

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

**2020-2021 (165 Reprint)**

1. Study of Transmutation, Gas Production, and Displacement Damage in Chromium for Fusion Neutron Spectrum  
MAYANK RAJPUT, R. SRINIVASAN  
[Annals of Nuclear Energy, 138, 107187, April 2020](#)
2. Development and Performance of a 14-MeV Neutron Generator  
S.J. VALA, M. ABHANGI, RATNESH KUMAR, S. TIWARI, R. KUMAR, H.L. SWAMI and M. BANDYOPADHYAY  
Nuclear Instruments and Methods in Physics Research Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 959, 163495, April 2020  
[Detectors and Associated Equipment, 959, 163495, April 2020](#)
3. Microstructure and Mechanical Properties of Tungsten and Tungsten-Tantalum Thin Film Deposited on RAFM Steel  
S. LAKSHMI KANTH KONURU, V. UMASANKAR, BISWANATH SARKAR and ARUN SARMA  
[Materials Research Innovations, 24, 97, April 2020](#)
4. Physicochemical and Biological Assessment of Flowable Resin Composites Incorporated With Farnesol Loaded Halloysite Nanotubes for Dental Applications  
TEJAS BAROT, DEEPAK RAWTANI, PRATIK KULKARNI, CHAUDHERY MUSTANSAR HUSSAIN, SATYAPRASAD AKKIREDDY  
[Journal of the Mechanical Behavior of Biomedical Materials, 104, 103675, April 2020](#)
5. Transient Heat Transfer Characteristics and Process Intensification with Al<sub>2</sub>O<sub>3</sub>-Water and TiO<sub>2</sub>-Water Nanofluids: An Experimental Investigation  
SAYANTAN MUKHERJEE, SHANTA CHAKRABARTY, PURNA CHANDRA MISHRA, PARITOSH CHAUDHURI  
[Chemical Engineering and Processing - Process Intensification, 150, 107887, April 2020](#)
6. The Emergence of Inertial Waves from Coherent Vortex Source in Strongly Coupled Dusty Plasma  
AKANKSHA GUPTA and RAJARAMAN GANESH  
[Physics of Plasmas, 27, 050701, April 2020](#)
7. 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, April 2020](#)
8. Sowing the Seeds of an Indian Fusion Programme-An Untold Legacy of Vikram Sarabhai  
ABHIJIT SEN  
[Current Science, 118, 1196, April 2020](#)
9. Experimental Observation of a First-Order Phase Transition in a Complex Plasma Monolayer Crystal  
M. G. HARIPRASAD, P. BANDYOPADHYAY, GARIMA ARORA and A. SEN  
[Physical Review E, 101, 043209, April 2020](#)
10. Evolution of Voids in Single-Crystal Iron under Uniaxial, Biaxial and Triaxial Loading Conditions  
SUNIL RAWAT and SHASHANK CHATURVEDI

[Philosophical Magazine, 1754486, April 2020](#)

11. In-plane Optical Anisotropy and SERS Detection Efficiency of Self-Organized Gold Nanoparticles on Silicon Nanoripples: Roles of Growth Angle and Postgrowth Annealing  
MAHESH SAINI, SEBIN AUGUSTINE, MUKESH RANJAN, TAPOBRATA SOM

[Applied Surface Science, 512, 145703, May 2020](#)

12. Study on Negative Ion Production by Electronegative Gases in a Helicon Source  
MONOJIT CHAKRABORTY, NARAYAN SHARMA, NIROD KUMAR NEOG and MAINAK BANDYOPADHYAY

[Japanese Journal of Applied Physics, 59, SHHC01, May 2020](#)

13. Enhanced Detection using Stable Isotope Enriched <sup>65</sup>Cu Doped Ferrite Nanoparticles for Tracing Studies

SWAROOP CHAKRABORTY, BARATH K. MAHADEVAN, JUHI SHAH, KAUSTUBH PANSE, BHARTI MALVI, C. BALASUBRAMANIAN, SANJAY SINGH, SUPERB K. MISRA

