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

2022-2023 (161 Reprint)

1. Morphology Induced Large Magnetic Anisotropy in Obliquely Grown Nanostructured Thin Film on Nanopatterned Substrate
ANUP KUMAR BERA, ARUN SINGH DEV, MANIK KUILA, MUKESH RAJAN, PALLAVI PANDIT, MATTHIAS SCHWARTZKOPF, STEPHAN V. ROTH, VARIMALLA R. REDDY, and DILEEP KUMAR
Applied Surface Science, 581, 152377, April 2022

2. Cross-Section of (n, 2n) Reaction for Niobium and Strontium Isotopes between 13.97 to 20.02 MeV Neutron Energies
MAYUR MEHTA, N. L. SINGH, RATANKUMAR SINGH, RAKESH CHAUHAN, RAJNIKANT MAKWANA, S. V. SURYANARAYANA, H. NAIK, P. V. SUBHASH, S. MUKHERJEE, JAN VARMUZA, KAREL KATOVSKY
Applied Radiation and Isotopes, 182, 110142, April 2022

3. Overview of Recent Experimental Results from the ADITYA-U Tokamak
R.L. TANNA, TANMAY MACWAN, J. GHOSH, K.A. JADEJA, ROHIT KUMAR, S. AICH, K.M. PATEL, HARSHITA RAJ, KAUSHLENDER SINGH, SUMAN DOLUI, ANKIT KUMAR, B.K. SHUKLA, P.K. CHATTOPADHYAY, M.N. MAKWANA, K.S. SHAH, S. GUPTA, V. BALAKRISHNAN, C.N. GUPTA, V.K. PANCHAL, PRAVEENLAL EDAPPALA, B. ARAMBHADIYA, MINSHA SHAH, PRAMILA GAUTAM, V. RAULJI, PRAVEENA SHUKLA, R. RAJPAL, U.C. NAGORA, KIRAN PATEL, NANDINI YADAVA, S. PATEL, N. RAMAIYA, M.B. CHOWDHURI, R. MANCHANDA, R. DEY, G. SHUKLA, K. SHAH, VARSHA S, J. RAVAL, S. PUROHIT, K. TAHILIANI, D. KUMAWAT, S.K. JHA, N. BISAI, P.K. ATREY, S.K. PATHAK, M.K. GUPTA, M.V. GOPALKRISHANA, B.R. DOSHI, DEEPTI SHARMA, R. SRINIVASAN, D. RAJU, CHETNA CHAUHAN, Y.C. SAXENA, ABHIJIT SEN, R. PAL and S. CHATURVEDI
Nuclear Fusion, 62, 042017, April 2022

4. Spatially Selective Nanoplasmonic Response in Ag Embedded GLAD TiO2 Nanocomposite Thin Films
RAJNARAYAN DE, S. MAIDUL HAQUE, M. K. SIKDAR, P. K. SAHOO, S. KESARI, CH KISHAN SINGH, S. STINE, M. RANJAN, R. RAO, K. DIVAKAR RAO
Optical Materials, 126, 112122, April 2022

5.Estimation of Vacuum Vessel Time-Constant in ADITYA-U Tokamak
ROHIT KUMAR, S. K. JHA, SUMAN AICH, TANMAY MACWAN, DEVILAL KUMAWAT, R. L. TANNA, J. GHOSH, KAUSHAL PATEL, KUMARPAL JADEJA
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6. Operating a Full Tungsten Actively Cooled Tokamak: Overview of WEST First Phase of Operation
J. BUCALOSSI, R. DANIEL et. al
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7. Laser Intensity Profile Based Terahertz Field Enhancement from a Mixture of Nano-Particles Embedded in a Gas
P. VARSHNEY, A. P. SINGH, M. KUNDU, K. GOPAL
Optical and Quantum Electronics, 54, 222, April 2022

