

A. Journal Articles

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- relationship
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131. Verma S., Bitra V.S.* , Singh R., Rao T.
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132. Vijay K., Chandra L.S.S., Ali K.* , Sagdeo A., Tiwari P., Chattopadhyay M.K., Arya A.* , Banik S.
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133. Vijay K., Vavilapalli D.S.* , Arya A.* , Srivastava S.K., Singh R., Sagdeo A., Jha S.N.* , Kumar K.* , Banik S.
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134. Vishwakarma P.* , Sharma G.* , Modi M.H., Gupta M.* , Stahn J.* , Gupta A.*
 Boron migration during amorphous to crystalline transformation in CoFeB/MgO multilayers: a reflectivity study
Materials Research Bulletin, 161, 112150 (2023)
135. Yadav P.K.* , Gupta R.K.* , Gupta S.* , Mukherjee C., Goutam U.K.* , Modi M.H.
 Boron carbide thin film surface characterization after graphitic carbon removal using low-pressure oxygen gas RF plasma
Applied Optics, 62, 1399-1405 (2023)
136. Yadav S., Paul C.P., Rai A.K., Singh R., Dixit S.K.
 Elucidating laser directed energy deposition based additive manufacturing of copper-stainless steel functionally graded material: Processing and material behavior
Journal of Manufacturing Processes, 92, 107-123 (2023)

B. Invited Talks

- Abdurrahim
 Simulation of transverse single bunch instabilities in HBSRS booster synchrotron
11th Indian Particle Accelerator Conference (InPAC-2023), BARC, Mumbai, Mar. 13-16, 2023
- Agrawal R.K.
 Control software and networking infrastructure for Indian Synchrotron Radiation Sources: present and future
Asian Forum for Accelerators and Detectors (AFAD-2023), The University of Melbourne, Melbourne, Australia, Apr. 12-14, 2023
- Banik S.
 Photoemission studies on spintronic materials using Indus synchrotron
Theme meeting on Spectroscopy using Indus Synchrotron Radiation (SISR-2023), RRCAT, Indore, Mar. 24-25, 2023
- Baraik K., Garg S.R., Garg C.K., Lal S., Nath S.K., Jangir R., Kane S.R., Raghuvanshi V.K., Singh S.D., Ganguly T.
 Development and initial results of x-ray magnetic circular dichroism beamline at Indus-2 synchrotron source
Theme meeting on Spectroscopy using Indus Synchrotron Radiation (SISR-2023), RRCAT, Indore, Mar. 24-25, 2023