[Journal of Alloys and Compounds, 822, 153502, May 2020](#)

14. Characteristics of Atmospheric Pressure Micro-Plasma Jets in Two Different Modes of Excitation Depending Upon Wave Amplitude and Frequency

KALYANI BARMAN, DEEPIKA BEHMANI, MOHIT MUDGAL, SUDEEP BHATTACHARJEE, RAMKRISHNA RANE and SUDHIR K NEMA

[Plasma Research Express, 2, 025007, May 2020](#)

15. Helium Cooled Dual Breeder Blanket-Preliminary Design Analyses of a Candidate Breeding Blanket Concept for Near Term Indian DEMO Fusion Reactor

H.L. SWAMI, DEEPAK SHARMA, A.N. MISTRY, C. DANANI, P. CHAUDHURI, R. SRINIVASAN

[International Journal of Energy Research, 45, 11735, May 2020](#)

16. Steady-State Operation of High CW Power Circulator: Challenges and Solutions through Simulation and Experiments

YOGESH M. JAIN, P. K. SHARMA, KIRANKUMAR AMBULKAR, PRAMOD R. PARMAR, AVIRAJ R. JADHAV, and HARISH V. DIXIT

[IEEE Transactions on Plasma Science, 48, 1290, May 2020](#)

17. Effect of Substrate Surface Roughness on Properties of Cold-Sprayed Copper Coatings on SS316L Steel

SURINDER SINGH, HARPREET SINGHA, SHILPI CHAUDHARY, RAMESH KUMAR BUDDU

[Surface & Coatings Technology, 389, 125619, May 2020](#)

18. Evidence of a New Class of Cnoidal Electron Holes Exhibiting Intrinsic Substructures, its Impact on Linear (and Nonlinear) Vlasov Theories and Role in Anomalous Transport

SCHAMEL, H., MANDAL, D., SHARMA, D.

[Physica Scripta, 95, 55601, May 2020](#)

19. X-band F-shaped Anisotropic Metasurface-Based Perfect Cross-Polarizer for RCS Reduction

PRIYANKA TIWARI, SURYA KUMAR PATHAK, ANITHA V. P., VARSHA SIJU and ABHISHEK SINHA

[Journal of Electromagnetic Waves and Applications, 34, 894, May 2020](#)

20. Finite  $\beta$  Effects on Short Wavelength Ion Temperature Gradient Modes

M. JAGANNATH, J. CHOWDHURY, R. GANESH and L. VILLARD

[Physics of Plasmas, 27, 052509, May 2020](#)

21. Crystalline Rubrene Via a Novel Process and Realization of a Pyro-Phototronic Device with a Rubrene-Based Film

DEEPSHIKHA GOGOI, AMREEN A. HUSSAIN, SWEETY BISWASIA and ARUP R. PAL

[Journal of Materials Chemistry C, 8, 6450, May 2020](#)

22. Measurement of Temperature of a Dusty Plasma from its Configuration

RUPAK MUKHERJEE, SURABHI JAISWAL, MANISH K. SHUKLA, AMMAR HAKIM, EDWARD THOMAS

[Contributions to Plasma Physics, 60, e201900161, May 2020](#)

23. Measurement of  $(n,\gamma)$  Reaction Cross Section of  $^{186}\text{W}$ -Isotope at Neutron Energy of  $20.02 \pm 0.58$  MeV

MAYUR MEHTA, N L SINGH, R MAKWANA, P V SUBHASH, S V SURYANARAYANA, S PARASHARI, RAKESH CHAUHAN, R K SINGH, H NAIK, S MUKHERJEE, B SONI,

S KHIRWADKAR, J VARMUZA and K KATOVSKY

[Indian Journal of Pure & Applied Physics, 58, 392, May 2020](#)

24. Characteristics of Arbitrary Ramp Generator: A Tuning Voltage Setup for the FMCW Reflectometer  
GIBIN CHACKO GEORGE, N. BITTU, J. J. U. BUCH, A. AMALIN PRINCE, NEENA GOVEAS, and SURYA K. PATHAK