8. Physics Studies of ADITYA & ADITYA-U Tokamak Plasmas Using Spectroscopic Diagnostics
R. MANCHANDA, M. B. CHOWDHURI, J. GHOSH, N. RAMAIYA, N. YADAVA , S. PATEL, G. SHUKLA, K. SHAH, R. DEY, K. A. JADEJA, K. M. PATEL, R. L. TANNA, S. K. PATHAK, B. V. NAIR, C. N. GUPTA and ADITYA-U TEAM
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J. MISHRA, R. GANGRADEY, P. NAYAK, S. MUKHERJEE
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10. Numerical Simulation of a Bi-Directional Plasma Thruster for Space Debris Removal
VINOD SAINI and RAJARAMAN GANESH
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11. On the Effects of H2 and Ar on Dual Layer Formed by Plasma Nitrocarburizing on Austenitic Stainless Steels
JEETA SAH, ALPHONSA JOSEPH, GHANSHYAM JHALA, SUBROTO MUKHERJEE
Journal of Materials Engineering and Performance, 31, 2664, April 2022

12. Data Driven Discovery of a Model Equation for Anode-Glow Oscillations in a Low Pressure Plasma Discharge
BHUMIKA THAKUR, ABHIJIT SEN and NEERAJ CHAUBEY
Physics of Plasmas, 29, 042112, April 2022 (Erratum: Physics of Plasmas, 29, 069901, June 2022)

13. Progress in ITER ECE Diagnostic Design and Integration
Y. LIU, V.S. UDINTSEV, S. DANANI, G. PARAISO, G. TAYLOR, M.E. AUSTIN, A. BASILE, J.H. BENO, B. BUNKOWSKI, R. FEDER, T. GIACOMIN, J. GUIRAO, S. HOUSHMANDYAR, H. HUANG, A.E. HUBBARD, S. HUGHES, S. JHA, A. KHODAK, R. KUMAR, S. KUMAR, V. KUMAR, P. MAQUET, C. NAZARE, H. NEILSON, A. OUROUA, S. PAK, H.K.B. PANDYA, C. PENNEY, P.E. PHILLIPS, S. PISH, J. POISSY, W.L. ROWAN, A. SAXENA, M. SCHNEIDER, S.M. STRANK, S. THOMAS, G. VAYAKIS, F.L. WAELBROECK, M.J. WALSH and L. WORTH
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14. Phase Locked Loop System with SIW-Based Bandpass Filter for D-Band Microwave Interferometer
ALPESH VALA, AMIT PATEL, BHARGAV PATEL, ABHISHEK SINHA,UMESH NAGORA, SURYA PATHAK JITENDRA CHAUDHARI and HIREN MEWADA
IETE Journal of Research, 68, 255, April 2022

