Characteristics of Downstream Magnetized Plasma Column
M. P. BHUVA, S. K. KARKARI and SUNIL KUMAR
Plasma Sources Science and Technology, 28, 115013, 2019

113. Negative Entropy-Production Rate in Rayleigh-Benard Convection in Two-Dimensional Yukawa Liquids
PAWANDEEP KAUR and RAJARAMAN GANESH
Physical Review E, 100, 053201, 2019

114. Influence of He and N2 Plasma on in Situ Surface Passivated Fe Nanopowders by Plasma Arc Discharge
E. M. KOUSHIKA, C. BALASUBRAMANIAN, P. SARAVANAN and G. SHANMUGAVELAYUTHAM
Journal of Physics Condensed Matter, 31, 475302, 2019

115. CAE V1.1-A Code for the Magnetic Field Due to Arbitrary Electromagnets
DIVYANG R. PRAJAPATI and GATTU RAMESH BABU
IEEE Transactions on Magnetics, 55, 8818666, 2019

116. Dynamics of a Toroidal Pure Electron Plasma using 3D PIC Simulations
S. KHAMARU, M. SENGUPTA and R. GANESH

Physics of Plasmas, 26, 112106, 2019

117. Radial Variation of Electron Temperature Gradient in a Double Plasma Laboratory Device
PRINCE ALEX, A. K. SANYASI, PRABHAKAR SRIVASTAV, P. K. SRIVASTAVA, R. SUGANDHI and L. M. AWASTHI
Physics of Plasmas, 26, 112115, 2019

118. The Data Acquisition and Control System for the Operation of ASDEX Pressure Gauge for the Measurement of Neutral Pressure in ADITYA Tokamak
KIRAN PATEL A, K.A. JADEJA, H.C. JOSHI, J. GHOSH
Fusion Engineering and Design, 148, 111256, 2019

119. Design of Tomographic Diagnostic System for Indian Test Facility (INTF) Neutral Beam Injector
D. BORAH, A.K. CHATTOPADHYAY, M. BANDYOPADHYAY, A.J. DEKA
Fusion Engineering and Design, 148, 111255, 2019

120. Structural Investigation of Low Energy Ion Irradiated Al2O3
SUNIL KUMAR, SEJAL SHAH, INDRA SULANIA, FOURAN SINGH, ARUN CHAKRABORTY
Ceramics International, 45, 20346, 2019

121. Design and Development of High Power Variable Dual-Directional Radio Frequency Coupler
A. JAIN, R. P. YADAV and S. KUMAR
IET Microwaves, Antennas and Propagation, 13, 2544, 2019

122. Mechanical Properties of Laser Shock-Peened Regions of SS316LN and SS304 Studied by Nanoindentation
PARDHU YELLA, J. VARGHESE, P. PREM KIRAN, R. K. BUDDU, K. BHANU SANKARA RAO and KOTESWARARAO V. RAJULAPATI
INAE Letters, 4, 215, 2019

123. Understanding Langmuir Probe Characteristics of a Magnetized Plasma Column in Partial Contact with Grounded Probe Reference
M.P. BHUVA, S.K. KARKARI and S. KUMAR
Journal of Instrumentation, 14, T11009, 2019

124. Effect of Magnetization on Impedance Characteristics of a Capacitive Discharge using Push-Pull Driven Cylindrical Electrodes
JAY K. JOSHI, SHANTANU K. KARKARI and SUNIL KUMAR
IEEE Transactions on Plasma Science, 47, 8911246, 2019

125. Measurement of Neutron Induced 86Sr (N, 2n)85Sr Reaction Cross Sections at Different Neutron Energies
SHETTY N, MAKWANA R, MEHTA M, MUKHERJEE S, SINGH NL, SURYANARAYANA SV, PARASHARI S, SINGH R, NAIK H, SHARMA SC, AYYALA S, SONI B, CHAUHAN R.
Applied Radiation and Isotopes, 154, 108866, 2019