[IEEE Transactions on Instrumentation and Measurement, 69, 3481, June 2020](#)

25. Thermal Convection Field Studies in Liquid Metal Flow inside a Horizontal Duct under the Influence of Transverse Magnetic Field

S. SAHU, C. COURTESSOLE, A. RANJAN, R. BHATTACHARYAY, T. SKETCHLEY and S. SMOLENTSEV

[Physics of Fluids, 32, 067107, June 2020](#)

26. Diversity of Solitary Electron Holes Operating With Non-Perturbative Trapping

HANS SCHAMEL, DEBRAJ MANDAL and DEVENDRA SHARMA

[Physics of Plasmas, 27, 062302 June 2020](#)

27. Dust Vortex Flow Analysis in Weakly Magnetized Plasma

PRINCE KUMAR and DEVENDRA SHARMA

[Physics of Plasmas, 27, 063703, June 2020](#)

28. Magnetized Plasma Sheath in the Presence of Negative Ions

R. PAUL, S. ADHIKARI, R. MOULICK, S. S. KAUSIK and B. K. SAIKIA

[Physics of Plasmas, 27, 063520, June 2020](#)

29. Experimental Measurements of Gas Pressure Drop of Packed Pebble Beds

MAULIK PANCHAL, ABHISHEK SARASWAT and PARITOSH CHAUDHURI

[Fusion Engineering and Design, 160, 111836, June 2020](#)

30. Experimental Results of Core Ion Temperature and Neutral Density Measurements on ADITYA Tokamak Using Four Channels Neutral Particle Analyzer

KUMAR AJAY, SANTOSH P. PANDYA, SNEHLATA AGGARWAL and ADITYA TOKAMAK TEAM

[Journal of Fusion Energy, 39, 111, June 2020](#)

31. Functional Balance between Tcf21-Slug Defines Cellular Plasticity and Migratory Modalities in High Grade Serous Ovarian Cancer Cell Lines

S.S. VARANKAR, M. MORE, A. ABRAHAM, KSHAMA PANSARE, B. KUMAR, N. J. NARAYANAN, M. K. JOLLY, A. M. MALI and S. A. BAPAT  
[Carcinogenesis, 41, 515, June 2020](#)

32. Thermal-Hydraulic Characteristics of Purge Gas in a Rectangular Packed Pebble Bed of a Fusion Reactor using DEM-CFD and Porous Medium Analyses  
AKHALESH SHARMA, ABHISHEK THAKURA, SANDIP K. SAHAA, ATUL SHARMA, DEEPAK SHARMA, PARITOSH CHAUDHURI  
[Fusion Engineering and Design, 160, 111848, June 2020](#)

33. Preliminary Performance Analysis and Optimization Based on 1D Neutronics Model for Indian DEMO HCCB Blanket  
D AGGARWAL, C DANANI and M Z YOUSSEF  
[Plasma Science and Technology, 22, 085602, June 2020](#)

34. Structural Integrity Assessment of ITER Torus Cryo-Pump Housing  
GAURAV JOGI, VAIBHAV JOSHI, AVIK BHATTACHARYA, GIRISH KUMAR GUPTA, TAILHARDART OLIVIER, and ANIL BHARDWAJ  
[IEEE Transactions on Plasma Science, 48, 1479, June 2020](#)

35. Design and Development of Fast Protection and Fast Monitoring Module Compatible with NI Compact RIO System for ITER-India Gyrotron Test Facility  
RONAK V. SHAH , VIPAL RATHOD, RAJVI PARMAR, E. SHARAN DILIP, DEEPAK MANDGE, ANJALI SHARMA, AMIT YADAV, and S. L. RAO  
[IEEE Transactions on Plasma Science, 48, 1531, June 2020](#)

36. Physical Properties and Enhanced Photocatalytic Activity of ZnO-rGO Nanocomposites  
POORNIMA SENGUNTHAR, K. H. BHAVSAR, C. BALASUBRAMANIAN and D U. S. JOSHI  
[Applied Physics A, 126, 567, June 2020](#)