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5. Borage M.B.
Future accelerators at RRCAT: High Brilliance Synchrotron Radiation Source (HBSRS)
11th Indian Particle Accelerator Conference (InPAC-2023), BARC, Mumbai, Mar. 13-16, 2023
6. Borage M.B., Srivastava A., Singh A.
Fast-ramped power converters with energy storage and grid power control
National Symposium on High Voltage- Energy Storage Capacitors and Applications (HV-ESCA-2023), BARC, Mumbai, June 22-24, 2023
7. Fatnani P.
Control system of Indus-2 and future SRS
RRCAT-ISPA Theme meeting on Control Systems and Instrumentation for Future Accelerator Projects, RRCAT, Indore, May 26, 2023
8. Dwivedi J.
ARPF (RRCAT)
11th Indian Particle Accelerator Conference (InPAC-2023), BARC, Mumbai, Mar. 13-16, 2023
9. Dwivedi J.
Electron beam services and industrial Linac technology from RRCAT
8th International Conference on Radiation Technologies: Challenges and Opportunities for Sustainable Development (NICSTAR 2023), Lulu Bolgatty International Convention Centre (LBICC), Kochi Kerala, Jan. 9-12, 2023
10. Ganguli T.
Materials science research at Indus beamlines
Asian Forum for Accelerators and Detectors (AFAD-2023), The University of Melbourne, Melbourne, Australia, Apr. 12-14, 2023
11. Kumar V.
Beams in cavities
11th Indian Particle Accelerator Conference (InPAC-2023), BARC, Mumbai, Mar. 13-16, 2023
12. Lad M.
High power RF systems for future accelerators
11th Indian Particle Accelerator Conference (InPAC-2023), BARC, Mumbai, Mar. 13-16, 2023
13. Modi M.H.
Soft x-ray reflection spectroscopy using synchrotron source
Theme meeting on Spectroscopy using Indus Synchrotron Radiation (SISR-2023), RRCAT, Indore, Mar. 24-25, 2023
14. Moorti A.
Laser wakefield accelerators
15. Nakhe S.V.
Future accelerators at RRCAT
11th Indian Particle Accelerator Conference (InPAC-2023), BARC, Mumbai, Mar. 13-16, 2023
16. Pant K.K.
IR-FEL(RRCAT)
11th Indian Particle Accelerator Conference (InPAC-2023), BARC, Mumbai, Mar. 13-16, 2023
17. Pathak K.
RF characterization of 32 KW and 40 KW, 650 MHz solid state RF power amplifiers
11th Indian Particle Accelerator Conference (InPAC-2023), BARC, Mumbai, Mar. 13-16, 2023
18. Puntambekar T.
INDUS-2(RRCAT)
11th Indian Particle Accelerator Conference (InPAC-2023), BARC, Mumbai, Mar. 13-16, 2023
19. Raghavendra S.
Challenges in cavity processing
11th Indian Particle Accelerator Conference (InPAC-2023), BARC, Mumbai, Mar. 13-16, 2023
20. Rana R.
Orbit feedback systems in synchrotron radiation sources
RRCAT-ISPA Theme meeting on Control Systems and Instrumentation for Future Accelerator Projects, RRCAT, Indore, May 26, 2023
21. Rao B.S., Mishra S., Moorti A., Chakera J.A.
Generation and application of high energy electron beams and hard-x-rays from laser wakefield accelerator
Asian Forum for Accelerators and Detectors (AFAD-2023), The University of Melbourne, Melbourne, Australia, Apr. 12-14, 2023
22. Shrivastava P.
Indian institutions & Fermilab collaboration
11th Indian Particle Accelerator Conference (InPAC-2023), BARC, Mumbai, Mar. 13-16, 2023
23. Shrivastava P.
Proton accelerator and related technology development at RRCAT
Asian Forum for Accelerators and Detectors (AFAD-2023), The University of Melbourne, Melbourne, Australia, Apr. 12-14, 2023
24. Singh S.N.
Design, development and deployment of accelerator magnets in RRCAT and future challenges



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Asian Forum for Accelerators and Detectors (AFAD-2023), The University of Melbourne, Melbourne, Australia, Apr. 12-14, 2023

25. Tiwari M.K.
X-ray fluorescence spectroscopy using Indus-2 facility
Theme meeting on Spectroscopy using Indus Synchrotron Radiation (SISR-2023), RRCAT, Indore, Mar. 24-25, 2023
26. Tiwari N.
Operational experience of digital LLRF system for particle accelerators at RRCAT
11th Indian Particle Accelerator Conference (InPAC-2023), BARC, Mumbai, Mar. 13-16, 2023
27. Yadav S.
Beam diagnostics system for Indus-2 and future challenges for HBSRS
RRCAT-ISPA Theme meeting on Control Systems and Instrumentation for Future Accelerator Projects, RRCAT, Indore, May 26, 2023

C. Seminar/Conference Presentations

C.1. 11th Indian Particle Accelerator Conference (InPAC-2023), BARC, Mumbai, Mar. 13-16, 2023

