Sequential abatement of Fe\textsuperscript{II} and Cr\textsuperscript{VI} water pollution by use of walnut shell-based adsorbents

Marius Gheju, Ionel Balcu

**Figure S1.** FTIR spectra of fresh WSP

**Figure S2.** FTIR spectra of WSP-Fe\textsuperscript{II}
Figure S3. FTIR spectra of fresh WSP-Fe(0)

Figure S4. FTIR spectra of Cr(VI)-loaded WSP-Fe(0)
Figure S5. FTIR spectra of Cr(VI)-loaded WSP

Figure S6. SEM micrograph of fresh WSP
Figure S7. SEM micrograph of Fe(II)-loaded WSP

Figure S8. SEM micrograph of fresh WSP-Fe(0)
Figure S9. SEM micrograph of Cr(VI)-loaded WSP-Fe(0)

Figure S10. SEM micrograph of Cr(VI)-loaded WSP
Figure S11. EDX pattern of fresh WSP

Figure S12. EDX pattern of Fe(II)-loaded WSP
Figure S13. EDX pattern of fresh WSP-Fe(0)

Figure S14. EDX pattern of Cr(VI)-loaded WSP-Fe(0)
Figure S15. EDX pattern of Cr(VI)-loaded WSP

Figure S16. Image of WSP (1) and WSP-Fe⁰ (2).
Table S1. Word Health Organization maximum permissible limits of some heavy metals in drinking water [1].

|      | Guideline value |
|------|----------------|
| Cu   | 2 mg/L         |
| Total Cr | 50 µg/L    |
| Cd   | 3 µg/L         |
| Ni   | 70 µg/L        |
| Pb   | 10 µg/L        |
| Hg   | 6 µg/L         |

References

1. World Health Organization. Guidelines for drinking-water quality: fourth edition incorporating the first addendum. Geneva, 2017. Licence: CC BY-NC-SA 3.0 IGO.