37. Effects of Annealing Treatment on Microstructure, Electrical and Magnetodielectric Properties of  $\text{BiFe}_{0.98}\text{Co}_{0.02}\text{O}_3/\text{Al}$ -doped ZnO Layered Thin Films  
Prepared by Chemical Solution Deposition  
V.G. SHRIMALI, KEVAL GADANI, BHARGAV RAJYAGURU, HIMANSHU DADHICH, VIVEK PACHCHIGAR, DAVIT DHRUV, A.D. JOSHI, M. RANJAN, P.S. SOLANKI, N.A. SHAH  
[Journal of Alloys and Compounds, 827, 154278, June 2020](#)

38. Design and Analysis of TWIN Source Extraction System Grids with Indigenous Manufacturing Feasibility Assessment  
RAVI PANDEY, MAINAK BANDYOPADHYAY, M.J. SINGH, JAYDEEP JOSHI, ARUN K. CHAKRABORTY  
[Fusion Engineering and Design, 155, 111552, June 2020](#)

39. A New Mechanism of Direct Coupling of Laser Energy to Ions  
AYUSHI VASHISTHA, DEVSHREE MANDAL, ATUL KUMAR, CHANDRASEKHAR SHUKLA and AMITA DAS  
[New Journal of Physics, 22, 063023, June 2020](#)

40. Surface Engineering Analysis of Plasma-Nitrided Die Steels  
ASHISH KUMAR, MANPREET KAUR, ALPHONSA JOSEPH, GHANSHYAM JHALA  
[Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, Volume 234, 917, June 2020](#)

41. Effect of Nitrogen Concentrations on Optical, Structural and Mechanical Properties of Self Organized a-C: N Films

INFANT SOLOMON, KRISHNANAND SHUKLA, MUKUL BHATNAGAR, RAMKRISHNA RANE, MUKESH RANJAN, FABRICE GOURBILLEAU, ARUN SARMA

[Ceramics International, 46, 13743, June 2020](#)

42. Processing of Copper by Keyhole Gas Tungsten Arc Welding for Uniformity of Weld Bead Geometry  
RAGHAVENDRA DARJI, VISHVESH BADHEKA, KUSH MEHTA, JAYDEEP JOSHI and ASHISH YADAV

[Materials and Manufacturing Processes, 1784932, June 2020](#)

43. Evolution of Particle Metrics in a Buoyant Aerosol Cloud from Explosive Releases

BATHULA SREEKANTH, SRINIVASAN ANAND, VENKATA RAMANA IKKURTHI, PROBAL CHAUDHURY, BALVINDER K. SAPRA, YELIA S. MAYYA and SHASHANK CHATURVEDI

[Aerosol Science and Technology, 54, 656, June 2020](#)

44. Prediction of Axial Variation of Plasma Potential in Helicon Plasma Source using Linear Regression Techniques

VIPIN SHUKLA, MAINAK BANDYOPADHYAY, VIVEK PANDYA and ARUN PANDEY

[International Journal of Mathematical, Engineering and Management Sciences, 5, 1284, June 2020](#)

45. Evaluation of Heat Transfer Performance of Hypervapotron Elements in Two Phase Flow Devised in Indian test facility

VENKATA NAGARAJU M, MAINAK BANDYOPADHYAY, MAHENDRAJIT SINGH, ARUN CHAKRABORTY, JAYDEEP JOSHI, HITESH PATEL, SAMIR KHIRWADKAR,

SUNIL BELSARE, RAJAMANNAR SWAMY, KEDAR BHOPE, SUDHIR TRIPATHI

[Fusion Engineering and Design, 155, 111543, June 2020](#)

46. A Constant Corrugation Circular Waveguide for High-Pass Signal Diagnostics in ECEI System at 75-110 GHz

HIRENKUMAR V. DHUDA, PIYUSH N. PATEL, HITESHKUMAR B. PANDYA

[Journal of Infrared, Millimeter, and Terahertz Waves, 41, 894, June 2020](#)

47. Basis of Plasma Astrophysics in Stability of the Triple Star System

AYAN KUMAR MAKAR

[Results in Physics, 17, 103042, June 2020](#)

