Publications

Journal Papers

1) Vijendra Singh Bhati, Sapana Ranwa, Mattia Fanetti, Matjaz Valant and Mahesh Kumar," Efficient hydrogen sensor based on Ni- doped ZnO nanostructures by RF sputtering", Sensor & Actuators B: Chemical, 2017 (Accepted).
2) Mohit Kumar, Rahul Kumar, Saravanan Rajamani, Sapana Ranwa, Mattia Fanetti, Matjaz Valant and Mahesh Kumar, "Efficient room-temperature hydrogen sensor based on UV-activated ZnO nano-network", Nanotechnology, 2017.
3) 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, Vol. 7, pp. 1, 2017.
4) Sapana Ranwa, Surendra Singh Barala, Mattia Fenetti and Mahesh Kumar, "Effect of gamma irradiation on Schottky-contacted vertically aligned ZnO nanorods based hydrogen sensor, Nanotechnology, Vol. 27, pp. 345502, 2016.
5) Sapana Ranwa, Mohit Kumar, Pawan K. Kulriya, Mattia Fanetti, Matjaz Valant, and Mahesh Kumar , "Improvement in the sensing response of nano-crystalline ZnO based hydrogen sensor: Effect of swift heavy ion irradiation", IEEE Sensors Journal, Vol. 16, pp. 7586-7592, 2016.
6) Sapana Ranwa, Mohit Kumar, Jitendra Singh, Mattia Fanetti, and Mahesh Kumar, "Schottky-contacted vertically self-aligned ZnO nanorods for hydrogen gas nanosensor applications", Journal of Applied Physics, Vol. 118, pp. 034509, 2015.
7) Surendra Singh Barala, Jitendra Singh, Sapana Ranwa, and Mahesh Kumar, "Radiation Induced Response of $Ba_{0.5}Sr_{0.5}TiO_3$ Based Tunable Capacitors Under Gamma Irradiation", IEEE Transactions on Nuclear Science, Vol. 62, pp. 1873, 2015.
8) Jitendra Singh, Sapana Ranwa, Jamil Akhtar, and Mahesh Kumar, "Growth of residual stress-free ZnO films on SiO2/Si substrate at room temperature for MEMS devices", AIP Advances, Vol. 5, pp. 067140, 2015.
9) Sapana Ranwa, Pawan K. Kulriya, Vikas Kumar Sahu, L. M. Kukreja, and Mahesh Kumar, "Defect-free ZnO nanorods for low temperature hydrogen sensor applications", Applied Physics letters, Vol. 105, pp. 213103, 2014.
10) Sapana Ranwa, Pawan Kumar Kulriya, Vivek Dixit and Mahesh Kumar, "Temperature dependent electrical transport studies of self-aligned ZnO nanorods/Si heterostructures deposited by RF sputtering" Journal of Applied Physics, Vol. 115, pp. 233706, 2014.

Conference Papers

1) Sapana Ranwa, Giraj Vyas and Mahesh Kumar, "Electrical transport studies of ZnO nanorods/n-Si heterostructures formed by RF sputtering", International Union of Materials Research Societies (IUMRS- ICA 2013), December 16-20, 2013
2) Sapana Ranwa, Pawan K. Kulriya, Vivek Dixit, Fouran Singh and Mahesh Kumar, "Swift heavy ion induced modification in the structural, optical and transport properties of RF sputtered ZnO /n-Si heterostructure" International conference on Shift Heavy Ion in Materials Engineering and characterization(SHIMEC-2014),October 14-17, 2014
3) Sapana Ranwa and Mahesh Kumar, "RF sputtered ZnO NRs based hydrogen sensor at low temperature", IEEE International Conference on Emerging Electronics(ICEE-2014),December 3-6, 2014

4) Sapana Ranwa, Mohit Kumar, Jitendra Singh, Mattia Fanetti and Mahesh kumar, "ZnO NRs based energy efficent nanosensor for hydrogen", International Workshop on Physics of Semiconductor Devices (IWPSD-2015), December 7-9, 2015
5) Sapana Ranwa, Mohit Kumar, Pawan K. Kulariya, Mattia Fanetti and Mahesh Kumar, "To study impact of SHI induced surface tailoring on enhanced gas sensitivity of ZnO thin film based hydrogen sensor", National Conference on Semiconductor Materials and Devices, March 4-6, 2016

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