126. Surface and Structural Analyses of Helium Ion Irradiated Beryllium
N.J. DUTTA, S.R. MOHANTY, K.P. SOORAJ, M. RANJAN
Vacuum, 170, 108962, 2019

127. A Model for Real Time, in Situ Estimation of Cesium Coverage on Metal Substrate Using Infrared Imaging under Vacuum
PRANJAL SINGH and MAINAK BANDYOPADHYAY
Review of Scientific Instruments, 90, 123505, 2019

128. Low Frequency (f< 200 Hz) Polar Plasmaspheric Hiss: Coherent and Intense
BRUCE T. TSURUTANI, SANG A. PARK, BARBARA J. FALKOWSKI, JACOB BORTNIK, GURBAX S. LAKHINA, ABHIJIT SEN, JOLENE S. PICKETT, RAJKUMAR HAJRA, MICHELL PARROT and PIERRE HENRI
Journal of Geophysical Research: Space Physics, 124, 10063, 2019

129. Microstructural investigations on bonding mechanisms of cold-sprayed copper with SS316L steel

SURINDER SINGH, HARPREET SINGH and RAMESH KUMAR BUDDU
Surface Engineering, 2019, 1698163, 2019

130. Electron Heating of Over-Dense Plasma with Dual-Frequency Electron Cyclotron Waves in Fully Non-Inductive Plasma Ramp-Up on the QUEST Spherical Tokamak
H. IDEI, T. ONCHI, K. MISHRA, H. ZUSHI, T. KARIYA, T. IMAI, O. WATANABE, R. IKEZOE, K. HANADA, M. ONO, A. EJIRI, J. QIAN, K. NAKAMURA, A. FUJISAWA, Y. NAGASHIMA, M. HASEGAWA, K. MATSUOKA, A. FUKUYAMA, S. KUBO, M. YOSHIKAWA, M. SAKAMOTO, S. KAWASAKI, A. HIGASHIJIMA, S. IDE, Y. TAKASE and S. MURAKAMI
Nuclear Fusion, 60, 016030, 2019

131. Synthesis and Structure Determination of Calcium Silicate-Cellulose Nanograss Biocomposite
NILORMI BISWAS, ANIRUDDHA SAMANTA, SANCHALI MITRA, RIPAN BISWAS, SOUMIK PODDER, AMBARISH SANYAL, JITEN GHOSH, CHANDAN KUMAR GHOSH, ANOOP KUMAR MUKHOPADHYAY
Journal of the American Ceramic Society, 103, 2868, 2019

132. Development of Lab Scale Sub-Cooled Liquid Nitrogen Facility for High Temperature Superconductor Applications
BAIRAGI NITIN, NIMAVAT H., SONARA D., TANNA V. L.
Indian Journal of Cryogenics, 44, 142, 2019

133. Test Set-up and Results of Indigenous Prototype 80 K Helium purifier of He Plant
SAHU A K, PRAJAPATI D, BODA N, PANDYA D, BRAHMBHATT P, BOHRA D, BEHERA A, ARYA B,KAVAD H, DAVE H, BHATTASANA R, CHANDRATRE O and KUMAR N
Indian Journal of cryogenics, 44, 65, 2019

134. Performance Assessment of the Helium Cooled First Wall Mock-Up in HELOKA Facility
S. RANJITHKUMAR, B. K. YADAV, A. SARASWAT, P. CHAUDHURI, E. R. KUMAR, A. KUNZE and B. E. GHIDERSA
Fusion Engineering and Design, 150, 111319, 2020

135. Structure Factor and Phonon Dispersion in Liquid Pb–Li Eutectic
S. G. KHAMBHOLJA, A. ABHISHEK, D. P. MEHTA and B. Y. THAKORE
Transactions of the Indian Institute of Metals, 73, 199, 2020

