



**Figure S1.** FTIR- ATR spectra of curdlan based hydrogels including CR-CTRL; CR-PLD; CR- $\text{Fe}_3\text{O}_4$ ; CR-PLD- $\text{Fe}_3\text{O}_4$ ; CR- $\text{Fe}_3\text{O}_4$ -Ag; CR-PLD- $\text{Fe}_3\text{O}_4$ -Ag samples.