List of publications

1. **Bano, D.,** Kumar, V., Singh, V. K., & **Hasan, S. H. (2018)**. Green synthesis of fluorescent carbon quantum dots for the detection of mercury (II) and glutathione. ***New Journal of Chemistry***, *42*(8), 5814-5821.

2. **Bano, D.,** Chandra, S., Yadav, P. K., Singh, V. K., & **Hasan, S. H. (2020)**. Off-on detection of glutathione based on the nitrogen, sulfur codoped carbon quantum dots@ MnO2 nano-composite in human lung cancer cells and blood serum. ***Journal of Photochemistry and Photobiology A: Chemistry***, 112558.

3. **Bano, D.,** Kumar, V., Chandra, S., Singh, V. K., Mohan, S., Singh, D. K., & **Hasan, S. H. (2019).** Synthesis of highly fluorescent nitrogen-rich carbon quantum dots and their application for the turn-off detection of cobalt (II). ***Optical Materials***, *92*, 311-318.

4. **Bano, D.,** Kumar, V., Singh, V. K., Chandra, S., Singh, D. K., Yadav, P. K., & **Hasan, S. H.** (2018). A facile and simple strategy for the synthesis of label free carbon quantum dots from the latex of Euphorbia milii and its peroxidase-mimic activity for the naked eye detection of glutathione in a human blood serum. ***ACS Sustainable Chemistry & Engineering*****,** *7*(2), 1923-1932.

5. Chandra, S., **Bano, D.,** Pradhan, P., Singh, V. K., Yadav, P. K., Sinha, D., & **Hasan, S. H. (2020**). Nitrogen/sulfur-co-doped carbon quantum dots: a biocompatible material for the selective detection of picric acid in aqueous solution and living cells. ***Analytical and Bioanalytical Chemistry*****,** *412*, 3753-3763.

6. Singh, V. K., Singh, V., Yadav, P. K., Chandra, S., **Bano, D.,** Koch, B., & **Hasan, S. H. (2019).** Nitrogen doped fluorescent carbon quantum dots for on-off-on detection of Hg2+ and glutathione in aqueous medium: Live cell imaging and IMPLICATION logic gate operation. ***Journal of Photochemistry and Photobiology A: Chemistry*****,** *384*, 112042.

7. Yadav, P. K., Singh, V. K., Chandra, S., **Bano, D.,** Kumar, V., Talat, M., & Hasan, **S. H. (2018).** Green synthesis of fluorescent carbon quantum dots from azadirachta indica leaves and their peroxidase-mimetic activity for the detection of H2O2 and ascorbic acid in common fresh fruits. ***ACS Biomaterials Science & Engineering***, *5*(2), 623-632.

8. Chandra, S., Singh, V. K., Yadav, P. K., **Bano, D.,** Kumar, V., Pandey, V. K., & **Hasan, S. H. (2019**). Mustard seeds derived fluorescent carbon quantum dots and

their peroxidase-like activity for colorimetric detection of H2O2 and ascorbic acid in a real sample. ***Analytica chimica acta*****,** *1054*, 145-156.

9. Singh, V. K., Yadav, P. K., Chandra, S., **Bano, D.,** Talat, M., & **Hasan, S. H. (2018).** Peroxidase mimetic activity of fluorescent NS-carbon quantum dots and their application in colorimetric detection of H 2 O 2 and glutathione in human blood serum. ***Journal of Materials Chemistry B*****,** *6*(32), 5256-5268.

10. Singh, V. K., Singh, V., Yadav, P. K., Chandra, S., **Bano, D.,** Kumar, V., & **Hasan, S. H. (2018)**. Bright-blue-emission nitrogen and phosphorus-doped carbon quantum dots as a promising nanoprobe for detection of Cr (VI) and ascorbic acid in pure aqueous solution and in living cells. ***New Journal of Chemistry*****,** *42*(15), 12990-12997.

11. Kumar, V., **Bano, D.**, Singh, D. K., Mohan, S., Singh, V. K., & **Hasan, S. H. (2018).** Size-dependent synthesis of gold nanoparticles and their peroxidase-like activity for the colorimetric detection of glutathione from human blood serum. ***ACS Sustainable Chemistry & Engineering*****,** *6*(6), 7662-7675.

12. Singh, D. K., Kumar, V., Mohan, S., **Bano, D.,** & **Hasan, S. H. (2017)**. Breakthrough curve modeling of graphene oxide aerogel packed fixed bed column for the removal of Cr (VI) from water. *Journal of water process engineering*, *18*, 150-158.

13. Kumar, V., Singh, D. K., Mohan, S., **Bano, D.,** Gundampati, R. K., & Hasan, **S. H. (2017)**. Green synthesis of silver nanoparticle for the selective and sensitive colorimetric detection of mercury (II) ion. ***Journal of Photochemistry and Photobiology B: Biology*****,** *168*, 67-77.

14. Kumar, V., Gundampati, R. K., Singh, D. K., **Bano, D.,** Jagannadham, M. V., & **Hasan, S. H. (2016).** Photoinduced green synthesis of silver nanoparticles with highly effective antibacterial and hydrogen peroxide sensing properties. ***Journal of*** Photochemistry and Photobiology B: Biology, 162, 374-385.

15. Kumar, V., **Bano, D.,** Mohan, S., Singh, D. K., & **Hasan, S. H. (2016)**. Sunlight-induced green synthesis of silver nanoparticles using aqueous leaf extract of Polyalthia longifolia and its antioxidant activity. ***Materials Letters*****,** *181*, 371-377.

Conferences

Poster Presentations

- **Bano, D.,** Kumar V., **Hasan, S. H.,** Aqueous extract mediated synthesis of silver nanoparticles using aqueous extract of *Euphorbia hirta* for calorimetric detection of hydrogen peroxide "International Conference on Advanced Materials for Energy, Environment and Health (ICAM-2016)" 4-7 Mar. 2016, organized by Department of Chemistry, IIT Roorkee, Uttrakhand, India.
- **Bano, D.,** Kumar, V. Singh, V. K., **Hasan, S. H.,** On-off-On fluorescent carbon dot nanosensor for the detection of Co (II) and ascorbic acid, International Conference on Advanced Nanomaterial and Nanotechnology (ICANN-2017), 18-21 December 2017 organized by Centre for Nanotechnology, IIT Guwahati, India.
- **Bano, D.,** Kumar, V. Singh, V. K., **Hasan, S. H.**, Synthesis of Nitrogen and Sulfur doped Fluorescence Carbon Quantum dots for the Selective Detection of Chromium (VI) ions via Quenching Mechanism (ABSMSNW-2017), International Conference on Advances in Biological Systems and Material Science in NanoWorld (ABSMSNW-2017), 19-23 February 2017, organized by Department of Physics, IIT (BHU), Varanasi, India.
- **Bano, D.,** Kumar, V. Singh, V. K., **Hasan, S. H.,** Green synthesis of fluorescent carbon quantum dots for the detection of mercury (II) and glutathione, International Conference on Functional Nanomaterials (ICFNM-2019)" 22-25 February 2019, organized by Department of Physics, IIT (BHU), Varanasi, India.

Oral presentation

- **Bano, D., Hasan, S. H.**, Off-on detection of glutathione based on the nitrogen, sulfur codoped carbon quantum dots@MnO_2 nano-composite in human lung cancer cells and blood serum, International Conference on Advanced Nanomaterials (ICAN-2020), 27-29 February organized by Rama University, Kanpur, India (**Best oral presentation**).