136. Design of Surface Defects Loaded Selectively Notched W-Band Waveguide Filter for Millimeter Wave Diagnostic in Fusion Reactor
HIRENKUMAR V. DHUDA, PIYUSH N. PATEL and HITESHKUMAR B. PANDYA
Wireless Personal Communications, 110, 69, 2020

137. Design and Development of the W-Band Corrugated Waveguide Mode Converter for Fusion Plasma Experiments
HIRENKUMAR V. DHUDA, PIYUSH N. PATEL and HITESHKUMAR B. PANDYA
International Journal of RF and Microwave Computer-Aided Engineering, 30, e22024, 2020

138. Thermal-hydraulics and structural analyses of LLCB TBM set
DEEPAK SHARMA, S. RANJITHKUMAR, PARITOSH CHAUDHURI and E. RAJENDRA KUMAR
Fusion Engineering and Design, 150, 111372, 2020

139. Lane Formation in Driven Pair-Ion Plasmas
UPASHA SARMA, SWATI BARUAH and R. GANESH
Physics of Plasmas, 27, 012106, 2020

140. Inferring Plasma Parameters from the Sheath Characteristics of a DC Biased Hairpin Probe
A. K. PANDEY, JAY K. JOSHI and S. K. KARKARI
Plasma Sources Science and Technology, 29, 015009, 2020

141. Displacement Damage Study in Tungsten and Iron for Fusion Neutron Irradiation
MAYANK RAJPUTA, P.V. SUBHASH and R. SRINIVASAN

Fusion Engineering and Design, 150, 111370, 2020

142. Global Scaling of the Heat Transport in Fusion Plasmas
SARA MORADI, JOHAN ANDERSON, MICHELE ROMANELLI, HYUN-TAE KIM, JET CONTRIBUTORS, M. ABHANGI, J. BUCH, D. CHANDRA, P. DUTTA, P. V. EDAPPALA, M. GHATE, A. KUNDU, B. MAGESH, R. MAKWANA, S. PANJA, S. PATHAK, V. PRAJAPATI, R. PRAKASH, S. RANJAN, K. RATHOD, P. SANTA, A. SINHA, M. STEPHEN, K. VASAVA, et al.
Physical Review Research, 2, 013027, 2020

143. Discharge Properties of Helicon Oxygen Plasma in the Source and Expansion Chambers
N. SHARMA, M. CHAKRABORTY, N. K. NEOG and M. BANDYOPADHYAY
Plasma Research Express, 2, 015005, 2020

144. Effects of Mixing Vane Spacer on Flow and Thermal Behavior of Fluid in Fuel Channels of Nuclear Reactors - A Review
SATISH KUMAR DHURANDHAR, S. L. SINHA and SHASHI KANT VERMA
Nuclear Technology, 206, 663, 2020

145. Oversized circular corrugated waveguides operated at 42 GHz for ECRH application
A. PATEL, P. BHATT, K. K. MAHANT, A. D. VALA, K. SATHYANARAYAN, S. V. KULKARNI, and D. RATHI
Progress in Electromagnetics Research M, 88, 73, 2020

146. Characterization of Argon Plasma in a Variable Multi-Pole Line Cusp Magnetic Field Configuration
A. D. PATEL, M. SHARMA, N. RAMASUBRAMANIAN, J. GHOSH and P. K. CHATTOPADHYAY
Physica Scripta, 95, 035602, 2020

147. Activated Charcoal Cooled to Liquid Helium Temperature Exhibiting Pumping for Hydrogen and Helium Gases
R. GANGRADEY, V.L. TANNA, S. MUKHERJEE, J. MISHRA, P. NAYAK, P. PANCHAL
Vacuum, 172, 109026, 2020

148. Computational Characterization of Plasma Transport across Magnetic Filter in ROBIN using PIC-MCC Simulatio M. SHAH, B. CHAUDHURY, M. BANDYOPADHYAY and A. CHAKRABORTY
Fusion Engineering and Design, 151, 111402, 2020

