Curriculum Vitae

Full Name	Don Biswas	
Designation	Assistant Professor	
Department	Instrumentation Engineering-USIC	
Campus	Srinagar, HNB Garhwal University	
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Education Qualification	Ph. D. in Engineering (2023), Jadavpur University, Kolkata.		
Teaching Experience	12 Years	**Research Experience**	5 Years

Areas of Interest/Specialization

1. Ferroelectric materials.
2. Thin films.

Subject Knowledge

1. Electrical Measurements and Instruments.
2. Power Electronics.
3. Signals and Systems.
4. Basic Electrical Engineering.
5. Process Control.

Instrument knowledge

1. DC sputtering system, RF sputtering system.
2. SEM (Scanning Electron Microscopy).
3. LCR Meter.
4. XRD (X-ray diffraction).
5. P- E loop tracer.

Award/Honours

1. Gate Scholarship (2008-2010).
2. Young scientist award (2021) from VDGOOD society.

Reviewer

1. Ceramics International (Elsevier).
2. Measurement and control (Sage).

Administrative Experience

1. Member of Departmental Purchase Committee.
2. Member of the B. Tech. Admission Committee, H.N.B. Garhwal University, Srinagar (Garhwal).
3. Member of the B. Tech. JOSSA Admission Committee, H.N.B. Garhwal University, Srinagar (Garhwal).
4. Member of the B. Ed. Admission Committee, H.N.B. Garhwal University, Srinagar (Garhwal), from January 2018- July 2018.
5. Member of the P.G. Admission Committee, H.N.B. Garhwal University, Srinagar (Garhwal), from January 2019- July 2020.
6. Member of the Ph. D. Admission Committee, H.N.B. Garhwal University, Srinagar (Garhwal), from July 2019- July 2020.
7. Member of the board of studies (BoS) (meeting held on 26-02-2019), Instrumentation Engg. -USIC, H.N.B. Garhwal University, Srinagar (Garhwal).
8. Member of the B. Tech. examination Committee, H.N.B. Garhwal University, Srinagar (Garhwal).
9. Member of "School Board" of School of Engineering and Technology, H.N.B. Garhwal University, Srinagar (Garhwal), in 2023.
10. Committee Member of "Election of Student Union" of H.N.B. Garhwal University, Srinagar (Garhwal).

11. Committee Member of "NAAC peer review team" of H.N.B. Garhwal University, Srinagar (Garhwal), in 2022-23.

Conference/Symposium/Workshop/Invited lecture Attended/Delivered during last eight years (2012-2023)