15. DIII-D Research Advancing the Physics Basis for Optimizing the Tokamak Approach to Fusion Energy
M. E. FENSTERMACHER, A. CHATTOPADHYAY, R. MANCHANDA, et. al.
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16. Dust-Ion Acoustic Solitary Waves in a Collisionless Magnetized Five Components Plasma
PALTU HALDER, ANUP BANDYOPADHYAY, SANDIP DALUI and SANKIRTAN SARDAR
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17. Effect of Directional Nature of Antenna and Magnetic Field Strength on Optimal Power Absorption in a Helicon Discharge
N. SHARMA, M. CHAKRABORTY, S. BORTHAKUR, N. K. NEOG and M. BANDYOPADHYAY
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18. Numerical Evaluation for Spacer Vane Effects on Flow and Heat Transfer of Water at Supercritical Pressure in Annular Channel
SATISH KUMAR DHURANDHAR, S. L. SINHA and SHASHI KANT VERMA
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VIKAS RATHORE, CHIRAYU PATIL, ADAM SANGHARIYAT and SUDHIR KUMAR NEMA
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20. Mode Conversion and Laser Energy Absorption by Plasma under an Inhomogeneous External Magnetic Field
SRIMANTA MAITY, LAXMAN PRASAD GOSWAMI, AYUSHI VASHISTHA, DEVSHREE MANDAL and AMITA DAS
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21. Equilibrium Magnetic Field Requirements during Plasma Initiation and Current Ramp-Up Phase in ADITYA/ADITYA-U Tokamak Discharges
RAKESH L. TANNA, JOYDEEP GHOSH, CHETNARAYAN GUPTA, BALAKRISHNAN V. NAIR, SHIVAM GUPTA, MOTI N. MAKWANA, KUNAL SHAH, SUPRIYA NAIR, ROHIT KUMAR, SUMAN AICH, KUMARPALSINH A. JADEJA, KAUSHAL M. PATEL, TANMAY MACWAN, KAUSHLENDER SINGH, SUMAN DOLUI, ANKIT KUMAR, CHETNA CHAUHAN, RAJENDRA P. BHATTACHARYAY, PRABAL K. CHATTOPADHYAY, MALAY BIKAS CHOWDHURI, RANJANA MANCHANDA, YOGESH CHANDRA SAXENA and ADITYA-U TEAM
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22. Systematic Study of the (n, 2n) Reaction Cross Section for 121Sb and 123Sb Isotopes
RATANKUMAR SINGH, N.L. SINGH, RAKESH CHAUHAN, MAYUR MEHTA, SARASWATULA SURYANARAYAN, RAJNIKANT MAKWANA, B K NAYAK, H. NAIK, TARAK NATH NAG and KAREL KATOVSKY
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P. K. SHARMA, D. RAJU, S. K. PATHAK, R. SRINIVASAN, K. K. AMBULKAR, P. R. PARMAR, C.G. VIRANI, J. KUMAR, S. SHARMA, C. SINGH, A. L. THAKUR, V. L. TANNA, U. PRASAD, Z. KHAN, D. C. RAVAL, C. N. GUPTA, B. KRISHNAN, S. NAIR, D. K. SHARMA, B. DOSHI, M. VASANI, K. MAHAJAN, R. RAJPAL, R. MANCHANDA, K. ASUDANI, M. K. GUPTA, M. B. CHOWDHURI, R. L. TANNA, SST-1 and DIAGNOSTIC TEAMS
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24. Forster Resonance Energy Transfer between Fluorescent Organic Semiconductors: Poly (9, 9-Dioctylfluorene-Alt-Benzothiadiazole) and 6, 13-Bis (Triisopropylsilylethynyl) Pentacene
HEMLATA BISHT, ABHINAV PRATAP SINGH, HEM CHANDRA JOSHI, SATYABRATA JIT, and HIRDYESH MISHRA

The Journal of Physical Chemistry B, 126, 3931, May 2022

25. A Study on the Influence of External Magnetic Field on Nitrogen RF Discharge using Langmuir Probe and OES Methods
ATRI MUKHERJEE, NARAYAN SHARMA, M CHAKRABORTY and PABITRA K SAHA
Physica Scripta, 97, 055601, May 2022

26. Design and Analysis of a Plasma Chamber for Thermal Processing Applications
DEEPAK SHARMA, ATIK MISTRY, VADIVEL MURUGAN PALANICHAMY, ADAM SANGHARIYAT, HARDIK MISTRY, PARITOSH CHAUDHURI, SHASHANK CHATURVEDI and SUDHIR K. NEMA
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27. Emergence of Directed Motion in a 2D System of Yukawa Particles on 1D Ratchet
ANSHIKA CHUGH, RAJARAMAN GANESH
Physica A: Statistical Mechanics and its Applications, 593, 126913, May 2022

28. Oxygen Plasma for Prevention of Biofilm Formation on Silicone Catheter Surfaces: Influence of Plasma Exposure Time
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31. Wave Studies using Triple Langmuir Probe in Transient Plasma
S. BORTHAKUR, N. K. NEOG and T. K. BORTHAKUR
Plasma Physics Reports, 48, 560, May 2022

32. Neutronic Analysis of Indian Helium-Cooled Solid Breeder Tritium Breeding Module for Testing in ITER
H L SWAMI, DEEPAK SHARMA, C DANANI, P CHAUDHARI, R SRINIVASAN and RAJESH KUMAR
Plasma Science and Technology, 24, 065601, June 2022