149. Real-Time Sensor Fault Detection in Tokamak Using Different Machine Learning Algorithms
D. MOHAPATRA, B. SUBUDHI and R. DANIEL
Fusion Engineering and Design, 151, 111401, 2020

150. Thermo-Economic Performance Analysis of Al2O3-Water Nanofluids - An Experimental Investigation
SAYANTAN MUKHERJEE, PURNA CHANDRA MISHRA and PARITOSH CHAUDHURI
Journal of Molecular Liquids, 299, 112200, 2020

151. Design and Thermal fluid Structure Interaction Analysis of Liquid Nitrogen Cryostat of Cryogenic Molecular Sieve Bed Adsorber for Hydrogen Isotopes removal System
V. GAYATHRI DEVI, S. RANJITH KUMAR, DEEPAK YADAV, PRATIK LATHIYA and AMIT SIRCAR
Fusion Engineering and Design, 151, 111376, 2020

152. Pipe-To-Pipe Friction Welding of Dissimilar Al-SS Joints for Cryogenic Applications
HARDIK VYAS, KUSH P. MEHTA, VISHVESH BADHEKA and BHARAT DOSHI
Journal of the Brazilian Society of Mechanical Sciences and Engineering, 42, 96, 2020

153. Efficient Microwave Synthesis, Functionalisation and Biocompatibility Studies of SPION Based Potential Nano-Drug Carriers
NAMITA SAXENA, NEERAJ DHOLIA, SATYAPRASAD AKKIREDDY, ANUPINDER SINGH, UMESH C. S. YADAV and CHARU LATA DUBE
Applied Nanoscience, 10, 649, 2020

154. Effect of Periodic Gas-Puffs on Drift-Tearing Modes in ADITYA/ADITYA-U Tokamak Discharges

HARSHITA RAJ,A,B, TANMACWAN, KAUSHALENDER SINGH, SUMAN DOLUI, JOYDEEP GHOSH, NIRMAL K. BISAI, K.A. JADEJA, K.M. PATEL, N.C. PATEL, R.L. TANNA, D. RAJU, S.K. JHA, P.K. CHATTOPADHYAY, ABHIJIT SEN, Y.C. SAXENA, R. PAL and ADITYA-U TEAM
Nuclear Fusion, 60, 036012, 2020

155. Investigation of the Behavior of Effective Charge of Aditya Tokamak Plasmas
M. B CHOWDHURI, R. MANCHANDA, J. GHOSH, K. A. JADEJA, KAUSHAL M. PATEL, VINAY KUMAR, KETAN M. PATEL, P. K. ATREY, Y. SHANKARA JOISA, S. B. BHATT, R. L. TANNA and ADITYA TEAM
Plasma Physics and Controlled Fusion, 62, 035015, 2020

156. Effect of Two Temperature Electrons in a Collisional Magnetized Plasma Sheath
G. SHARMA, S. ADHIKARI, R. MOULICK, S. S. KAUSIK and B. K. SAIKIA
Physica Scripta, 95, 035605, 2020

157. Simulation of the Internal Kink Mode in Visco-Resistive Regimes
J. MENDONCA, D. CHANDRA, A. SEN and A. THYAGARAJA
Nuclear Fusion, 60, 046004, 2020

158. Study on Production and Extraction of Negative Impurity Ions in a Caesiated Negative Ion Source
P. BHARATHI, A.J. DEKA, M. BANDYOPADHYAY, M. BHUYAN, K. PANDYA, R.K. YADAV, H. TYAGI, A. GAHLAUT and A. CHAKRABORTY
Nuclear Fusion, 60, 046008, 2020