1. Attended short term course on "PCB Layout, Fabrication and Testing" from 14-01-2013 to 18-01-2013, organized by NITTTR Chandigarh, India.
2. Attended Conference on "Recent Advances in Material Science (NCRAMS-13)", organized by Dept. of Physics, H.N.B. Garhwal University, Srinagar (Garhwal), 26-27 October, 2013.
3. Attended Orientation Course organized by Academic Staff College, Jadavpur University, Kolkata, 04 Aug. - 01 Sept., 2014.
4. Attended a Workshop on NMEICT Awareness "Recent Trends in Education System", organized by National Institute of Technology, Uttarakhand, on 29-30 November, 2014.
5. Attended Refresher Course on "Disaster Management" organized by UGC-HRDC, Kamaun University, Nainital (Uttarakhand) from 02 – 23 Dec, 2016.
6. Attended two day training program on "Ethics & Values in Public Governance", organized by Academic Activity Centre, HNBGU, Uttarakhand, 28-29 May, 2017.
7. Attended one month Induction training Program organized by FDC, HNBGU, Uttarakhand, 01-30 June, 2018.
8. Presented an Invited talk on the topic ferroelectrics in "International Conference on Aerosol, Air Quality and Climate Change", organized by Dept. of Physics, H.N.B. Garhwal University, Srinagar (Garhwal), 21-23 October, 2018.
9. Attended a Short term training Program on Data Analysis Awareness "Computational Techniques in Research Methodology for Science and Social Sciences", organized by FDC, HNBGU, Uttarakhand, 25-31 July, 2019.
10. Attended a short term training program on "Dimensions of Qualitative Research", organized by FDC, HNBGU, Uttarakhand, 21-27 Aug., 2019.
11. Attended a short term training program on "Nanotechnology for electronic and photonic devices (Nanodev 2020)" organized by Punjab Engg. College, Chandigarh, during 15th june, 2020- 19th june, 2020.
12. Attended online lecture series on "Academic Leadership in Higher education during and after Covid- 19 pandemic" organized by HNB Garhwal university, Srinagar Garhwal, during 22th june, 2020- 26th june, 2020.
13. Attended a short term training program on "Pedagogical Training for Teachers on Tools for Online Teaching Learning and Evaluation" organized by Swami Ramanand Teerth Marathwada University, Nanded, during 1st july 2020- 6th july, 2020.
14. Attended a short term course on "Sub-micrometer Semiconductor Device to Circuit Co-Design and Modeling Techniques" organized by NIT Jhalandar, Punjab, during 20th Aug., 2020- 24th Aug., 2020.
15. Invited talk and demonstration in "Skill Development Program on Sophisticated Research Instruments" under the scheme of Synergistic Training Program Utilizing the Scientific and Technological Infrastructure (STUTI) supported by Department of Science and Technology, Government of India, organized by Department of Chemistry, H.N.B. Garhwal University, Srinagar Garhwal in association with Banasthali Vidyapith, Rajasthan, 12th to 18th May, 2023.
16. Invited talk and demonstration in "International Workshop and Winter School on HANDS -ON-TRAINING on Instrumentation and Analytical Techniques" organized by Department of Physics, H.N.B. Garhwal University, Srinagar Garhwal in association with Instrumentation Engg.-USIC, Srinagar Garhwal, 18th to 22nd March, 2024.
17. Invited talk and demonstration in "Analytical Instrumentation Techniques for Applied Research" organized by Department of Chemistry, H.N.B. Garhwal University, Srinagar Garhwal in association with Instrumentation Engg.-USIC, Srinagar Garhwal, 17th May to 23rd May, 2024.
18. Attended a FDP course on "NEP 2020 ORIENTATION & SENSITIZATION PROGRAMME" organized by Jadavpur University, Kolkata, during 5th Aug., 2024- 16th Aug., 2024.
19. Attended a FDP course on "Future Trends in Novel Materials" organized by SRM Institute of Management and Technology, Delhi NCR campus, during 9th Dec., 2024- 14th Dec., 2024.

In the Proceedings of Conferences/ Seminars

1. **D. Biswas**, P. Thapliyal, V. Rohilla, G. S. Kathait, S. Singh and J. Negi, Dielectric and piezoelectric properties of sodium potassium niobate ($Na_{1-x}K_xNbO_3$) ceramics for x = 0.08 and 0.17, International conference on Aerosol, Air Quality and Climate Change on Himalayan region of Uttarakhand, Srinagar Garhwal, Uttarakhand, 21-23th October, 2018.
2. K. Kumar, A. Bahuguna, **D. Biswas**, Four band slotted microstrip antenna, State level conference on Imagineering, Tula's Institute, Dehradun, Uttarakhand, 25th October, 2018.
3. **D. Biswas**, P. Sharma, N. S. Panwar, Piezoelectric properties of lead free $Ba_{1-x}Ca_xZr_{0.1}Ti_{0.9}O_3$ (x = 0.150) ceramics with different sintering temperature, International conference on Material Science and Applications (ICMSAA-2019), Physics Department, H. N. B. Garhwal University, Uttarakhand, 25-27th Nov, 2019.
4. V. Rohilla, **D. Biswas**, P. Thapliyal, G. S. Kathait, Recent Trends in Solar Energy Conversion Techniques, National Conference on "Recent Advancements in Natural Products Chemistry and Nanotechnology"(RANPCN-2019), Department of chemistry, H. N. B. Garhwal University, 9-10th September 2019.
5. V. Rohilla, **D. Biswas**, P. Thapliyal, G. S. Kathait , S. Singh, Estimation of some essential, non-essential toxic and toxic elements in some Indian Black Tea sold in market by ICP-MS and their risk assessment, International Conference on Material Science and Applications (ICMSAA-19), Department of Physics, H. N. B. Garhwal University, 25-27th November, 2019.
6. **D. Biswas**, P. Sharma, N. S. Panwar, Electrical and optical properties of lead free $Ba_{1-x}Ca_xZr_{0.1}Ti_{0.9}O_3$ (x = 0.150) ceramics, international-conference-on-innovative-research-in-applied-science-engineering, RIT, Roorkee, 20-21th Feb., 2021.
7. **D. Biswas**, S. Singh, M. Uniyal, N. S. Panwar, Structural and electrical properties of lead free $(Ba_{0.9-z}Sr_zCa_{0.1})(Zr_{0.1}Ti_{0.9})O_3$ (z = 0.20) ceramics, ICEAMST-25, BGR campus, H. N. B. Garhwal University, Srinagar Garhwal, 14-15th Feb., 2025.