1. Abdurrahim, Kumar P.
Simulation of transverse single bunch instabilities in HBSRS booster synchrotron
2. Agrawal G., Patel H.K., Gilankar S.G., Ghosh R., Lakshminarayanan A., Jain A., Tiwari A., Arzare D., Khare P., Shrivastava P., Vincent R.*, Chandrasekaran S.*
Design of vacuum vessel for HB 650 MHz cryomodule at RRCAT
3. Aditya L., Ahlawat M., Meena M., Pareek P., Singh S.N.
Design and development of NiAlCo ferrites for high power circulator at S-band
4. Arora P., Jana P.K., Kulkarni N.S., Kumar V.
Numerical studies for evolving measurement methodology for characterization of single cell in constant gradient traveling wave Linac
5. Babbar L.K., Vaishnav D., Soni A.K., Sisodia B., Tiwari S.K.
Design and development of ultrahigh vacuum compatible upgraded fluorescent screen monitor for Indus-1 upgrade
6. Babbar L.K., Vaishnav D., Soni A.K., Sharma S.K., Sisodia B., Sankar P.R., Kamath M.P., Mukherjee C., Tiwari S.K.
Design and development of ultrahigh vacuum compatible

upgraded synchrotron light monitor for Indus-1 upgrade

7. Bagduwal P.S., Sharma D., Mishra E., Mishra N., Gothwal P., Tiwari N., Lad M.
Design and development of up-graded digital RF gap voltage and phase regulation control system
8. Bagre M., Jain V., Moulali S., Vijayakumar V., Singh A., Maratha S., Maurya T., Yedle A., Yadav A., Verma V., Srivastava V.K., Mohania P., Mahawar A., Kamble P.B., Chouksey S., Shrivastava P.
Experience of dumbbells fabrication for five-cell HB 650 ($\beta=0.92$) SCRF cavities in Indian industries
9. Biswas B., Chandran S., Saini R.S., Dave T., Lal S., Kumar A., Pandit R.K., Nerpagar P., Kale U., Gupta S.K., Pant K.K.
Performance optimization of the IR-FEL at RRCAT
10. Chalisgaonkar A., Ghodke D.V., Jain R., Singh K.K., Amban A.K.
Design and development of FPGA based data acquisition card for hydrogen ion source beam current measurements
11. Dave T., Lal S., Kumar A., Pant K.K.
Design studies for a pill box type accelerating structures with beam ports and coupling loop using analytical and perturbation techniques
12. Deepchand, Gandhi M.L.
Design and fabrication of cold plates for dipole power converter of Indus-2 at RRCAT
13. Dey S.K., Sinha G., Aich S.*
Effect of Dy substitution at Nd sites in melt-spun Nd-Fe-B permanent magnet ribbons
14. Dhingra R., Kulkarni N.S., Kumar V.
Development of a computer program for longitudinal beam dynamics studies in a traveling wave constant impedance electron Linac
15. Dhingra R., Kumar V., Kulkarni N.S.
Three-dimensional electromagnetic simulations of a constant gradient traveling wave accelerating structure integrated with RF couplers
16. Dwivedi V.K., Madhu B., Koli M., Singh A., Borage M.
Design and development of 125 A, 25 V power converters for combined function corrector magnets in Indus-1 storage ring
17. Garg A.D., Ojha A., Puntambekar T.A.
Measurement of electron beam size by using synchrotron radiation interferometer in Indus-2
18. Gaur R., Kulkarni N.S., Kumar V., Kane G. V., Sharma N.K., Chaturvedi A., Prasad V., Singh K.A.P., Rajput V.,