159. Emerging advanced technologies developed by ipr for bio medical applications - A review
A VAID, C PATIL, A SANGHARIYAT, R RANE, A VISANI, S MUKHERJEE, ALPHONSA JOSEPH, M RANJAN, S INE, KP SOORAJ, V RATHORE, SK NEMA, A AGRAJ, G GARG, A SHARMA, M SHARMA, K PANSARE, C MURALI KRISHNA, JYOTIRMOY BANERJEE, SARAT CHANDRA
Neurology India, 68, 26, 2020

160. Ultra Slow Electron Holes in Collisionless Plasmas: Stability at High Ion Temperature
DEBRAJ MANDAL, DEVENDRA SHARMA and HANS SCHAMEL
Physics of Plasmas, 27, 022102, 2020

161. Plasma-Metal Junction
SARAVANAN ARUMUGAM, M. PERUMAL, K. P. ANJANA, S. V. M. SATYANARAYNA and SURAJ KUMAR SINHA
Physics of Plasmas, 27, 023512, 2020

162. First operation in SPIDER and the path to complete MITICA
G. SERIANNI, C. ROTTI, A. CHAKRABORTY, U. BARUAH, H. PATEL, N. P. SINGH, A. PATEL, H. DHOLA, B. RAVAL, et.al.
Review of Scientific Instruments, 91, 023510, 2020

163. Numerical Estimation of the Oxygen Impurity Transport in the Aditya Tokamak
AMRITA BHATTACHARYA, JOYDEEP GHOSH, M. B. CHOWDHURI and PRABHAT MUNSHI
Physics of Plasmas, 27, 023303, 2020

164. The Use of Multi-Sensor Video Surveillance System to Assess the Capacity of the Road Network
VLADIMIR SHEPELEV, SERGEI ALIUKOV, KSENIYA NIKOLSKAYA, ARKAPRAVA DAS and IVAN SLOBODIN
Transport and Telecommunication, 21, 15, 2020

165. Evidence for neutrals carrying ion-acoustic wave momentum in a partially ionized plasma
MEENAKSHEE SHARMA, A. D. PATEL, ZUBIN SHAIKH, N. RAMASUBRAMANIAN, R. GANESH, P. K. CHATTOPADHAYAY and Y. C. SAXENA
Physics of Plasmas 27, 022120, 2020

166. Effect of transverse beam size on the wakefields and driver beam dynamics in plasma wakefield acceleration schemes

RATAN KUMAR BERA, DEVSHREE MANDAL, AMITA DAS, and SUDIP SENGUPTA
AIP Advances, 10, 025203, 2020

167. Stationary Langmuir structures in a relativistic current carrying cold plasma
ROOPENDRA SINGH RAJAWAT, SUDIP SENGUPTA and NIKHIL CHAKRABARTI
Physics of Plasmas 27, 022118, 2020

168. Investigation of Hot-Dip Aluminized Ti6Al4V Alloy Processed by Different Thermal Treatments in an Oxidizing Atmosphere
PAYANK PATEL, N.I. JAMNAPARA, ARUNSINH ZALA and S.D. KAHAR
Surface and Coatings Technology, 385, 125323, 2020

169. Bio-Tribological Response of Duplex Surface Engineered SS316L for Hip-Implant Application
ANIRUDDHA SAMANTA, RAMKRISHNA RANE, BISWANATH KUNDU, DIPAK KR. CHANDA, JITEN GHOSH, SANDIP BYSAKH, GHANSHYAM JHALA, ALPHONSA JOSEPH, SUBROTO MUKHERJEE, MITUN DAS and ANOOP KUMAR MUKHOPADHYAY
Applied Surface Science, 507, 145009, 2020

170. Phase transition and emergence of active temperature in an active Brownian system in underdamped background
SOUMEN DE KARMAKAR and RAJARAMAN GANESH
Physical Review E, 101, 032121, 2020

171. Driven electrostatic phase space vortices in a 1D weakly dissipative Vlasov–Poisson system
PALLAVI TRIVEDI and RAJARAMAN GANESH
Physics of Plasmas, 27, 032107, 2020