48. Artificial Neural Network based Predictive Negative Hydrogen Ion Helicon Plasma Source for Fusion Grade Large Sized Ion Source

VIPIN SHUKLA, MAINAK BANDYOPADHYAY, VIVEK PANDYA, A. PANDEY, A. MAULIK

[Engineering with Computers, s00366-020-01060-5, June 2020](#)

49. Enhanced Proton Acceleration Using Hollow Silica Nano-Sphere Coated Targets

RAKESH Y. KUMAR, BALJEET SINGH, M. KUNDU, PANKAJ KUMAR RASTOGI, SHEROY TATA, V. RAKESH KUMAR, AMIT D. LAD, YESH M. VED, R. GOPAL,

V. SHARMA and M. KRISHNAMURTHY

[Physics of Plasmas, 27, 063108, June 2020](#)

50. Investigation of Antimicrobial Activity of DBD Air Plasma-Treated Banana Fabric Coated with Natural Leaf Extracts

MONA VAJPAYEE, MUMAL SINGH, LALITA LEDWANI, RAM PRAKASH, and SUDHIR KUMAR NEMA

[ACS Omega, 0c02380, July 2020](#)

51. Thermo-Structural Analysis of SST-1 Cryopump  
VISHAL GUPTA, VIPUL L. TANNA, RANJANA GANGRADEY, SAMIRAN SHANTI MUKHERJEE, JYOTI SHANKAR MISHRA, PARESH PANCHAL, PRATIK A. NAYAK  
[Cryogenics, 110, 103132, July 2020](#)
52. Precursor Magneto-Sonic Solitons in a Plasma from a Moving Charge Bunch  
ATUL KUMAR and ABHIJIT SEN  
[New Journal of Physics, 22, 073057, July 2020](#)
53. Modified Corrugation-Based W-Band Waveguide with Selective Notched Operation for Fusion Plasma Diagnostics  
HIRENKUMAR V. DHUDA, PIYUSH N. PATEL, and HITESHKUMAR B. PANDYA  
[IEEE Transactions on Plasma Science, 48, 9109686, July 2020](#)
54. Strain-Rate Effect on Plasticity and  $\omega$ -phase Transformation in Single Crystal Titanium: A Molecular Dynamics Study  
SUNIL RAWAT, SHASHANK CHATURVEDI  
[Mechanics of Materials, 148, 103529, July 2020](#)
55. Effect of Plasma Processed Ti-Al Coating on Oxidation and Tensile Behavior of Ti6Al4V Alloy  
TEJAS PAREKH, PAYANK PATEL, C.S. SASMAL, N.I. JAMNAPARA  
[Surface and Coatings Technology, 394, 125704, July 2020](#)
56. Design and Analysis of Hysteresis Feedback Controlled DC Power Supply for Solid State Power Amplifier  
ROHIT AGARWAL, RAJESH KUMAR, GAJENDRA SUTHAR, HRUSHIKESH DALICHA  
[IETE Journal of Research, 1, July 2020](#)
57. Effect of Magnetic Field Environment on the Performance of 3/2 Solenoid Valve  
VINIT SHUKLA, HITENSINH VAGHELA, SHK MADEENAVALLI, BIKASH RANJAN DASH, ANUJ GARG  
[Fusion Engineering and Design, 156, 111618, July 2020](#)
58. Exploring the Effect of Hydrogen Bonding on Protonation of 7,8-Benzoquinoline with TFE: Water Binary Mixture  
KIRANKUMARI, NEERAJ TEWARI, HEM CHANDRA JOSHI, SANJAY PANT  
[Journal of Molecular Structure, 1211, 128119, July 2020](#)
59. Performance Optimization of Test Facility for Coaxial Transmission Line Components Based on Traveling Wave Resonator  
AKHIL JHA, J. V. S. HARIKRISHNA, AJESH PALLIWAR, MANOJ PATEL, ROHIT ANAND, HRUSHIKESH DALICHA, PARESH VASAVA, KUMAR RAJNISH, RAJESH TRIVEDI and APARAJITA MUKHERJEE  
[Review of Scientific Instruments, 91, 074702, July 2020](#)
60. Expansion Dynamics of Atmospheric Pressure Helium Plasma Jet in Ambient Air  
G. VEDA PRAKASH, KIRAN PATEL, NARAYAN BEHERA, AJAI KUMAR  
[Physics Letters A, 384, 126497, July 2020](#)
61. Lanthanum Bromide (LaBr<sub>3</sub>(Ce)) Based Hard X-Ray Spectroscopic Diagnostic for the Study of Runaway Electrons at Aditya Tokamak

