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

2008-2009 Reprints (75)

1. Loss Less Real-time Data Compression based on LZO for Steady-State Tokamak DAS
   H.D. PUJARA and MANIKA SHARMA
   Fusion Engineering and Design, ***83***, *363-365, 2008*

2. Clustered Chimera States in Delay-Coupled Oscillator Systems
   GAUTAM C. SETHIA, ABHIJIT SEN and FATIHCAN M. ATAY
   Physical Review Letters, ***100***, *144102, 2008*

3. Influence of the Radio Frequency Ponderomotive Force on Anomalous Impurity Transport in Tokamaks
   H. NORDMAN, R. SINGH, T. FULOP, L.-G. ERIKSSON, R. DUMONT, J. ANDERSON, P. KAW, P. STRAND, M. TOKAR and J. WEILAND
   Physics of Plasmas, ***15***, *042316, 2008*

4. Measurements of Electron Temperature and Density of Multi-component Plasma Plume formed by Laser-blow-off of LiF-C Film
   S SUNIL, AJAI KUMAR, R K SINGH and K P SUBRAMANIAN
   Journal of Physics D: Applied Physics, ***41***, *085211, 2008*

5. Space- and Time-resolved Visible-emission Spectroscopy of Aditya-tokamak Discharges using Multi-track Spectrometer
   SANTANU BANERJEE, VINAY KUMAR, M B CHOWDHURI, J GHOSH, R MANCHANDA, KETAN M PATEL and P VASU
   Measurement Science and Technology, ***19***, *045603, 2008*

6. Facilitating Scientific Research with Library Services: A Case Study of the IPR Library
   S. DAS and P.J. PATHAK
   Library Philosophy and Practice, ***2008***, *2008*

7. Physical Vapor Deposition of Copper Over Lexan
   K. KISHOR KUMAR and S. MUKHERJEE
   Thin Solid Films, ***516***, *4535-4540, 2008*

8. Design, Fabrication and Testing of UHV Compatible High Power RF Devices for Lower Hybrid Current Drive System on SST-1 Tokamak
   P.K. SHARMA, S.L. RAO, K.K. RAMELLA, D. BORA and LHCD GROUP
   Fusion Engineering and Design, ***83***, *601-605, 2008*

9. Criticality in the Fabrication of Ion Extraction System for SST-1 Neutral Beam Injector
   M.R. JANA and S.K. MATTOO
   Fusion Engineering and Design, ***83***, *649-654, 2008*

10. An Optical Limiter based on Ferrofluids
    SWAPNA S. NAIR, JINTO THOMAS, C. S. SUCHAND SANDEEP, M. R. ANANTHARAMAN and REJI PHILIP
    Applied Physics Letters, ***92***, *171908, 2008*

11. Generation of Fast Neutrals in a Laser-blow-off of LiF–C film: A Formation Mechanism
R. K. SINGH, AJAI KUMAR, V. PRAHLAD and H. C. JOSHI
Applied Physics Letters, ***92***, *171502, 2008*

12. Study of Electron Behavior in a Pulsed Ion Sheath
S. KAR and S. MUKHERJEE
Physics of Plasmas, ***15***, *063504, 2008*

13. Corrosion Resistance Improvement of High Carbon Low Alloy Steel by Plasma Nitriding
A. BASU, J. DUTTA MAJUMDAR, J. ALPHONSA, S. MUKHERJEE and I. MANNA
Materials Letters, ***62***, *3117-3120, 2008*

14. Hot Electron Generation by Highly Efficient Absorption of High Intensity Femtosecond Laser Light in Plasma Generated on Sub-l Gratings
S KAHALY, G R KUMAR, S YADAV, S SENGUPTA, A DAS and P K KAW
Journal of Physics: Conference Series, ***112***, *022102, 2008*

15. Stability of One-dimensional Relativistic Laser Plasma Envelope Solitons
V SAXENA, A DAS, S SENGUPTA, P KAW and A SEN
Journal of Physics: Conference Series, ***112***, *022110, 2008*

16. Estimation of Partial Pressure during Graphite Conditioning by Matrix Method
P CHAUDHURI, A PRAKASH and D C REDDY
Journal of Physics: Conference Series, ***114***, *012023, 2008*