172. Transverse magnetic field effects on spatial electron temperature distribution in a 13.56 MHz parallel plate capacitive discharge
S. BINWAL, Y. PATIL, S. K. KARKARI, and L. NAIR
Physics of Plasmas, 27, 033506, 2020

173. Positive ion speed at the plasma–sheath boundary of a negative ion-emitting electrode
AVNISH K. PANDEY, SHANTANU K. KARKARI
Contributions to Plasma Physics, 60, e201900116, 2020

174. Fluid Flow Analysis through a Variable Diameter Infra-Red Suppression Device
AVIK BHATTACHARYA and A. MADHUSUDAN ACHARI
International Journal of Automotive and Mechanical Engineering, 17, 7734, 2020

175. Electric Field Nonlinearity in Very High Frequency Capacitive Discharges at Constant Electron Plasma Frequency
SARVESHWAR SHARMA, NISHANT SIRSE, ANIMESH KULEY and MILES M TURNER
Plasma Sources Science and Technology, 29, 045003, 2020

176. Parameter Space Validation Through OOPS Simulations of Plasma Burnthrough and Discharge Evolution in the SST-1 Tokamak
AMIT K. SINGH, SANTANU BANERJEE, I. BANDYOPADHYAY, R. SRINIVASAN, U. C. NAGORA, JAYESH RAVAL and K. TAHILIANI
Physics of Plasmas, 27, 042505, 2020

Conference Papers 2019-20 (22)

1. Numerical and Experimental Investigations on Two-Phase Flow of Liquid Nitrogen in a Flexible Transfer Line
H N NAGENDRA, A V KARTHIK, RAVI VERMA, S KASTHURIRENGAN, N C SHIVAPRAKASH, A K SAHU and UPENDRA BEHERA
IOP Conference Series: Materials Science and Engineering, 502, 012198, 2019

2. Cryogenic Process Optimization for Simultaneous Cool Down of the TF and PF Superconducting Coils of SST-1Tokamak
P PANCHAL, R PANCHAL, R PATEL, G MAHESURIYA, D SONARA, L N G SRIKANTH, A GARG, D CHRISTIAN, N BAIRAGI,R SHARMA, K PATEL, P SHAH, H NIMAVAT,
G PURWAR, J PATEL, V TANNA, U PRASAD, A SAHU, C CHAKRAPANI, R SRINIVASAN and D RAJU
IOP Conference Series: Materials Science and Engineering, 502, 012106, 2019

3. Radial Density Profile Measurement at Different RF Power in Argon Plasma using RF Compensated Langmuir Probe
CHAUHAN S.S., SHARMA U., SHARMA J., SANYASI A.K., GHOSH J., CHOUDHARY K.K., GHOSH S.K
AIP Conference Proceedings, 2100, 020187, 2019

4. Hybrid Parallelization of Particle in Cell Monte Carlo Collision (PIC-MCC) Algorithm for Simulation of Low Temperature
BHASKAR CHAUDHURY, MIHIR SHAH, UNNATI PAREKH, HASNAIN GANDHI, PARAMJEET DESAI, KEVAL SHAH, ANUSHA PHADNIS, MIRAL SHAH, MAINAK BANDYOPADHYAY, ARUN CHAKRABORTY
Communications in Computer and Information Science, 964, 32, 2019

5. SMS and FBG Interrogation for Measurement of Temperature and Strain using OTDR
DEY K., ROY S., SHANKAR M.S., KUMAR B.R., KISHORE P.
Proceedings of SPIE - The International Society for Optical Engineering, 11142, 2019