S. PUROHIT, M.B. CHOWDHURI, Y.S. JOISA, M.K. GUPTA, J.V. RAVAL, U.C. NAGORA, P.K. ATREY, S.K. PATHAK, K.A. JADEJA, S.B. BHATT, C.N. GUPTA,  
R.L. TANNA and J. GHOSH

[Journal of Instrumentation, 15, P08015, August 2020](#)

62. Observations of Parametric Drift Wave Instabilities in an Electron Cyclotron Resonance Ion Source  
SARVESH KUMAR, JYOTSNA SHARMA, SHATENDRA SHARMA, YADUVANSH MATHUR, T NANDI,  
DEVENDRA SHARMA and MANISH K KASHYAP

[Plasma Physics and Controlled Fusion, 62, 105013, August 2020](#)

63. A Review of Pellet Injector Technology: Brief History and Recent Key Developments  
SHASHI KANT VERMA, SAMIRAN SHANTI MUKHERJEE, RANJANA GANGRADEY, R. SRINIVASAN, VISHAL  
GUPTA, PARESH PANCHAL and PRATIK NAYAK

[Fusion Science and Technology, 76, 770, August 2020](#)

64. Fabrication of W-Cu Functionally Graded Composites Using High Energy Ball Milling and Spark  
Plasma Sintering For Plasma Facing Components

LAVA KUMAR PILLARI, SRINIVASA R. BAKSHI, PARITOSH CHAUDHURI, B.S. MURTY

[Advanced Powder Technology, 31, 3657, August 2020](#)

65. Radial Control of Electron Temperature Gradient with Optimized Operational Configuration of  
Double Plasma Device

PRINCE ALEX, A K SANYASI, PRABHAKAR SRIVASTAV, L M AWASTHI, P K SRIVASTAVA and RITESH  
SUGANDHI

[Plasma Sources Science and Technology, Volume 29, 085022, August 2020](#)

66. Corrosion Behavior of Aluminum Surface Composites with Metallic, Ceramic, and Hybrid  
Reinforcements Using Friction Stir Processing

V. P. MAHESH, ANURAG GUMASTE, NEHA MEENA, J. ALPHONSA and AMIT ARORA

[Metallurgical and Materials Transactions B, 51, 2131, August 2020](#)

67. Electronic Structure Correlation with Ferroelectric Behavior of Ca-Doped BiFeO<sub>3</sub> Films

SADAF JETHVA, SAVAN KATBA, CHIRAG SAVALIYA, ASHISH RAVALIA, MUKUL BHATNAGAR, MUKESH  
RANJAN, DINESH SHUKLA, D.M. PHASE, D.G. KUBERKAR

[Journal of Electron Spectroscopy and Related Phenomena, 243, 146983, August 2020](#)

68. Thermal Performance Analysis and Experimental Validation of Primary Chamber of Plasma  
Pyrolysis System during Preheating Stage Using CFD Analysis in ANSYS CFX

DEEPAK SHARMA, ATIK MISTRY, HARDIK MISTRY, PARITOSH CHAUDHURI, P.V MURUGAN, S.PATNAIK,  
AADAM SANGHARIYAT, VISHAL JAIN,  
SHASHANK CHATURVEDI, S.K. NEMA

[Thermal Science and Engineering Progress, 18, 100525, August 2020](#)

69. Phase Detection System Based on Digital Signal Processing in Millimeter Wave Interferometer for  
Fusion Plasma Diagnostics