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- Baxy D., Lad M., Shrivastava P.
Cold test and RF tuning of the first section of 3 MeV, 35 MHz RFQ at RRCAT
19. Gauttam V.K., Kasliwal A.
Design and development of 3kW, active PFC pre-regulator for super conducting wavelength shifter magnet power supply.
20. Gothwal P., Mishra N., Bagduwal P.S., Mishra E., Sharma D., Tiwari N., Lad M.
Prototype development of digital controllers for multi-module current sharing power supply for RF amplifiers
21. Gupta A.K., Jain A., Lad M.
Power combining topology for CW 32 kW-650 MHz solid state RF amplifier (SSPA) installed at horizontal test stand (HTS) facility, RRCAT
22. Gupta P.K., Sharma R. K., Nema V., Kumar M., Raghavendra S., Shrivastava P.
Design, development and installation of cryogenic safety system of horizontal test stand
23. Jain M.K., Deo R.K., Kanyal G., Lad M.
Design study on solid-state RF power system for 10MeV re-circulating high power accelerator (RHPA)
24. Jain R., Holikatti A.C., Yadav S., Babbar L.K., Sonawane B.B., Fatnani P., Puntambekar T.A.
Development of beam position based interlock system for Indus-2
25. Jain V., Bagre M., Moulali S., Srivastava V., Singh K.K., Kane G.V., Bose A., Suhane S., Raghavendra S., Mohania1 P., Park H.*., Eremeev G.*., Furuta F.*., Chandrasekaran S.*., Grimm C.*., Chouksey S., Shrivastava P.
Development Journey of elliptically shaped high beta 650 MHz superconducting RF cavity: an overview
26. Jena S.K., Fakhri A.A.
Study of on-axis longitudinal beam injection in storage ring of high brilliance synchrotron radiation source
27. Kanyal G., Jain M.K., Deo R.K., Lad M.
Design and development of 100 kW, 325 MHz tetrode tube based high power RF pulse amplifier
28. Karnewar K., Maurya N.K., Holikatti A.C., Jain R., Kumar M., Arora P., Yadav H., Kumar A., Sisodia B.N., Sandha R.S., Fatnani P., Dwivedi J., Puntambekar T.A.
Development of energy measuring device and the measurement of energy and energy spread for the industrial Linac
29. Kelkar Y., Srinivas L., Barothiya R., Karandikar U., Singh Y.P.
Vertical pinger magnet power supply for Indus – 2
30. Koli M., Madhu B., Kumar V., Prajapati S. K., Somkuwar V., Mani S., Rohidas P.R., Srivastava A., Dwivedi V. K., Singh A., Borage M.B.
Development of high-stability true-bipolar power converters for upgraded closed orbit distortion correction scheme in Indus-1 storage ring
31. Kumar A., Ruwali K., Kumar S., Das S., Singh S.N.
Development of helmholtz coil based measurement system for characterization of permanent magnet blocks
32. Kumar A., Yadav R.P., Borage M.B., Fatnani P.
Disciplined software clock for new VME CPU
33. Kumar N., Vyas D., Jain A., Kumar R., Lad M.
Development and commissioning of a thermal profile data logging and protection subsystem for Indus-2 RF cavity
34. Kumar V.
Understanding the RF coupling, beam loading and wake field in accelerator physics
35. Kumar V., Sharma A.
A review of calculation of emittance growth for some common cases in accelerator physics
36. Mahawar A., Mohania P., Namdeo R. K., Baxy D., Lad M.
Design and development of pulse 2 kW solid state amplifiers for energizing s-band pre-buncher cavity of 10 MeV, 10 kW Linac developed at RRCAT
37. Malik R., Sinha G., Sreeramulu K., Sisodia B., Chatarji U., Prasad R. K., Srinivasan B., Singh K., Mishra A., Ruwali K., Singh B., Kumar P., Rajesh L., Shah P., Awale N., Veerbhadrabai T., Singh S. N.
Design and development of an improved 270 degree dipole magnet for energy filtering system for the Linac at RRCAT
38. Maurya V., Chaudhari S., Tomar S., Rajan A.
Our experiences in establishing and managing reliable and secure network connectivity over public communication channels for mission critical accelerator applications
39. Meena V.K., Prakash S., Husain R.
Proposed closed orbit correction scheme for Indus-1 storage ring
40. Mishra D.K., Purohit D., Dutta S., Kumar P., Dwivedi J.
Electromagnetic simulation of 107.5 MHz co-axial RF cavity and its higher order mode identification
41. Mishra E., Sharma D., Mishra N., Bagduwal P. S., Gothwal P., Tiwari N., Lad M.
Auto-configurable clock divider for digital low-level radio frequency system of infrared free electron laser