Conference/Symposium/Workshop Organized during last eight years (2012-2020)

1. Organized the '**World IPR day'**, jointly with UCOST, Dehradun at USIC Department, HNB Garhwal University, Srinagar (Garhwal), 26th April, 2014.

Peer reviewed Publications

1. **D. Biswas** & A. S. Bahuguna, "To Measure Physical Signal from Sensor and Control through Data Acquisition System", *IJARCSSE*, Vol. **7**, pp. 377-388, 2017. (UGC listed) https://doi.org/10.23956/ijarcsse/SV7I5/0321
2. **D. Biswas**, G. S. Kathait, P. Thapliyal, V. Rohilla & S. Singh "Temperature dependence of dielectric properties of sodium potassium niobate ceramics for different values of x ($Na_{1-x}K_xNbO_3$)", *Ferroelectrics*, Vol. **526**, pp. 168-175, 2018. (IF- 0.699) (SCI Indexed) https://doi.org/10.1080/00150193.2018.1456307
3. T. Singh, B. Gangil, A. Patnaik, **D. Biswas**, G. Fekete "Agriculture waste reinforced corn starch based biocomposites: Effect of rice husk/walnut shell on physicomechanical, biodegradable and thermal properties", *Materials Research Express*, Vol. **06** (04), pp. 045702, 2019. (IF- 1.92) (SCI Indexed) https://doi.org/10.1088/2053-1591/aafe45
4. **D. Biswas**, G. S. Kathait, P. Thapliyal, V. Rohilla, S. Singh & J. Negi "Converse piezoelectric properties of K and Na-modified ($Na_{1-x}K_x$) NbO_3 lead free ceramics for x = 0.08 and 0.17", *Ferroelectrics*, Vol. **550**, pp. 228–232, 2019. (IF- 0.699) (SCI Indexed) https://doi.org/10.1080/00150193.2019.1652511
5. **D. Biswas et al.** "Microcontroller based data acquisition system using error reduction technique", *International Journal of Engineering, Science and Technology*, Vol. **11**, No. 3, pp. 40-48, 2019. (IF- 0.50) http://dx.doi.org/10.4314/ijest.v11i3.5
6. G. S. Kathait, **D. Biswas**, P. Thapliyal, V. Rohilla & S. Singh " Influence of Escaping of Na & K on physical properties in Lead-Free $Na_{0.92}K_{0.08}NbO_3$ Ceramic", *Ferroelectrics*, Vol. **551**, pp. 40-46, 2019. (IF- 0.699) (SCI Indexed) https://doi.org/10.1080/00150193.2019.1658026
7. T. Singh, B. Gangil, B. Singh, S. K. Verma, **D. Biswas**, G. Fekete "Natural-synthetic fiber reinforced homogeneous and functionally graded vinylester composites: Effect of bagasse-Kevlar hybridization on wear behavior", *J. Mater Res Technology*, Vol. **8**, No. 6, pp. 5961-5971, 2019. (IF- 5.32) (SCI Indexed) https://doi.org/10.1016/j.jmrt.2019.09.071
8. G. S. Kathait, N. S. Panwar, **D. Biswas**, P. Thapliyal, V. Rohilla & S. Singh "Sintering Effect on Electrical Properties and Morphology of Lead-Free $Na_{0.92}K_{0.08}NbO_3$ Ceramics", *Science of Sintering*, Vol. **51,** pp. 421-428, 2019. (IF- 1.71) (SCI Indexed)