33. Real-Time Density Feedback Control in ADITYA-U Tokamak
KIRAN PATEL, UMESH NAGORA, H.C. JOSHI, SURYA PATHAK, K.A. JADEJA, KAUSHAL PATEL, CHETAN VIRANI, ANKIT PATEL, R. L. TANNA, ROHIT KUMAR, SUMAN AICH and JOYDEEP GHOSH
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34. Long Time Fate of Two-Dimensional Incompressible High Reynolds Number Navier-Stokes Turbulence: A Quantitative Comparison between Theory and Simulation
SHISHIR BISWAS and RAJARAMAN GANESH
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35. Design and Development of a Liquid Nitrogen Cooled Test Cryopump for Application in Steady-State Superconducting Tokamak-1
RANJANA GANGRADEY, SAMIRAN S. MUKHERJEE, VISHAL GUPTA, PARESH PANCHAL, PRATIK NAYAK, JYOTI S. MISHRA, AVIJIT DEWASI, SHASHI KANT VERMA
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PAWANDEEP SINGH, SWATI and SHANTANU KUMAR KARKARI
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37. IDP Detection in Earth Environment: Prediction of Plasma Capture Efficiency and Detector Response to High-Energy Particles
J.P. PABARI, S. NAMBIAR, R.K. SINGH, ANIL BHARDWAJ, K.A. LAD, K. ACHARYYA, J.M. JAKHARIYA, S. JITARWAL, RASHMI, V. SHEEL
Planetary and Space Science, 215, 105452, June 2022

38. Laser Ablation Fabrication of a p-NiO/n-Si Heterojunction for Broadband and Self-Powered UV-Visible-NIR Photodetection
SAVITA CHAOUDHARY, AVIJIT DEWASI, RAM PRAKASH S, VIPUL RASTOGI, RUI N PEREIRA, ALESSANDRO SINOPOLI, BRAHIM AISSA and ANIRBAN MITRA
Nanotechnology, 33, 255202, June 2022

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40. Investigating the Effects of Electron Bounce-Cyclotron Resonance on Plasma Dynamics in Capacitive Discharges Operated in the Presence of a Weak Transverse Magnetic Field
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41. Evaluation of Three Methods of Static Contact Angle Measurements for TiO2 Nanofluid Droplets during Evaporation
SYLWIA WCISLIK and SAYANTAN MUKHERJEE
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42. Activation of Water in the Downstream of Low-Pressure Ammonia Plasma Discharge
VIKAS RATHORE, VYOM DESAI, NIRAV I. JAMNAPARA and SUDHIR KUMAR NEMA
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44. On Suitable Experiments for Demonstrating the Feasibility of the Beam-Driven Plasma Neutraliser for Neutral Beam Injectors for Fusion Reactors
G. STARNELLA, C. HOPF and P. N. MAYA
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45. Estimation of Production Cross-Sections, Transmutation and Gas Generation from Radionuclides (A ~50-60) in Fusion Environment
JYOTI PANDEY, BHAWNA PANDEY, P. V. SUBHASH, PRITI KANTH, MAYANK RAJPUT, S. VALA, RAJNIKANT MAKWANA, S. V. SURYANARAYANA, H. M. AGRAWAL
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46. Development of Resistive-Ink Based Planar and Conformal Metasurfaces for RCS Reduction
PRIYANKA TIWARI, SURYA KUMAR PATHAK, and VARSHA SIJU
IEEE Access, 10, 61472, June 2022