ALPESH VALA, HIREN MEWADA, AMIT PATEL, UMESH NAGORA, SURYAKUMAR PATHAK

[Fusion Engineering and Design, 157, 111637, August 2020](#)

70. Excitation of Dust Acoustic Shock Waves in an Inhomogeneous Dusty Plasma

GARIMA ARORA, P. BANDYOPADHYAY, M. G. HARIPRASAD and A. SEN

[Physics of Plasmas, 27, 083703, August 2020](#)

71. Occupational Radiation Exposure Control Analyses of 14 MeV Neutron Generator Facility: A Neutronic Assessment for the Biological and Local Shield Design  
H.L. SWAMI, S. VALA, M. ABHANGI, RATNESH KUMAR, C. DANANI, R. KUMAR, R. SRINIVASAN  
[Nuclear Engineering and Technology, 52, 1784, August 2020](#)
72. Cellulose Supported Bismuth Vanadate Nanocomposite for Effective Removal of Organic Pollutant  
NEHA TAVKER, UMESH GAUR, MANU SHARMA  
[Journal of Environmental Chemical Engineering, 8, 104027, August 2020](#)
73. Design of the 3.7 GHz, 1 Kw CW Solid State Driver for LHCD System of the SST-1 Tokamak  
SANDEEP R. SAINKAR, ALICE N. CHEERAN, MANJUNATH REDDY, HARISH V. DIXIT, PROMOD K. SHARMA  
[Fusion Engineering and Design, 158, 111692, September 2020](#)
74. Double Layer Formation and Thrust Generation in an Expanding Plasma using 1D-3V PIC Simulation  
V. SAINI and R. GANESH  
[Physics of Plasmas, 27, 93505, September 2020](#)
75. Mathematical Model of Thermodynamic Processes in the Intake Manifold of a Diesel Engine with Fuel and Water Injection  
VLADIMIR BONDAR, SERGEI ALIUKOV, ANDREY MALOZEMOV and ARKAPRAVA DAS  
[Energies, 13, 4315, September 2020](#)
76. Effect of Magnetic Field on the Lateral Interaction of Plasma Plumes  
ALAMGIR MONDAL, R. K. SINGH, VISHNU CHAUDHARI, and H. C. JOSHI  
[Physics of Plasmas, 27, 93109, September 2020](#)
77. Lower-Band “Monochromatic” Chorus Riser Subelement/Wave Packet Observations  
BRUCE T. TSURUTANI, RUI CHEN, XINLIANG GAO, QUANMING LU, JOLENE S. PICKETT, GURBAX S., LAKHINA, ABHIJIT SEN, RAJKUMAR HAJRA, SANG A PARK, BARBARA J. FALKOWSKI  
[Journal of Geophysical Research: Space Physics, 125, e2020JA028090, September 2020](#)
78. Constructing Caesium-Based Lead-Free Perovskite Photodetector Enabling Self-Powered Operation with Extended Spectral Response  
AMREEN A. HUSSAIN  
[ACS Applied Materials & Interfaces, 12, 46317, September 2020](#)
79. Electronegative Magnetized Plasma Sheath Properties in the Presence of Non-Maxwellian Electrons with a Homogeneous Ion Source  
SURESH BASNET, AMIT PATEL and RAJU KHANAL  
[Plasma Physics and Controlled Fusion, 62, 115011, September 2020](#)
80. Overview of Recent ITER TBM Program Activities  
LUCIANO M. GIANCARLI, XAVIER BRAVO, SEUNGYON CHO, MARCO FERRARI, TAKUMI HAYASHI, BYOUNG-YOON KIM, ARTUR LEAL-PEREIRA, JEAN-PIERRE MARTINS, MARIO MEROLA, ROMAIN PASCAL, IVA SCHNEIDEROVA, QIAN SHENG, AMIT SIRCAR, YURI STREBKOV, JAAP VAN DER LAAN, ALICE YING  
[Fusion Engineering and Design, 158, 111674, September 2020](#)

