

Electrospinning Chitosan/Fe-Mn Nanofibrous Composite for Efficient and Rapid Removal of Arsenite from Water

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Supplementary data

Table S1. Concentration of the dissolved ions in the natural groundwater sample. (Unit: mg/L)

| As | Fe | Cu | Zn | Cr | Pb |
|---------|-----------------|-------------------------------|------------------------------|-------------------------------|----------------|
| 0.00035 | 0.00112 | 0.00012 | 0.00186 | 0.00011 | 0.00033 |
| F | Cl ⁻ | SO ₄ ²⁻ | NO ₃ ⁻ | PO ₄ ³⁻ | F ⁻ |
| 0.517 | 53.4 | 69.5 | 12.1 | 0.065 | 0.517 |

Table S2. Binding energies and relative contents of C and O in the fresh and As(III)-loaded biosorbent.

| Valence state | Sample | Assignment | Binding energy (eV) | Relative Content (%) |
|---------------|-------------|------------------|---------------------|----------------------|
| C 1s | Fe-Mn@CS | C–C/C–H | 284.8 | 26.9% |
| | | C–O/C–N | 286.4 | 57.6% |
| | | C=O/O–C–O | 288.0 | 15.5% |
| | Fe-Mn@CS-As | C–C/C–H | 284.8 | 28.8% |
| | | C–O/C–N | 286.3 | 51.3% |
| | | C=O/O–C–O | 287.8 | 19.9% |
| O 1s | Fe-Mn@CS | M–O | 529.7 | 5.3% |
| | | –OH | 532.4 | 46.0% |
| | | H ₂ O | 532.8 | 48.7% |
| | Fe-Mn@CS-As | M–O | 530.0 | 6.3% |
| | | –OH | 532.2 | 37.8% |
| | | H ₂ O | 532.7 | 55.9% |