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42. Mishra N., Bagduwal P.S., Tiwari N., Sharma D., Gothwal P., Mishra E., Prasad M., Lad M.
Design and development of PLC based RF cavity tuner system for 31.6MHz RF cavities in Indus complex
43. Mishra R., Singh K.K., Kumar R., Pathak M., Ghodke D.V., Prasad V.
Remote control applications for operation of hydrogen negative ion source
44. Mohania P., Mahawar A., Namdeo R.K., Baxy D., Lad M.
Design and development of s-band low level RF system for 10 MeV, 10 kW electron linear accelerator KIRTI-1010
45. Mohania P., Namdeo R., Mahawar A., Baxy D., Lad M., Jain S.K., Shrivastava P.
Design and development of a 1 kW pulse RF amplifier with integrated power meter and pulse generator for ECR proton source
46. Moulali S., Kumar V., Maurya T., Singh A., Yedle A., Bagre M., Jain V., Chouksey S., Shrivastava P.
Study and development of various dissimilar metal joints of superconducting radio frequency cavities
47. Musuku J., Seema M., Jatin. J., Pawnarkar P., Satheesan T.V., Fatnani P.
Development of multi-channel programmable trigger generator for Linac of electron beam radiation processing facility
48. Nayak V.K.*., Kale U., Chaudhari B.B.*., Rath M. C.*
Design and development of pulse transformer for pico-second electron accelerator klystron modulator at RPCD, BARC
49. Nigam N., Mandle S., Sharma N.K., Kane G.V., Prasad V., Shrivastava P.
Mechanical design of spoke resonator cavity for high energy pulsed proton accelerator
50. Nigam N., Mandle S., Sharma N.K., Kane G.V., Prasad V., Shrivastava P.
Design methodology for forming tooling of SCRF cavities
51. Pal M.K., Jana A.R., Kumar V.
Development of a computer program for design of diode type electron gun
52. Pal M.K., Gaur R.
Study of cumulative beam breakup instability in spoke resonator section of a 1 GeV pulsed H-Linac
53. Pandey A., Gupta A., Mulchandani J., Wanmode Y., Lad M., Shrivastava P.
Design and development of floating pulse power supply for triode electron gun
54. Pareek P., Gaud V., Singh K., Kumar S.S., Veerbhadrariah T., Sisodia B., Sreeramu K., Singh S.N.
Development of pinger magnets for Indus- electron storage ring
55. Patel H.K., Agrawal G., Gilankar S.G., Ghosh R., Lakshminarayanan A., Jain A., Tiwari A., Shukla A., Arzare D., Khare P., Shrivastava P., Vincent R.*., Chandrasekaran S.*
Design analysis of strongback and cavity support for high beta 650 MHz cryomodule at RRCAT
56. Pathak K., Sharma D.K., Gupta A.K., Jain A., Lad M.
RF characterization of 3 kW and 40 kW, 650 MHz solid state RF power amplifiers
57. Pathak M., Mohania P., Jain S.K., Naika R., Ghodke D.V., Prasad V., Baxy D., Lad M., Shrivastava P.
Optimization of operating parameters of ECR proton source in pulsed mode
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1. Bharti A.S.* , Jaiswal A.* , Tiwari M.K., Uttam K.N.*
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2. Chattaraj A.* , Sinha A.K., Jha S.N., Claverie A.* , Kumar V.* , Kanjilal A.*
Oxygen driven phase transition from α to β in tungsten
3. Tiwari A.* , Bharti A.S.* , Tiwari M.K., Uttam K.N. *
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4. Tripathi A.* , Bharti A.S.* , Tiwari M.K., Uttam K.N.*
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5. Samanta A.* , Chattaraj A.* , Sagdeo A., Kanjilal A.*
Study of nickel oxide thin film as a hole transport layer for solar cell devices
6. Nag J.* , Vijay K., Bandyopadhyay B.* , Banik S., Alam A.* , Suresh K.G.*
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7. Bharti A.S., Baran C.* , Tiwari M.K., Uttam K.N.*
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8. Vijay K.* , Vavilapalli D.S., Arya A., Kumar K., Banik S.
Electronic structure of 2D van der waal ferromagnetic semiconductor CrGeTe₃
9. Rajput P.* , Kumar M.* , Nayak M., Jha S.K.*
On the splitting of surface plasmon resonance band of gold nanopillars developed on rippled si surface
10. Padhi P.S. * , Ajimsha R.S., Rai S.K., Banik S., Misra P.
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11. Dawn R.* , Urkude R., Tripathi S., Roy J. *, Jha S.N., Bhuniya S., Singh V.R.*
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12. Tripathi S., Kumar Y., Nand M., Baral M., Jha S.N.
Resonance photoemission in Tb:CePO₄ nanowires
13. Sharma S.* , Tiwari M.K., Uttam K.N.*
Nutrient profiling of the underutilized seeds using synchrotron radiation induced x-ray fluorescence spectroscopy