6. High Voltage Behaviour of Large Size Air Insulated Coaxial Transmission Line
BHAVIN RAVAL, VIKRANT GUPTA, DISHANG UPADHYA, NIRANJAN GOSWAMI, KUSH MEHTA, NP. SINGH, RASESH DAVE, SANDIP GAJJAR, AMIT PATEL, HITESH DHOLA, ARUNA THAKAR, UJJWAL BARUAH
International Conference on High Voltage Engineering and Technology (ICHVET), Hyderabad, India, 18723635, 7-8 February 2019 (Published in May 2019)

7. Conceptual RF Design of 3.7 Ghz 20 KW CW Magnetron for LHCD System of Tokamaks
AVIRAJ R JADHAV, JOSEPH JOHN, KUSHAL TUCKLEY, HARISH V DIXIT, PK SHARMA
2019 International Vacuum Electronics Conference (IVEC 2019), 8745107, South Korea, 28 April -1 May 2019

8. Harmonics of Drift Tearing Modes in Aditya Tokamak
GHOSH J, RAJ H, TANNA R L, MACWAN T, KUMAR R, AICH S, CHATTOPADHYAY P K, JADEJA K A, PATEL K, RAJU D, JHA S, ATREY P K, NAGORA U, SEN A, BOSAI N, PAL R
URSI Asia-Pacific Radio Science Conference (URSI AP-RASC), 8738676, New Delhi, 9-15 March 2019 (Published in June 2019)

9. Investigation of Sulfurization Effect on Magnetron Sputtered CZTS Thin Film
HEMANT KUMAR, SAGAR AGRAWAL, RAMKRISHNA RANE, SUBROTO MUKHERJEE and BASUDEV PRADHAN
AIP Conference Proceedings, 2115, 030335, July 2019

10. Characterization and Comparison of Copper Coatings Developed by Low Pressure Cold Spraying and Laser Cladding Techniques
SURINDER SINGH, PARMINDER SINGH, HARPREET SINGH, RAMESH KUMAR BUDDU
Materials Today: Proceedings, 18, 830, 2019

11. Development of digital control system in LabVIEW for stepper motor drives
R. SINGH, R. SUGANDHI, G. KAUR, D. TRIVEDI, PRABHAKAR SRIVASTAV, L. M. AWASTHI
2018 International Conference on Circuits and Systems in Digital Enterprise Technology, (ICCSDET), Kottayam; India, 21-22 December 2018, 18971481, (Published in September 2019)

12. 3D Geometric Modeling of Aluminum Based Foam Using Micro Computed Tomography Technique
ABHAY CHATURVEDI, SANIT BHATKAR, P.S. SARKAR, SHASHANK CHATURVEDI and MANOJ KUMAR GUPTA
Materials Today: Proceedings, 18, 4151, 2019

13. A New Regime of Whistler Waves in the Laboratory
GARIMA JOSHI and G. RAVI
Proceedings of the 21st International Conference on Electromagnetics in Advanced Applications (ICEAA-2019), 729-733, 2019

14. A Selective Notched W-Band Corrugated Bragg Reflector for Plasma Signal Diagnostics in ITER
HIRENKUMAR V. DHUDA, PIYUSH N. PATEL, HITESHKUMAR B. PANDYA
Proceedings of European Microwave Conference in Central Europe (EuMCE-2019), 66-69, 2019

15. Development of Level Sensor for Lead - Lithium Loop System
K. K RAJAN, S. VERMA, B. ARUNA, P. R. PEDADA, S. ANJU, R. BHATTACHARYAY
Proceedings of 3rd IEEE International Conference on Electrical, Computer and Communication Technologies (ICECCT-2019), 8869441, 2019

16. Real-Time High-Speed Novel Data Acquisition System Based on ZYNQ
HIMANSHU TYAGI, NAGENDRA P. GAJJAR, MAINAK BANDYOPADHYAY and ARUN CHAKRABORTY
Lecture Notes in Electrical Engineering, 607, 583, 2019

17. Large Amplitude Quasi-Periodic Structures Mediated Via Coherent Nonlinear Oscillations in 3D Magneto-Hydro-Dynamics
R. MUKHERJEE, R. GANESH, A. SEN
46th EPS Conference on Plasma Physics, EPS, P4.4010, 2019