81. A Study on Irradiated Welding Joints in ITER Materials and its Effects on FMECA Analysis of Components

SURAJ S PILLAI, MAYANK RAJPUT, HITESH PATEL, JEEVAN JAIDI, SHIVAKANT JHA and SIDDHARTH KUMAR

[Fusion Engineering and Design, 158, 111905, September 2020](#)

82. Development of Flow Regime Maps for Lead Lithium Eutectic-Helium Flows

E. MAS DE LES VALLS, A. CEGIELSKI, M. JAROS, M. PEREZ-FERRAGUT, L. BATET, T. SANDEEP, V. CHAUDHARI, J. FREIXA

[Fusion Engineering and Design, 158, 111691, September 2020](#)

83. Enhancing Thermo-Economic Performance of TiO<sub>2</sub>-Water Nanofluids: An Experimental Investigation

SAYANTAN MUKHERJEE, PURNA CHANDRA MISHRA and PARITOSH CHAUDHURI

[JOM, 72, 3958, September 2020](#)

84. Temperature-Dependent Cationic Doping-Driven Phonon Dynamics Investigation in CdO Thin Films Using Raman Spectroscopy

ARKAPRAVA DAS, DEOBRAT SINGH, ANUMEET KAUR, C. P. SAINI, D. KANJILAL, C. BALASUBRAMANIAN, JOYDIP GHOSH and RAJEEV AHUJA

[The Journal of Physical Chemistry C, 124, 21818, September 2020](#)

85. Single-step, DC Thermal Plasma-Assisted Synthesis of Ag-C Nanocomposites with less than 10 nm Sizes for Antibacterial Applications

GOPIKISHAN SABAVATH, MIZANUR RAHMAN, TRINAYAN SARMAH, PUBALI DIHINGIA, DIVESH N SRIVASTAVA, SWATI SHARMA, L M PANDEY and M KAKATI

[Journal of Physics D: Applied Physics, 53, 365201, September 2020](#)

86. Dynamic Simulation of Loss of Insulation Vacuum Event for ITER Cryodistribution System

SRINIVASA MURALIDHARA, HITENSINH VAGHELA, PRATIK PATEL, VINIT SHUKLA, KETAN CHOUKEKAR

[Cryogenics, 110, 103139, September 2020](#)

87. Measurement of Effective Thermal Conductivity of Lithium Metatitanate Pebble Bed by Transient Hot-Wire Technique

MAULIK PANCHAL, ABHISHEK SARASWAT, SHRIKANT VERMA, PARITOSH CHAUDHURI

[Fusion Engineering and Design, 158, 111718, September 2020](#)

88. Application of High Frequency Biasing and its Effect in STOR-M Tokamak

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104. Effect of Argon and Oxygen Gas Concentration on Mode Transition and Negative Ion Production in Helicon Discharge

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MUKTI RANJAN JANA, P. RAMSANKAR  
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ANIRUDDHA SAMANTA, RAMKRISHNA RANE, GHANSHYAM JHALA, BISWANATH KUNDU, SUSMIT DATTA, JITEN GHOSH, ALPHONSA JOSEPH, SUBROTO MUKHERJEE, SANDIPAN ROY, ANOOP KUMAR MUKHOPADHYAY  
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#### **Conference papers 2020-21 (25):**

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KOUSTAV DEY, V. D. R. PAVAN, SOURABH ROY, SAI SHANKAR M., B. RAMESH  
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2. Design and Development of User-Friendly Interface Environment for Accelerating Scientific Research Process: A Case Study for Nuclear Fusion Applications  
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SAI SHIKHA NAIDU, J. ALPHONSA and NISHCHHAL YADAV  
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H N NAGENDRA, R VERMA, P SAGAR, K AKBER, S KASTHURIRENGAN, N C SHIVAPRAKASH, A K SAHU, U BEHERA  
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P PATEL, H VAGHELA, S MURALIDHARA, V SHUKLA, A GARG, J DAS, B DASH, S MADEENAVALLI, H-S CHANG, D GRILLOT, B SARKAR, M CURSAN,  
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S. G. KHAMBHOLJA and A. ABHISHEK

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