14. Dubey S.* , Dubey K.* , Gautam U.K., Sharma R.K., Pagare G. *, Gaur N.K.*
Structural, electronic and optical spectroscopy of LiTaO₃ ceramic: an experimental and DFT study
15. Sharma S.* , Singh A.K., Tiwari M.K., Uttam K.N.*
Prompt screening of the alterations in mineral profile of wheat plants stressed with chromium using x-ray fluorescence excited by synchrotron radiation
16. Kumar Y., Tripathi S., Nand M., Jha S.N., Sengupta P.* , Arya A.*
Local structure analysis of Indian zircon

C.3. 8th International Conference on Radiation Technologies: Challenges Opportunities for Sustainable Development (NICSTAR-2023), Lulu Bolgatty International Convention Centre (LBICC), Kochi Kerala, Jan. 9-12, 2003

1. Kumar P., Kumar S., Purohit D., Goswami S. G., Sandha G.S., Soni R.K., Pal V., Verma, A.K., Choudhary R.S., Yadav R., Petwal V.C., Dwivedi J., John R., Rawlani B.K., Parchani G., Mulchandani J., Acharya M., Wanmode Y. T Reghu, Mohania P., Mahawar A., Lad M., Arora P., Jana A.R., Kulkarni N.S., Kumar V., Jotangia J.D., Seema M.,

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2. Sandha R.S., Goswami S.G., Dwivedi J., Choudhary J.R., kumar P., Soni R., Kumar A., Yadav H., Petwal V.C., Verma V.P., Khandelwal D., Dutta S., Wanmode Y., Reghu P., Mahawar A., Lad M., Seema M., Janardhan M., Jatongia J., Gupta A., Fatnani P., Arora P., Jana P.K., Sharma A., Kulkarni N., Kumar V., Pramod R., GauttamV., Kasliwal A., Singh G., SinhaG., Sreeramulu K., Karnewar A.K., Holikatti A.C., Jain R., Shrivastava B.B., Sindal B.K., Sharma H., Bhatnagar P., Yadav D.P., Bhatnagar V.K., Kumar A., Dhara A., Pandey R.M., Suryavanshi S.D., Kumar R., Puntambekar T.A., Mundra G., Shrivastava P.
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C.4. Other Seminar/Conference Presentations

1. Chaudhari S., Thankur A., Rajan A.
An efficient malicious URL detection approach using machine learning
2nd International Conference on Women Researchers in Electronics and Computing, Dr B. R. Ambedkar National Institute of Technology, Jalandhar, Punjab, Apr. 21–23, 2023
2. Radke N.K., Tomar S.S., Rajan A.
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Note: “*” indicates author affiliation other than RRCAT, Indore.