

List of Tables

Table	Title	Page
1.1	Relative comparison of advantages and disadvantages of different types of gas sensors	7
1.2	Gas sensing response based on doped ZnO nanostructures at different temperatures	15
1.3	Gas sensing response based on functionalized noble metal nanoparticles/ZnO nanostructures at different temperatures	17
1.4	Gas sensing response based on carbon nanomaterials/ZnO nanostructures at different temperatures	18
1.5	Gas sensing response based on MO _x /ZnO nanocomposite at different temperatures	20
1.6	Gas sensing response based on UV activation for ZnO nanostructures at room temperature	22
1.7	Gas sensing response based on irradiated ZnO nanostructures	24
3.1	Calculated Schottky barrier height and effective barrier height of Au/TiO ₂ , Ag/TiO ₂ , and Ni/TiO ₂ in air and 1% hydrogen atmosphere at different temperature	50
4.1	Comparison of hydrogen sensing performance of various metal doped ZnO sensors	65
5.1	Comparison of gas sensing performance of previously reported doped ZnO, and rGO loaded ZnO sensors, and present work for various target gases concentrations	76
5.2	Comparison of different NO ₂ gas sensors with rGO decorated V ₂ O ₅ thin film sensor	87
6.1	Comparison of hydrogen gas sensing performance of different ZnO based sensors	100