https://doi.org/10.1080/00150193.2019.1652511

9. V. Rohilla, G. S. Kathait, **D. Biswas**, P. Thapliyal, & B. Rohilla "Estimation of Heavy Metals in some Indian Black Tea Leaves by Inductively Coupled Plasma Mass Spectrometer (ICPMS) and associated Health Risks", *Indian Journal of Agricultural Research*, Vol. **A-5429**, pp. 1-6, 2020. (IF- 0.35) (SCI Indexed) https://doi.org/ https://doi.org/10.1080/00150193.2020.1853757
10. **D. Biswas**, N. S. Panwar, P. Sharma "Converse piezoelectric properties of lead free $Ba_{1-x}Ca_xZr_{0.1}Ti_{0.9}O_3$ (x = 0.055) ceramics using double sintered method", *Ferroelectrics*, Vol. **568:1**, pp. 95-103, 2020. (IF- 0.699) (SCI Indexed) https://doi.org/10.1080/00150193.2020.1811032
11. V. Rohilla, **D. Biswas**, P. Thapliyal, G. S. Kathait, S. Singh "Estimation of some essential, non-essential toxic and toxic elements in some Indian black tea sold in market by 'ICP-MS'and their risk assessment", *Applied Innovative Research CSIR-NISCAIR*, **Vol. 2**, pp. 226-230, 2020. (UGC Listed) http://nopr.niscpr.res.in/handle/123456789/55982
12. D. Das, **D. Biswas**, A. K. Hazarika, S. Sabhapondit, R. B. Roy, B. Tudu, R. Bandyopadhyay "CuO Nanoparticles Decorated MIP-based Electrode for Sensitive Determination of Gallic Acid in Green Tea", *IEEE Sensors Journal*, **Vol. 21**, No. 5, pp. 5687-5694, 2021. (IF- 4.32) (SCI Indexed) https://doi.org/10.1109/JSEN.2020.3036663
13. A. K. Gautam, R. S. Negi, S. Kumar, **D. Biswas** and S. Rawat "The Seasonal and Morphological Analysis of Airborne PM_{10} and $PM_{2.5}$ in Srinagar Garhwal (Himalaya Region)", *IJEP*, **vol. 40 (11):** 1154-1163 (2020). (Scopus Indexed) https://www.e-ijep.co.in/november-2020/
14. **D. Biswas**, P. Sharma, N. S. Panwar "Dielectric properties of $Na_{1-x}K_xNbO_3$ (NKN) ($0.160 \leq x \leq 0.200$) ceramics synthesized by double sintered method", *Ferroelectrics*, **Vol. 571**, pp. 214–229, 2021. (IF- 0.699) (SCI Indexed) https://doi.org/10.1080/00150193.2020.1853757
15. **D. Biswas**, P. Sharma, N. S. Panwar "Structural and electrical properties of lead free $Na_{1-x}K_xNbO_3$ ($0.160 \leq x \leq 0.200$) ceramics", *Ceramics International*, **Vol. 47**, pp. 13814–13819, 2021. (IF- 5.532) (SCI Indexed) https://doi.org/10.1016/j.ceramint.2021.01.246
16. **D. Biswas**, P. Sharma, N. S. Panwar "Composition dependent electrical properties of $(Ba_{1-x}Ca_xZr_{0.1}Ti_{0.9})O_3$ ceramics, near morphotropic phase boundary ($0.140 \leq x \leq 0.160$)", *ECS Journal of Solid State Science and Technology*, **Vol. 10,** pp. 033002, 2021. (IF- 2.483) (SCI Indexed) https://doi.org/10.1149/2162-8777/abea61
