# Publications

## Journal Papers

(1) Adarsh Nigam, Vijendra Singh Bhati, Thirumaleshwara Bhat, Surani Dolmanan, Sudhiranjan Tripathy, Mahesh Kumar, "Sensitive and Selective Detection of $Pb^{2+}$ ions using 2,5-Dimercapto-1,3,4-Thiadiazole Functionalized AlGaN/GaN High Electron Mobility Transistor", *IEEE Electron Device Letters*, Vol., pp., 2019.

(2) Vijendra Singh Bhati, Mirabbos Hojamberdiev and Mahesh Kumar, "Enhanced sensing performance of ZnO nanostructures-based gas sensors: A review", *Energy Reports*, 2019.

(3) Vijendra Singh Bhati, Adarsh Nigam, Akash Nathani, Chandra Shekhar Sharma, Mahesh Kumar, "PAN/(PAN-b-PMMA) derived Nanoporous Carbon Nanofibers loaded on ZnO Nanostructures for Hydrogen Detection", *Sensors & Actuators B: Chemical*, Vol. 299, pp. 126980, 2019.

(4) Vijendra Singh Bhati, Ramesh Raliya, Pratim Biswas, Mahesh Kumar, "$NO_2$ gas sensing performance enhancement based on reduced graphene oxide decorated on $V_2O_5$ nanostructures", *Nanotechnology*, Vol. 30 (22), 224001, 2019.

(5) Adarsh Nigam, Thirumaleshwara N Bhat, Vijendra Singh Bhati, Surani Bin Dolmanan, Sudhiranjan Tripathy, and Mahesh Kumar, "Highly sensitive MPA-GSH functionalized AlGaN/GaN High Electron Mobility Transistor based sensor for Cadmium ions", *IEEE-Sensors Journal*, Vol. 19 (8), 2863-2870, 2019.

(6) Vijendra Singh Bhati, Sapana Ranwa, Saravanan Rajamani, Kusum Kumari, Ramesh Raliya, Pratim Biswas, Mahesh Kumar, "Improved Sensitivity with Low Limit of Detection of a Hydrogen Gas Sensor Based on rGO-Loaded Ni-Doped ZnO Nanostructures", *ACS Applied Materials & Interfaces*, 10, 11116 (2018).

(7) Vijendra Singh Bhati, Sapana Ranwa, Mattia Fanetti, Matjaz Valant, and Mahesh Kumar, "Efficient hydrogen sensor based on Ni-doped ZnO nanostructures by RF sputtering", *Sensors & Actuators B: Chemical*, 255, 588 (2018).

(8) Mohit Kumar[1], Vijendra Singh Bhati[1], and Mahesh Kumar, "Effect of Schottky barrier height on hydrogen gas sensitivity of Metal/$TiO_2$ nanoplates", *International Journal of Hydrogen Energy*, 42, 22082 (2017).

(9) Surendra Singh Barala, Vijendra Singh Bhati, and Mahesh Kumar, "High energy photon induced Fermi-level shift of $Ba_{0.5}Sr_{0.5}TiO_3$ thin films", *Thin Solid Films,* 639, 107 (2017).

(10) Mohit Kumar, Vijendra Singh Bhati, Sapana Ranwa, Jitendra Singh, and Mahesh Kumar, "Pd/ZnO nanorods based sensor for highly selective detection of extremely low concentration hydrogen", *Scientific Reports* 7, 236 (2017).

## Conference Paper

(1) Vijendra Singh Bhati, Sapana Ranwa, and Mahesh Kumar, "Highly sensitive $H_2$ gas sensor of Co doped ZnO nanostructures", *AIP Conference Proceedings,* Vol. 1942 (1), 050059, 2018.

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