FUTURE SCOPE OF STUDY

We have successfully synthesized and studied the Transition metal (Co and Mn) doped ZnO by sol-gel method. Further study has to be carried out to explore new material functionalities via doping and co-doping to enhance the luminescence and RTFM properties of ZnO for spintronics applications.

The rare earth doped shows enhancement in characteristics emission of rare earth (Eu and Tb) and persist RTFM due to charge compensation. Further study is required with higher concentration of rare earth using other preparation method and concept of charge compensation to enhance luminescence as well as RTFM.

Thin film of doped ZnO has to be studied with different composition to enhance the responsivity of UV detector.

In addition, transport property and photocatalytic properties of doped ZnO should be explored via different composition.