17. Vacuum System Requirement for a 5 Km Baseline of Gravitational-Wave Detector
S SUNIL and D G BLAIR
Journal of Physics: Conference Series, ***114***, *012025, 2008*

18. On Residual Gas Analysis during High Temperature Baking of Graphite Tiles
A PRAKASH A, P CHAUDHURI, S KHIRWADKAR, N CHAUHAN, P M RAOLE, D CHENNA REDDY and Y C SAXENA
Journal of Physics: Conference Series, ***114***, *012063, 2008*

19. Study of the Sensitivity of a Quadrupole Mass Analyzer and a Bayard Alpert Gauge with Changes in Temperature and Gas Composition
P SEMWAL, K S JOSHI, K R DHANANI, F S PATHAN, P L THANKEY, D C RAVAL, Z KHAN, R SHARMA, D SONARA, H A PATHAK and D C REDDY
Journal of Physics: Conference Series, ***114***, *012064, 2008*

20. Quantitative Study of Sniffer Leak Rate and Pressure Drop Leak Rate of Liquid Nitrogen Panels of SST-1 Tokamak
F S PATHAN, Z KHAN, P SEMWAL, D C RAVAL, K S JOSHI, P L THANKEY and K R DHANANI
Journal of Physics: Conference Series, ***114***, *012067, 2008*

21. Phase Formation in Selected Surface-Roughened Plasma-Nitrided 304 Austenite Stainless Steel
GAJENDRA PRASAD SINGH, ALPHONSA JOSEPH, PRAKASH MANOHAR RAOLE, PREMA KANTA BARHAI and SUBROTO MUKHERJEE
Science Technology Advanced Materials, ***9,*** *025007, 2008*

22. Abel Inversion using Bessel Function as a Radial Basis Function for Sparse Spectroscopic Data
A. K. CHATTOPADHYAY
Plasma Devices and Operations, ***16***,*115–126,2008*

23. Propagation of Electron Magnetohydrodynamic Structures in a Two-Dimensional Inhomogeneous Plasma
SHARAD KUMAR YADAV, AMITA DAS and PREDHIMAN KAW
Physics of Plasmas, ***15***, *062308, 2008*

24. Secondary Virtual-Cathode Formation in a Low-Voltage Vircator: PIC Simulations
GURSHARN SINGH and SHASHANK CHATURVEDI
IEEE Transactions on Plasma Science, ***36***, *694-700, 2008*

25. Experimental Results of Large-current Capacity HTS Conductors
G. BANSAL, N. YANAGI, T. HEMMI, K. TAKAHATA and T. MITO
IEEE Transactions on Applied Superconductivity, ***18***, *1151-1154, 2008*

26. Quench Characteristics of an NbTi CICC with Non-uniform Current Distribution
G. BANSAL, K. SEO, N. YANAGI, T. HEMMI, K. TAKAHATA, T. MITO, B. SARKAR and Y.C. SAXENA
IEEE Transactions on Applied Superconductivity, ***18,*** *1245-1248, 2008*

27. Langmuir Probe Study in the Nonresonant Current Drive Regime of Helicon Discharge
MANASH KUMAR PAUL and DHIRAJ BORA
Pramana, ***71***, *117, 2008*

28. Particle Transfer in Edge Transport Barrier with Stochastic Magnetic Field
M. Z. TOKAR, T. E. EVANS, R. SINGH and B. UNTERBERG
Physics of Plasmas, ***15***, *072515, 2008*

29. Role of Nonadiabatic Untrapped Electrons in Global Electrostatic Ion Temperature Gradient Driven Modes in a Tokamak
J. CHOWDHURY, R. GANESH, P. ANGELINO, J. VACLAVIK, L. VILLARD and S. BRUNNER
Physics of Plasmas, ***15***, *072117, 2008*

30. Driven Transverse Shear Waves in a Strongly Coupled Dusty Plasma
P. BANDYOPADHYAY, G. PRASAD, A. SEN and P.K. KAW
Physics Letters A, ***372***, *5467-5470, 2008*