17. J. Negi, **D. Biswas**, N. S. Panwar "Piezoelectric Properties of Ta ($\leq$ 5 (mole)%) Doped in $Na_{0.685}K_{0.315}NbO_3$", *IJPAP*, **Vol. 59**, pp. 740-743, 2021. (IF- 0.86) (SCI Indexed) https://doi.org/10.56042/ijpap.v59i11.50334
18. **D. Biswas**, Surendra Singh, Prashant Thapliyal, Vishal Rohilla, G S Kathait, N S Panwar, Prolay Sharma "Investigation on dielectric and optical properties of $Ba_{1-x}Ca_xZr_{0.1}Ti_{0.9}O_3$ (x = 0.150) ferroelectric ceramics", *J. Mountain Res.*, **Vol. 16 (02),** pp. 279-286, 2021. (UGC Listed) https://doi.org/10.51220/jmr.v16i2.34
19. K. Kumar, A. S. Bahuguna, Y. P. Pundir, **D. Biswas** "Design of U-Shaped Slot Quad Band Patch Antenna", J. Mountain Res., **Vol. 16 (03),** pp. 437-445, 2021. (UGC Listed) https://doi.org/10.51220/jmr.v16i3.43
20. **D. Biswas**, P. Sharma, N. S. Panwar "Structural and piezoelectric properties of $(Ba_{1-x}Ca_xZr_{0.1}Ti_{0.9})O_3$ ceramics, near morphotropic phase boundary ($0.140 \leq x \leq 0.160$)", *IJPAP*, **Vol. 60**, pp. 111–116, 2022. (IF- 0.86) (SCI Indexed) http://dx.doi.org/10.56042/ijpap.v60i2.57525
21. **D. Biswas**, P. Sharma, N. S. Panwar "Temperature dependent dielectric and structural properties of $(Ba_{1-x}Ca_x)(Zr_{0.1}Ti_{0.9})O_3$, ($0.140 \leq x \leq 0.160$) ceramics", *ECS Journal of Solid State Science and Technology*, **Vol. 11,** pp. 043007, 2022. (IF- 2.483) (SCI Indexed) https://doi.org/10.1149/2162-8777/ac62f3
22. **D. Biswas**, P. Sharma, N. S. Panwar "Effect of sintering on the piezoelectric properties and microstructure of lead free $(Ba_{1-x}Ca_xZr_{0.1}Ti_{0.9}O_3)$ (x = 0.065) ceramics", *Science of Sintering*, **Vol. 52, issue 2,** pp. 1-8, 2022. (IF- 1.71) (SCI Indexed) https://doi.org/10.2298/SOS2202201B
23. **D. Biswas**, P. Thapliyal, P. Sharma, N. S. Panwar "Annealing temperature- dependent structural, optical and electrical properties of $[(Ba_{1-z}Ca_z)(Zr_{0.1}Ti_{0.9})O_3]$, (z = 0.155), films", *ECS Journal of Solid State Science and Technology*, **Vol. 12,** pp. 023011, 2023. (IF- 2.483) (SCI Indexed) https://doi.org/10.1149/2162-8777/acbbea
24. S. Singh, **D. Biswas**, A. S. Bahuguna, P. Thapliyal, V. Rohilla, G. S. Kathait, N. S. Panwar, P. Sharma, "Composition-dependent dielectric and piezoelectric properties of $Na_{1-z}K_zNbO_3$

