

List of Publications, if any. If yes, Upload copies of any two publications.

Total publications-24

Research paper:

- **1- Hasan MR**, Sharma P, Pilloton R, Khanuja M, Narang J. Colorimetric biosensor for the naked-eye detection of ovarian cancer biomarker PDGF using citrate modified gold nanoparticles. Biosensors and Bioelectronics: X. 2022 Sep 1;11:100142.
- **2- Anirudh Bishoyi**, Md. Anish Alam, **Mohd. Rahil Hasan**, Manika Khanuja, Roberto Pilloton, Jagriti Narang. Cyclic voltammetric- Paper-Based Genosensor for detection of the target DNA of zika virus. MDPI.2022.
- **3- Sharma P**, Hassan H, **Hasan MR**, Fatima T, Mohan H, Khanuja M, Kaushik S, Narang J. PBIS-based system integrated with zinc–silver nanocomposite for the detection of Chikungunya virus. Biosensors and Bioelectronics: X. 2023 May 1;13:100303. **.(IF-10)**
- **4- Hasan MR**, Sharma P, Shaikh S, Singh S, Pilloton R, Narang J. Electrochemical Aptasensor Developed Using Two-Electrode Setup and Three-Electrode Setup: Comprising Their Current Range in Context of Dengue Virus Determination. Biosensors. 2022 Dec 20;13(1):1. **(IF-5)**
- **5-Tyagi M**, Singh S, **Hasan MR**, Fatima T, Khanuja M, Narang J. Lab in tube: comparing different morphological dependent gold nanomaterials towards naked eye and optical sensing of dopamine using aptamer. International Journal of Environmental Analytical Chemistry. 2023 May 1:1-4.
- **6- Pradakshina Sharma**, **Mohd. Rahil Hasan**, Manika Khanuja, Rachna Rawal, Shivani Shivani, Jagriti Narang. Aptamer based silver nanoparticle decorated paper platform for electrochemical detection ovarian cancer biomarker PDGF. Material chemistry and physics. 2023.

- 7- Sharma P, Hasan MR, Khanuja M, Narang J. Carbon ink printed flexible glove-based aptasensor for rapid and point of care detection of Chikungunya virus. *Process Biochemistry*. 2023 Aug 2.

Review paper:

- 1-Alam MA, **Hasan MR**, Aznar N, Suleman S, Narang J. Diagnostic approaches for the rapid detection of Zika virus—A review. *Process Biochemistry*. 2021 Feb 1;101:156-68.
- 2- Aznar N, **Hasan MR**, Akram M, Yadav N, Narang J. Systematic and validated techniques for the detection of ovarian cancer emphasizing the electro-analytical approach. *Process biochemistry*. 2020 Jul 1;94:126-35.
- 3- **Hasan MR**, Sharma P, Aznar N, Pundir CS, Pilloton R, Narang J, Shetti NP. Analytical methods for detection of human cytomegalovirus clinched biosensor a cutting-edge diagnostic tool. *Biomedical Engineering Advances*. 2021 Jun 1;1:100006.
- 4- Beduk T, Beduk D, **Hasan MR**, Guler Celik E, Kosel J, Narang J, Salama KN, Timur S. Smartphone-Based Multiplexed Biosensing Tools for Health Monitoring. *Biosensors*. 2022 Jul 29;12(8):583.
- 5- Hassan H, Sharma P, **Hasan MR**, Singh S, Thakur D, Narang J. Gold nanomaterials—The golden approach from synthesis to applications. *Materials Science for Energy Technologies*. 2022 Sep 18.
- 6- Sharma P, **Hasan MR**, Mehta NK, Bishoyi A, Narang J. 92 years of zinc oxide: has been studied by the scientific community since the 1930s—An overview. *Sensors International*. 2022 Jun 3:100182.
- 7- Singh S, **Hasan MR**, Sharma P, Narang J. Graphene nanomaterials: The wondering

material from synthesis to applications. *Sensors International*. 2022 Jun 23:100190.