31. Summary of the 5th IAEA Technical Meeting on Steady State Operation of Magnetic Fusion Devices (Daejeon, Republic of Korea, 14–17 May 2007)
G.S. LEE, YONG-SU NA, A. BECOULET, S. IDE, C.E. KESSEL, A. KOMORI, B.V. KUTEEV, G. MANK, R.A. OLSTAD, B. SARKAR, A.C.C. SIPS, D. VAN HOUTTE and V.L. VDOVIN
Nuclear Fusion, ***48***, *087001, 2008*

32. Experimental Study of Nonlinear Dust Acoustic Solitary Waves in a Dusty Plasma
P. BANDYOPADHYAY, G. PRASAD, A. SEN and P. K. KAW
Physical Review Letters, ***101***, *065006, 2008*

33. The Potential of Pulsed Underwater Streamer Discharges as a Disinfection Technique
SURYAKANT B. GUPTA
IEEE Transactions on Plasma Science, ***36***, *1621-1632,2008*

34. Design and Development of Detector Signal Conditioning Electronics for SST-1 Thomson Scattering System
ARUNA THAKAR, AJAI KUMAR, JINTO THOMAS and CHHAYA CHAVDA
Review of Scientific Instruments, ***79***, *093505, 2008*

35. Spatio-temporal Dynamics of Plasma Spots in Helium Surface Barrier Discharge
A.K. SRIVASTAVA and G. PRASAD
Physics Letters A, ***372***, *6101-6106, 2008*

36. Full-field Swept-source Optical Coherence Tomography with Gaussian Spectral Shaping
SATISH KUMAR DUBEY, GYANENDRA SHEORAN, TULSI ANNA, ARUN ANAND, DALIP SINGH MEHTA and CHANDRA SHAKHER
Proceedings SPIE ***7155***, *71551F, 2008*

37. Near-Complete Absorption of Intense, Ultrashort Laser Light by Sub-lambda Gratings
SUBHENDU KAHALY, S. K. YADAV, W. M. WANG, S. SENGUPTA, Z. M. SHENG, A. DAS, P. K. KAW and G. RAVINDRA KUMAR
Physical Review Letters, ***101***, *145001, 2008*

38. Nonlinear Generalized Hydrodynamic Wave Equations in Strongly Coupled Dusty Plasmas
B. M. VEERESHA, A. SEN and P. K. KAW
AIP Conference Proceedings, ***1041***, *131, 2008*

39. Visco-elastic Effects in Strongly Coupled Dusty Plasmas
P. BANDYOPADHYAY, G. PRASAD, A. SEN and P. K. KAW
AIP Conference Proceedings, ***1041***, *161, 2008*

40. Characterizing and Modelling Cyclic Behaviour in Non-stationary Time Series through Multi-resolution Analysis
D.P. AHALPARA, A. VERMA, J.C. PARIKH and P.K. PANIGRAHI
Pramana - Journal of Physics, ***71***,*459-485,2008*

41. Stress, Texture and Microstructure of Zirconium Thin Films Probed by X-Ray Diffraction
J. CHAKRABORTY, K. KISHOR KUMAR, S. MUKHERJEE and S.K. RAY
Thin Solid Films, **516**, 8479-8486, 2008

42. Coherent Structures and Intermittency in Plasma Turbulence
AMITA DAS, PREDHIMAN KAW and ABHIJIT SEN
AIP Conference Proceedings, ***1061***, *14-23, 2008*

43. Multiscale Turbulence Simulation and Steady State Transport
W. W. LEE, S. ETHIER, R. GANESH, R. KOLESNOKOV, and W. X. WANG
AIP Conference Proceedings, ***1069***, *144-152, 2008*

44. Long Pulse Characteristics of 5 MW Ion Source for SST-1 Neutral Beam Injector
M.R. JANA, S.K. MATTOO, A.K. CHAKRABORTY, U.K. BARUAH, G.B. PATEL and P.K. JAYAKUMAR
Fusion Engineering and Design, ***83***, *729-735,2008*

45. Electric probes for characterization of microwave-produced plasma
VIPIN K YADAV and D BORA
*Physica Scripta, **T131**, 014023 (6pp), 2008*

46. A 1-MV Magnetically Insulated Tesla Transformer
MARKO ISTENIC, BUCUR M. NOVAC, JING LUO, RAJESH KUMAR and IVOR R. SMITH
*IEEE Transactions on Plasma Science, **36**, 2644-2650, 2008*

