



## 1.Introduction

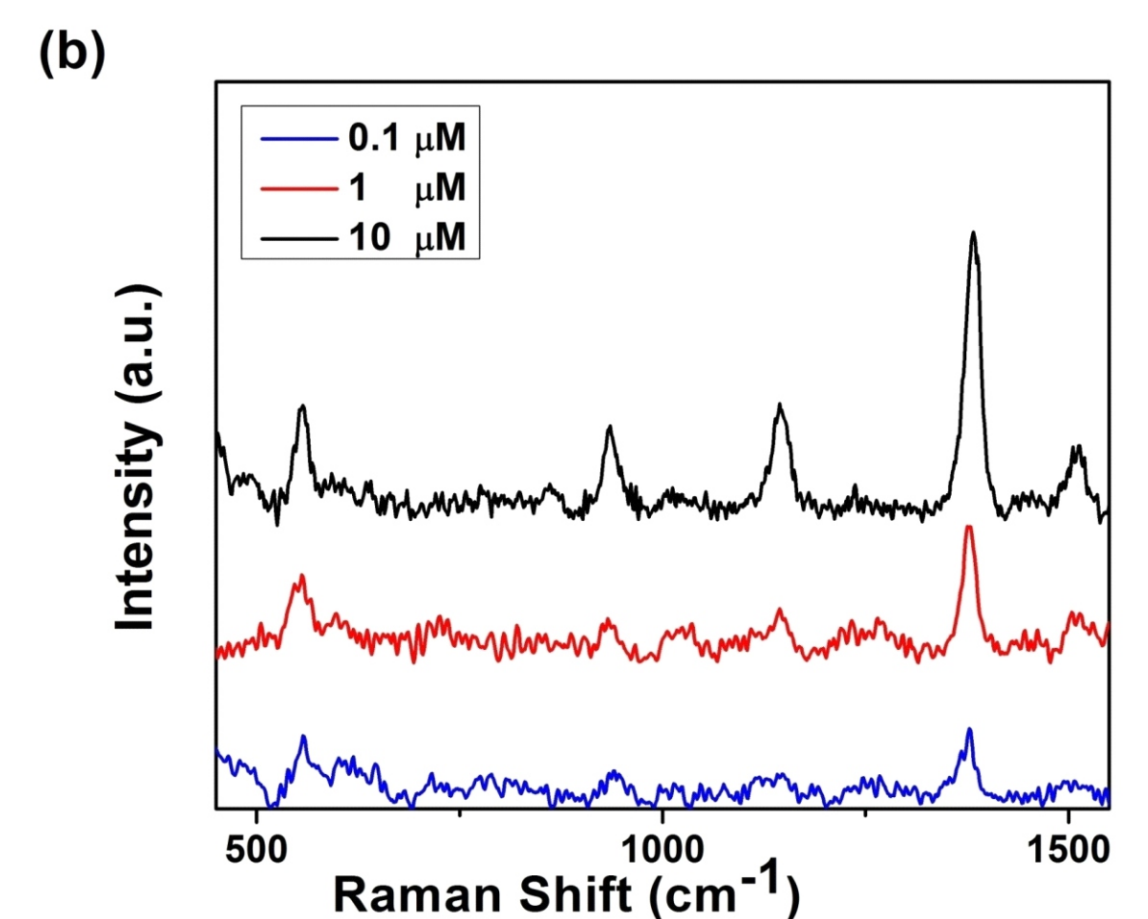
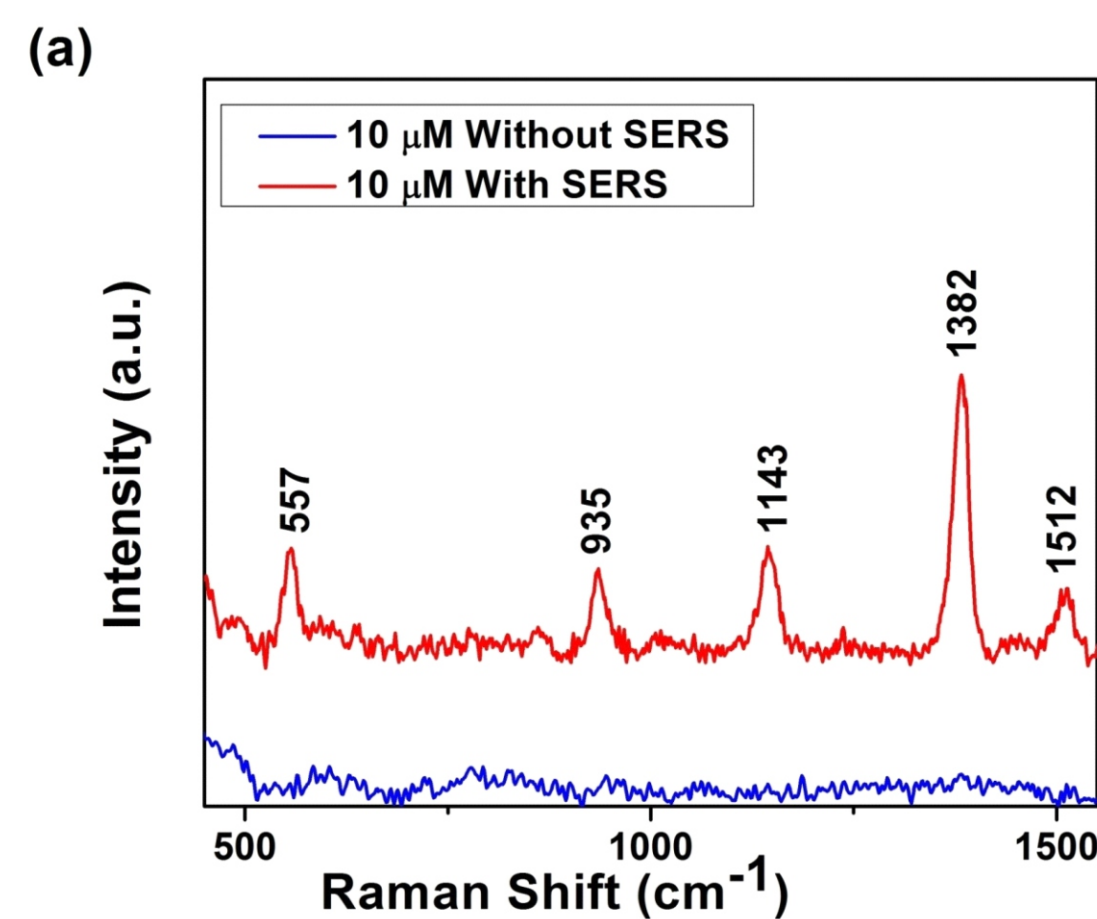
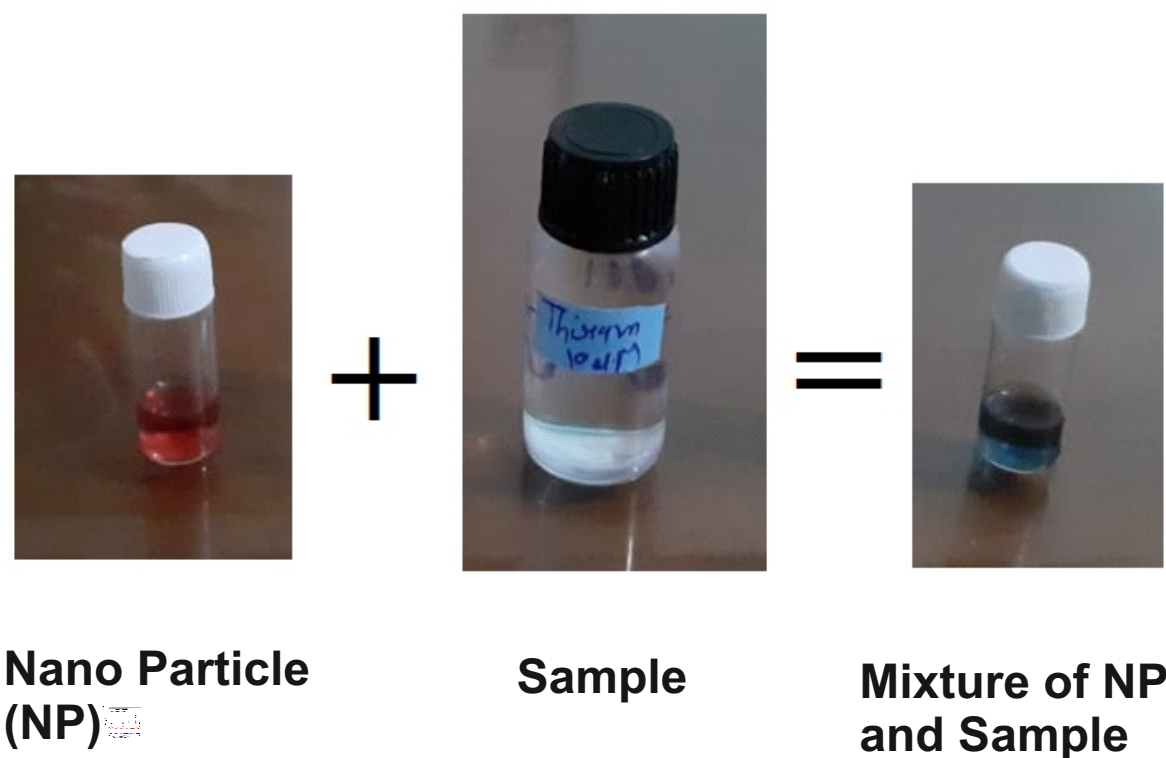
- > Fungicides are used for high productivity in farming
- > Retained fungicides in soil/water is harmful
- > Existing detection methods are time consuming and sophisticated
- > Surface-enhanced Raman spectroscopy (SERS) – high sensitivity, short detection time and nondestructive detection
- > In the current study, Thiram has been detected using SERS with  $10^3$  enhancement

## 2.Experimental Condition

- > Raman Spectrometer:
- > Model: **IndiRAM P785\_Tracer**
- > Laser excitation source
  - Wavelength: 785 nm
  - Power: 360 mW
- > Exposure time: 5 sec
- > No of Acquisition: 5
- > SERS: Liquid SERS

## 3.Results and Discussion

### SERS



- >SERS shown enhanced Raman Signal
- >Detected minimum of 0.1  $\mu$ M of Thiram on varying Concentration

## 4.Conclusion

- > The vibration modes of Thiram were quickly identified by using SERS Technique.

## 5.Reference

- [1] T.C. Dao, T.Q.N. Luong, T.A. Cao, N.M. Kieu, Advances in Natural Sciences: Nanoscience and Nanotechnology, 10 (2019) 025012.
- [2] H. Pu, Z. Huang, F. Xu, D.-W. Sun, Food Chemistry, 343 (2021) 128548.