- **8-** Aznar N, **Hasan R**, Tyagi M, Yadav N, Narang J. Carbon nanotube-A review on Synthesis, Properties and plethora of applications in the field of biomedical science. *Sensors International*. 2020 Jan 1;1:100003.
- **9- Hasan MR**, Anzar N, Sharma P, Singh S, Hassan H, Rawat C, Narang J. Mycobacterium tuberculosis diagnosis from conventional to biosensor-a systematic review. *International Journal of Environmental Analytical Chemistry*. 2022 Nov 25:1-6.
- **10-** Thakur D, Fatima T, Sharma P, **Hasan MR**, Malhotra N, Khanuja M, Shukla SK, Narang J. High-performance biosensing systems for diagnostics of Sexually transmitted disease—A strategic review. *Process Biochemistry*. 2023 Jan 13.
- **11- Hasan MR** , Sharma P, Shariq Suleman , Shouvik Mukherjee , Emine Guler Celik , Suna Timur , Roberto Pillton and Jagriti Narang. PAPERTRONICS-Marriage between Paper and Electronics becoming a real scenario in resource-limited settings.ACS.2023.
- **12-** Singh S, **Hasan MR**, Jain A, Pilloton R, Narang J. LFA: The Mysterious Paper-Based Biosensor: A Futuristic Overview. *Chemosensors*. 2023 Apr 19;11(4):255.
- **13-** Hasan MR, Anzar N, Sharma P, Malode SJ, Shetti NP, Narang J, Kakarla RR. Converting biowaste into sustainable bioenergy through various processes. *Bioresource Technology Reports*. 2023 Jul 5:101542.

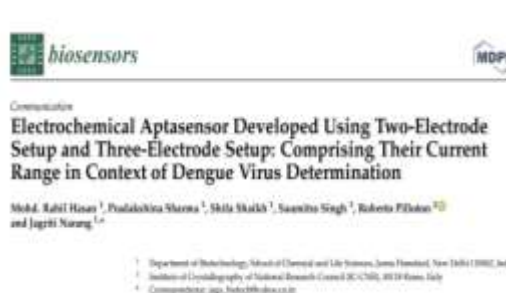
Book-Chapter:

- **1-Hasan MR**, Suleman S, Narang J. Lab-on-paper based devices for COVID-19 sensors. In *Sensing Tools and Techniques for COVID-19* 2022 Jan 1 (pp. 25-47). Elsevier.
- **2-Hasan MR**, Anzar N, Tyagi M, Yadav N, Narang J. Lab-on-a-chip devices—Advancement in the designing of biosensors. In *Functionalized Nanomaterials Based Devices for Environmental Applications* 2021 Jan 1 (pp. 175-198). Elsevier.
- **3-Sharma P, Hasan MR**, Narang J. Bio-inspired Protein-Based Nanoparticles in Cancer Therapy. In *Handbook of Oxidative Stress in Cancer: Therapeutic Aspects* 2022 Mar 18 (pp. 1-24). Singapore: Springer Singapore.
- **4-Malode SJ, Sharma P, Hasan MR**, Shetti NP, Mascarenhas RJ. Carbon and carbon paste electrodes. In *Electrochemical Sensors* 2022 Jan 1 (pp. 79-114). Woodhead Publishing.

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1-**Hasan MR**, Sharma P, Pilloton R, Khanuja M, Narang J. Colorimetric biosensor for the naked-eye detection of ovarian cancer biomarker PDGF using citrate modified gold nanoparticles. *Biosensors and Bioelectronics*: X. 2022 Sep 1;11:100142. **(10-impact factor)**

2- **Hasan MR**, Sharma P, Shaikh S, Singh S, Pilloton R, Narang J. Electrochemical Aptasensor Developed Using Two-Electrode Setup and Three-Electrode Setup: Comprising Their Current Range in Context of Dengue Virus Determination. *Biosensors*. 2022 Dec 20;13(1):1. **(5-impact factor)**



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Abstract: The present, for the very first time, the fabrication and electrochemical characterization of a paper-based experimental platform for dengue virus analysis. The paper-based device incorporates a screen-printing technology with the help of black carbon conductive ink. The paper-based device utilizes two types of electrode setups, i.e., the two-electrode system and three-electrode system, and both setups effectively detected the dengue virus with a LOD of 10¹ pg/ml, however, these paper electrodes exhibited various current ranges, and the created sensor was encapsulated and compared in this research based on current response. It is observed that the three-electrode system has a substantially higher current range, ranging from 55.73 µA to 122.21 µA, as compared to the two-electrode system, which has a current range of 8.97 µA to 4.54 µA. According to this study, the three-electrode system displayed a good range of current amplification that is roughly 10 times higher than the two-electrode system, which had a weak current response. As a result, the three-electrode method has emerged as a viable option for the very sensitive detection of the dengue virus, as well as