47. Compact Sub-Kilojoule Range Fast Miniature Plasma Focus as Portable Neutron Source
RISHI VERMA, M V ROSHAN, F MALIK, P LEE, S LEE, S V SPRINGHAM, T L TAN, M KRISHNAN and R S RAWAT
*Plasma Sources Science and Technology, **17**, 045020, 2008*

48. MHD-Neutronics Modeling for Magnetized Target Fusion
SHASHANK CHATURVEDI
2006 International Conference on Megagauss Magnetic Field Generation and Related Topics, including the International Workshop on High Energy Liners and High Energy Density Applications, MEGAGAUSS, p 83-91, 2008

49. 2-D MHD Study of Instabilities during the Compression Phase of an Inverse Z-pinch MTF System
P.V. SUBHASH, S. MADHAVAN and S. CHATURVEDI
2006 International Conference on Megagauss Magnetic Field Generation and Related Topics, including the International Workshop on High Energy Liners and High Energy Density Applications, MEGAGAUSS, p 191-196, 2008

50. Three-dimensional Calculations of Electrical Parameters in Flux Compression Systems
C.D. SIJOY and S. CHATURVEDI
2006 International Conference on Megagauss Magnetic Field Generation and Related Topics, including the International Workshop on High Energy Liners and High Energy Density Applications, MEGAGAUSS, p 385-390, 2008

51. Low Power Density Multihole Cathode Very-high-frequency Plasma for Mixed Phase Si:H Thin Films
C. JARIWALA, A. CHAINANI, R. EGUCHI, M. MATSUNAMI, S. SHIN, S. BHATT, V. DALAL and P. I. JOHN
*Applied Physics Letters, **93**, 191502, 2008*

52. Comparative Study of Laser produced Li Plasma Plumes from Thin Film and Solid Target
AJAI KUMAR, R. K. SINGH, V. PRAHLAD and H. C. JOSHI
*Journal of Applied Physics, **104**, 093302, 2008*

53. Geodesic Acoustic Modes Excited by Finite Beta Drift Waves
N. CHAKRABARfTI, P. N. GUZDAR, R. G. KLEVA, V. NAULIN, J. J. RASMUSSEN and P. K. KAW
*Physics of Plasmas, **15**, 112310, 2008*

54. Interference and Diffraction Effects in Folding Mirror Schlieren Diffraction Interferometer
R. KUMAR
*Applied Physics B: Lasers and Optics, **93**,415-420, 2008*

55. Overview of Liquid Metal TBM Concepts and Programs
C.P.C. WONG, J.-F. SALAVY, Y. KIM, I. KIRILLOV, E. RAJENDRA KUMAR, N.B. MORLEY, S.

TANAKA and Y.C. WU
Fusion Engineering and Design, ***83***, 850-857, 2008

56. Strategy for the Indian DEMO design
R. SRINIVASAN, S.P. DESHPANDE and THE INDIAN DEMO TEAM
Fusion Engineering and Design, ***83***, 889-892, 2008

57. Review of Blanket Designs for Advanced Fusion Reactors
T. IHLI, T.K. BASU, L.M. GIANCARLI, S. KONISHI, S. MALANG, F. NAJMABADI, S. NISHIO, A.R. RAFFRAY, C.V.S. RAO, A. SAGARA and Y. WU
Fusion Engineering and Design, ***83***, 912-919, 2008

58. Preliminary Design of Indian Test Blanket Module for ITER
E. RAJENDRA KUMAR, C. DANANI, I. SANDEEP, CH. CHAKRAPANI, N. RAVI PRAGASH, V. CHAUDHARI, C. ROTTI, P.M. RAOLE, J. ALPHONSA and S.P. DESHPANDE
Fusion Engineering and Design, ***83***, 1169-1172, 2008

59. Molecular Dynamic Simulations of a Double-walled Carbon Nanotube Motor Subjected to a Sinusoidally Varying Electric Field
S. NEGI, M. WARRIER, S. CHATURVEDI and K. NORDLUND
Computational Materials Science, 44, 979-987, 2009

60. Current Drive by Helicon Waves
MANASH KUMAR Paul and DHIRAJ BORA
Journal of Applied Physics, ***105***, 013305, 2009

61. Numerical Simulations for Cold Layer Formation in an Inverse Z-pinch Magnetized Target Fusion System
P.V. SUBHASH, S. MADHAVAN and S. CHATURVEDI
Physics of Plasmas, ***16***, 012701, 2009