ceramics ", *IJPAP*, **Vol. 61**, pp. 335-342, 2023. (IF- 0.86) (SCI Indexed) https://doi.org/10.56042/ijpap.v61i5.70679

25. **D. Biswas**, S. Singh, P. Thapliyal, V. Rohilla, G. S. Kathait, A. S. Bahuguna, P. Sharma, N. S. Panwar, "Impedance spectroscopy and AC conductivity analysis of $(Ba_{1-k}Ca_k)(Zr_{0.1}Ti_{0.9})O_3$, $(0.140 \leq k \leq 0.160)$, ceramics", *ECS advances*, **Vol. 2,** pp. 042001, 2023. (Scopus Indexed) https://doi.org/10.1149/2754-2734/ad02aa
26. S. Singh, **D. Biswas**, P. Thapliyal, V. Rohilla, G. S. Kathait, N. S. Panwar "Dielectric and Structural Properties of Double-sintered $(Na_{1-x}K_x)NbO_3$, $(0.460 \leq x \leq 0.485)$ Ceramics", *Ceramics International*, **Vol. 50**, pp. 7930-7935, 2024. (IF- 5.532) (SCI Indexed) https://doi.org/10.1016/j.ceramint.2023.12.121
27. S. Dasgupta, A. H. M. Toufique Ahmed, I. Bhattacharjee, S. Firdoushi, **D. Biswas**, S. Mukherjee, R. Bandyopadhyay, B. Tudu "Crafting a Graphite Electrode With Embedded Y_2O_3 Nanoparticles for the Electrochemical Detection of Amaranth in Candies", *IEEE Sensors Journal*, **Vol. 24**, No. 13, pp. 20750-20757, 2024. (IF- 4.32) (SCI Indexed) https://doi.org/10.1109/JSEN.2024.3400317
28. G. S. Kathait, **D. Biswas**, S. Negi, S. Maini "Dielectric and Electromechanical Properties of Pyroelectric $(Ba_{1-x}Ca_x)(Ti_{0.96}Sn_{0.04})O_3$ (BCST) Ceramics for $0.032 \leq x \leq 0.064$", *Smart Energy Systems and Artificial Intelligence (SESAI)*, IEEE explore, pp. 1-5, 2024. (Scopus Indexed) https://doi.org/10.1109/SESAI61023.2024.10599444
29. S. Dasgupta, A. H. M. Toufique Ahmed, I. Bhattacharjee, S. Firdoushi, **D. Biswas**, S. Mukherjee, B. Mondal, R. Bandyopadhyay, B. Tudu "Electrochemical detection of indigo carmine in candies using Y_2O_3 nanoparticles infused graphite electrode", *Journal of Food Composition and Analysis*, **Vol. 135**, pp. 106626, 2024. (IF- 4.6) (SCI Indexed) https://doi.org/10.1016/j.jfca.2024.106626
30. I. Bhattacharjee, S. Dasgupta, S. Firdoushi, **D. Biswas**, A. H. M. Toufique Ahmed, S. Mukherjee, R. Bandyopadhyay, B. Tudu "A Simple Nano $NiMn_2O_4$ Functionalized Graphite Electrode for Electrochemical Detection of Cinnamic Acid in Cinnamon Bark", *IEEE Sensors Journal*, **Vol. 24**, No. 23, pp. 38613-38619, 2024. (IF- 4.32) (SCI Indexed) https://doi.org/10.1109/JSEN.2024.3477255
31. **D. Biswas**, S. Singh, P. Thapliyal, V. Rohilla, G. S. Kathait, N. S. Panwar "Composition dependent structural and electrical properties of $(Ba_{0.9-z}Sr_zCa_{0.1})(Zr_{0.1}Ti_{0.9})O_3$, $(0.08 \leq z \leq 0.12)$ ceramics", *ECS Journal of Solid State Science and Technology*, **Vol. 14,** pp. 033003, 2025. (IF- 2.483) (SCI Indexed) https://doi.org/ 10.1149/2162-8777/adaf55
32. S. Firdoushi, A. H. M. Toufique Ahmed, I. Bhattacharjee, S. Dasgupta, S. Firdoushi, **D. Biswas**, H. Ghosh, R. Bandyopadhyay, B. Tudu "Electrochemical detection of erythrosine in candies using a simple nano Y_2O_3 modified graphite electrode", *Food and Humanity*, **Vol. 4**, No. 23, pp. 100586, 2025. (SCI Indexed) https://doi.org/10.1016/j.foohum.2025.100586
33. I. Bhattacharjee, S. Firdoushi, S. Dasgupta, A. H. M. Toufique Ahmed, **D. Biswas**, S. Ghorai, B. Tudu, A. Chatterjee, R. Bandyopadhyay, B. Tudu "A Novel Molecularly Imprinted 4-Vinyl Pyridine Electrode for Detection and Quantification of Cinnamic Acid in Food Samples", *IEEE Sensors Journal*, **Vol. 25**, pp. 21085–21092, 2025. (IF- 4.32) (SCI Indexed) https://doi.org/ 10.1109/JSEN.2025.3564400
34. S. Mukherjee, S. Ghorai, H. Naskar, S. Manna, A. H. M. Toufique Ahmed, **D. Biswas**, S. Dasgupta, I. Bhattacharjee, B. Tudu, A. Chatterjee, R. Bandyopadhyay, B. Tudu "A novel TMS@ G-MIP electrochemical sensor for selective detection of p-coumaric acid in fruits using voltammetry signal and CNN", *Journal of Food Composition and Analysis*, **Vol. 146**, pp. 107925, 2025. (IF- 4.6) (SCI Indexed) https://doi.org/10.1016/j.jfca.2025.107925

Book Chapters

1. S. kumar, **D. Biswas**, B. Gangil "Asbestos free braking pads by using organic fiber based reinforced composites for automotive industries", Automotive Tribology, Springer Nature Singapore Pte Ltd., Oct. 2019. https://doi.org/10.1007/978-981-15-0434-1_17
2. V. Rohilla, R. C. Rohilla, P. Thapliyal, **D. Biswas**, G. S. Kathait, "Photovoltaic Power System with Battery Backup and Grid-Connection to Reduce Grid Dependency During Peak Demand Hours and Power Cuts" Techno-Societal, Jun. 2021. https://doi.org/10.1007/978-3-030-69925-3_39
3. M. K. Gupta, T. Gupta, D. Mangal, P. Thapliyal, **D. Biswas** "Study and Analysis of IoT (Industry 4.0): A Review" Handbook of Smart Manufacturing, CRC Press, Jul. 2023. https://doi.org/10.1201/9781003333760-2