

CHAPTER 4

CONCLUSION

In this work, Silver Bismuth sulfide (AgBiS_2) nanostructured flowers were successfully produced by the 200 °C solvothermal reaction. The phase was detected using X-ray Diffractometer (XRD), including SAED of which the results were in accordance with those of the simulation. Scanning Electron Microscope (SEM) and Transmission Electron Microscope (TEM) showed that the nanostructured flowers became larger and have branches, by increasing the length of time and temperature. Photoluminescence spectra (PL) showed an intense, sharp and dominate peak at 382 nm in the UV region which was attributed to near band edge emission. Their photoluminescence (PL) emissions were detected at the same wavelength of 382 nm (3.24 eV), although the products were produced under different conditions. These results show that the length of time and temperature play an important role in the product formations, morphologies and PL intensities.