62. Inhomogeneous Electron Emission from a Hot Filament in a Toroidal Magnetic Field
R. KAUR and S. K. MATTOO
Plasma Sources Science and Technology, ***18***, 015003, 2009

63. Phase Mixing of Relativistically Intense Waves in a Cold Homogeneous Plasma
SUDIP SENGUPTA, VIKRANT SAXENA, PREDHIMAN K. KAW, ABHIJIT SEN and AMITA DAS
Physical Review E, ***79***, 026404, 2009

64. Ionization of Positronium (Ps) in Collision with Atoms
HASI RAY
Physics Letters A, ***373***, 759-763,2009

65. I–V Characteristics and Magnetic Field Profile Studies in High Tc BSCCO based Helmholtz Coil
P.K. NAYAK, U. PRASAD, A.N. SHARMA, D. PATEL, S. KEDIA and S. PRADHAN
Physica C, 469, 211–215, 2009

66. Effect of Surface Produced Negative Ions on Near Wall Sheath
SEJAL SHAH and M. BANDYOPADHYAY
Plasma Physics Controlled Fusion, ***51***, 035015, 2009

67. An Experimental Setup to Study the Expansion Dynamics of Laser Blow-off Plasma Plume in Variable Transverse Magnetic Field
AJAI KUMAR, VISHNU CHAUDHARI, KIRAN PATEL, SONY GEORGE, S. SUNIL, R. K. SINGH and RANJEET SINGH
*Review of Scientific Instruments, **80**, 033503, 2009*

68. Transient Analysis of Creeping Wave Modes Using 3-D FDTD Simulation and SVD Method
B. CHAUDHURY, P. K. CHATTOPADHYAY, D. RAJU, and S. CHATURVEDI
*IEEE Transactions on Antennas and Propagation, **57**, 754, 2009*

69. Facilitating Scientific Research with Library Services: A Case Study of the IPR Library
SAROJ DAS and P.J. PATHAK
Library Philosophy and Practice, April 2008

70. Innovative plasma system to improve Angora fibre
P.B. JHALA, S.K. NEMA, S. MUKHERJEE
*The Indian Textile Journal, **6436,** 35-39, 2009*

71. Effect of frequency on the properties of plasma nitrided AISI 4340 steel
ALPHONSA, J., SINHA, G., KUMAR, A., JHALA, G., TIWARI, S.K., GUPTA, S., RAYJADA, P.A., CHAUHAN, N., RAOLE, P.M., MUKHERJEE, S.
*Journal of Metallurgy and Materials Science, **50**, 119-125, 2008*

72. Plasma Based Sub-surface Modification of Steels: Developments at FCIPT
ALPHONSA, J., MUKHERJEE, S.
*Steel Tech, **2**, 11-19, 2008*

73. Conceptual Design of the Cryogenic System for ITER
L. Serio, M. Chalifour, V. Kalinin, D. Henry, M. Sanmarti, B. Sarkar
(Awarded best paper Liquid Helium Centenary Award)
Proceedings of the 22nd International Cryogenic Engineering Conference and International Cryogenic Materials Conference, ICEC22-ICMC2008, Seoul, Korea, (Ed. by HO-Myung Chang etal.)
*Page no. **607**, July 21-25, 2008*

74. Cryoline for Torus and Cryostat Cryopumps of ITER: The Engineering Design Pathway
B. Sarkar, S. Badgujar, H. Vaghela, N. Shah, R. Bhattacharya, L. Serio, V. Kalinin, M. Chalifour and Y.H. Kim
Proceedings of the 22nd International Cryogenic Engineering Conference and International Cryogenic Materials Conference, ICEC22-ICMC2008, Seoul, Korea, (Ed. by HO-Myung Chang etal.)
*Page no. **625**, July 21-25, 2008*

75. Low Pressure Plasma based Nitrogen Incorporation Techniques for Surface Modification
S. Mukherjee
Plasma Surface Engineering Research and its Practical Applications, edited by R. Wei, published by Research Signpost, Trivandrum, p343-354, 2008. ISBN: 978-81-308-0257-2