18. Fundamental O-Mode ECRH Assisted Low-Loop Voltage Plasma Start-Up in Tokamak ADITYA-U
BRAJ KISHORE SHUKLA, JOYDEEP GHOSH, R.L. TANNA, S.K. PATHAK, P.K. ATREY, MAHESH KUSHWAH, JATIN PATEL, HARSHIDA PATEL, D PUROHIT, HARDIK MISTRY, K.G. PARMAR, RANJANA MANCHANDA, DEVILAL KUMAWAT, UMESH NAGORA, V. BALAKRISHNAN and ADITYA-U TEAM
46th EPS Conference on Plasma Physics, EPS, P1.1008, 2019

19. High Density Hydrogen Plasma for Negative Hydrogen Ion Production in Helicon Experiment for Negative Ion Source (HELEN-I)
ARUN PANDEY, D. MUKHOPADHYAY, M. BANDYOPADHYAY, A. CHAKRABORTY
46th EPS Conference on Plasma Physics, EPS, P1.1097, 2019

20. Heavy Impurity Transport in Tokamaks with Plasma Flows and Saturated 3D Perturbations
E. NETO, J. P. GRAVES, M. RAGHUNATHAN, S. LANTHALER, D. PFEFFERLE, W.A. COOPER, C. SOMMARIVA and JET contributors
46th EPS Conference on Plasma Physics, EPS, P2.1082, 2019

21. A Hierarchical Approach to Extract Application Logs with Visualization in a Containerized Environment
SHARAD JASH, R. GANESH, TASMAY D. RACHHADIA, PURVA. K. SHAH
2019 International Conference on Computing, Power and Communication Technologies (GUCON), 19276258, December 2019

22. Numerical Modelling of Solid Hydrogen Flow through an Extruder Die
S R PRASHANTH, SENTHIL KUMAR ARUMUGAM, RANJANA GANGRADEY, SAMIRAN MUKHERJEE, S KASTHURIRENGAN and UPENDRA BEHERA
Journal of Physics: Conference Series, 1473, 12006, 2020

Book Chapters 2019-20 (3)

1. Simulation of Radiation Damage and Ion Irradiation Experiments with Tungsten
S P DESHPANDE, P M RAOLE, P N MAYA, P SHARMA, A ATTRI, A K TYAGI, R KUMAR, SS VALA, A SATYAPRASAD, S MUKHERJEE, P K PUJARI, P KULRIYA, P K BAJPAI, S P PATEL, T TRIVEDI, M WARRIER, P V SUBHASH, P RAYJADA, P KIKANI, C DAVID, A LAKHANI, V KARKI, M SINGH, M. ABHANGI, K DEVRANI DEVI, KEDARMAL, K SARAVANAN, S KANNAN, S MISHRA, KB KHAN, P

NANDI, C BALASUBRAMANIAN, SA KHAN, MH MEHTA, S KANPARA, C JARIWALA, C DUBE, S KHIRWADKAR
Atomic and Plasma-Material Interaction Data for Fusion, IAEA, Vienna, 18, 3-43, August 2019

2. Discovering Applications: Interaction between Optical and Mechanical Modes
SUNIL SUSMITHAN
Advances in Spectroscopy: Molecules to Materials (Proceedings of NCASMM 2018), Dheeraj Kumar Singh, Sourav Das, Arnulf Materny (Ed's), Springer, Singapore, ISBN: 9789811502019. Vol 236, pp 83-92, October 2019

3. Thermal Plasma Processes and Nanomaterial Preparation
C. BALASUBRAMANIAN
Nanotechnology for Energy and Environmental Engineering, Ledwani, Lalita, Sangwai, Jitendra S. (Eds.), pp. 73-92, ISBN: 9783030337735, Springer, March 2020