

Supplementary Materials for:

Ciprofloxacin Adsorption onto a Smectite–Chitosan-Derived Nanocomposite Obtained by Hydrothermal Synthesis

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Procedure for the determination of point of zero charge of adsorbent

The 20mg of the sample was shaken in 20 mL of 0.01 M NaCl solution for 24 h [34]. The initial pH values (pH_i) were adjusted in the pH range from 2 to 12 by adding appropriate amounts of 0.1 M HCl or 0.1 M NaOH solution. After 24 h the suspension was centrifuged, and the final pH values of supernatants were measured (pH_f). The point of zero charge was determined from the pH_i vs. pH_f diagram. The pH of PZC was determined as an intersection point between the curve pH_f vs. pH_i and the line that represents the bisector of the equal initial and final pH.

Pore size distribution

The pore size distribution was calculated from desorption isotherm data using Barret-Joyner-Halenda method (ref. [38]). In the Figure S1 the integral and differential pore size distribution for the pore diameters from 2 nm–50 nm (mesoporous region) of Na-S (Figure S1a) and H₂Co/C-S (Figure S1b) are presented.

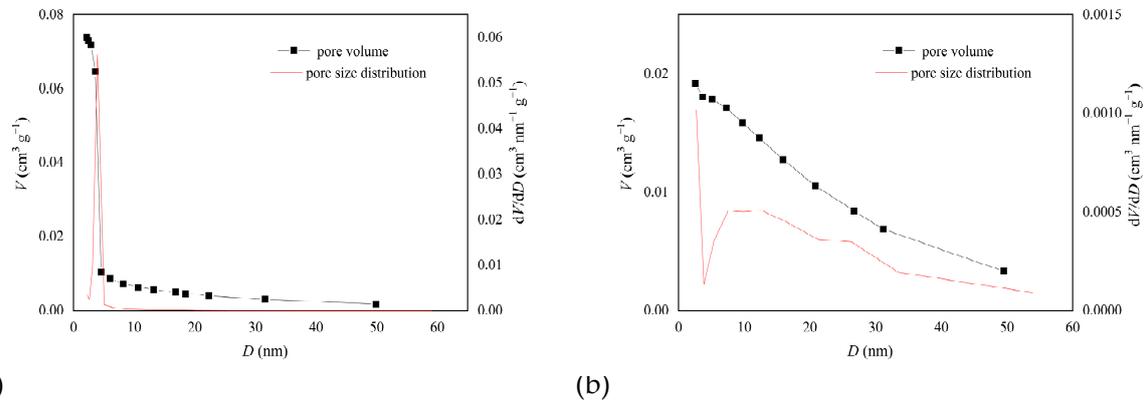


Figure S1. The pore-size distribution of (a) Na-S, and (b) H₂Co/C-S.

Their main characteristic of pore size distribution integral curve of Na-S (Figure S1a) is existence of one sharp peak. It can be observed that the dominant pore size has diameter with value of 4.16 nm. On the other hand, Figure S1b revealed that there is a wide range of present diameters sized, while the most abundant were pores with diameter size in a range of 8.2 to 13.8 nm.