47. Validation of 3-D Non-Isothermal CFD Simulation with Experimental Results for Single-Screw Hydrogen Extruder
VISHAL GUPTA, RANJANA GANGRADEY, SAMIRAN S. MUKHERJEE, SHASHIKANT VERMA, AVIJIT DEWASI, J. MISHRA, PARESH PANCHAL, PRATIK A. NAYAK
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48. Sensing a Change in Size of a Circular Tokamak Plasma using a Single Magnetic Probe: A Theoretical Approach
SUMAN AICH, JAHAAN THAKKAR, JOYDEEP GHOSH
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49. Conceptual Design and Analysis of Prototype Center Stack for Spherical Tokamak Based Technologies Development
ADITYA KUMAR VERMA, RANJITH KUMAR SANTHARAM, PRASADA RAO PEDADA, SHIJU SAM, YELLAMRAJU S.S. SRINIVAS, RAJENDRA KUMAR ELLAPPAN
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50. Design, Simulation, Fabrication and Testing of LIM for EML
P PRASADA RAO, ARVIND KUMAR, ANANYA KUNDU, ANKUR JAISWAL, VILAS CHAUDHARI, SIDIBOMMA RAMBABU, Y.S.S. SRINIVAS, and E. RAJENDRAKUMAR
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VIKAS RATHORE and SUDHIR KUMAR NEMA
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52. Vibrational Temperature Estimation of Nitrogen Molecules in Radio-Frequency (RF) Produced Plasma
NANDINI YADAVA, SACHIN S. CHOUHAN, AMULYA SANYASI, UTTAM SHARMA, JAYASHREE SHARMA, MALAY B. CHOWDHURI, JOYDEEP GHOSH and ANKUR PANDYA
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53. Measurement of Plasma Stream Parameters by Triple Probe in a Pulsed Plasma Accelerator
SUMIT SINGHA, AZMIRAH AHMED, SURAMONI BORTHAKUR, NIROD KUMAR NEOG, TRIDIP KUMAR BORTHAKUR
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54. Formation of Nonlinear Stationary Structures in Ionospheric Plasma
GOBINDA MANNA, SUMAN DEY, JYOTIRMOY GOSWAMI, SWARNIV CHANDRA, JIT SARKAR, AMRITA GUPTA
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55. Deuterium Ion Irradiation Impact on the Current-Carrying Capacity of DI-BSCCO Superconducting Tape
M. RAJPUT, H.L. SWAMI, R. KUMAR, A. BANO, S. VALA, M. ABHANGI, UPENDRA PRASAD, RAJESH KUMAR, R. SRINIVASAN
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ASHISH YADAV, JAYDEEP JOSHI, ARUN CHAKRABORTY, HARSHAD NATU
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58. Silica FBG for Simultaneous Strain Temperature Measurement
KOUSTAV Performance of Etched DEY, B. RAMESH and SOURABH ROY
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60. Silanized Halloysite Nanotubes as 'Nano-Platform' for the Complexation and Removal of Fe (II) and Fe (III) Ions from Aqueous Environment
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61. Plasma Asymmetry and Electron and Ion Energy Distribution Function in Capacitive Discharges Excited By Tailored Waveforms
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62. Anomalous Time of Flight Behavior of Fast Ions in Laser Produced Aluminum Plasma
GARIMA ARORA, JINTO THOMAS and HEM CHANDRA JOSHI
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63. Modelling and Experimental Investigations of Composition-Dependent Heat and Mass Transfer during Cu–Ni Alloy Nanoparticle Synthesis in a Transferred Arc Helium Plasma
G D DHAMALE, SUBRAT DAS, ANTHONY B MURPHY, SATYA P R KANDADA, C BALASUBRAMANIAN and S GHORUI
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64. Dynamics of Nanoscale Triangular Features on Ge Surfaces
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ASHISH ADAK, NIDHI RATHEE, SUDIP SENGUPTA
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HARDIK MISTRY, DHARMESH PUROHIT, HARSHIDA PATEL, JATIN PATEL, K.G. PARMAR, DILIP RAVAL, MANOJ KUMAR GUPTA, B.K. SHUKLA
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68. Performance Testing of the Liquid Nitrogen Cooled Sorption Cryopump for Application in SST-1 Tokamak
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70. Defect Engineered Blue Photoluminescence in ZnO:Al/TiO2 Heterostructures
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71. Edge Biasing and Its Impact on the Edge and SOL Turbulence
VIJAY SHANKAR, NIRMAL BISAI, SHRISH RAJ and ABHIJIT SEN
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72. Self-Sustained Non-Equilibrium Co-Existence of Fluid and Solid States in A Strongly Coupled Complex Plasma System
M. G. HARIPRASAD, P. BANDYOPADHYAY, V. S. NIKOLAEV, D. A. KOLOTINSKII, S. ARUMUGAM, G. ARORA, S. SINGH, A. SEN and A. V. TIMOFEEV
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74. Fabrication and Characterization of BSCCO-2223 Tape Compact Coils
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