Supplementary Information

Achieving Efficient Uranium Extraction by In-situ Ultrasonic Texturization of Commercial Fe Powder

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content

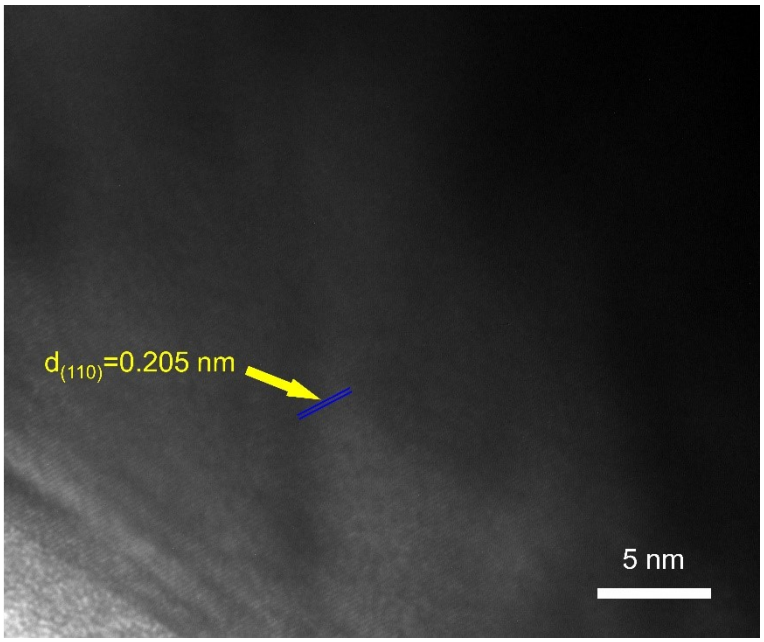

Figure S1. The HRTEM images of the inner part of commercial Fe powders.

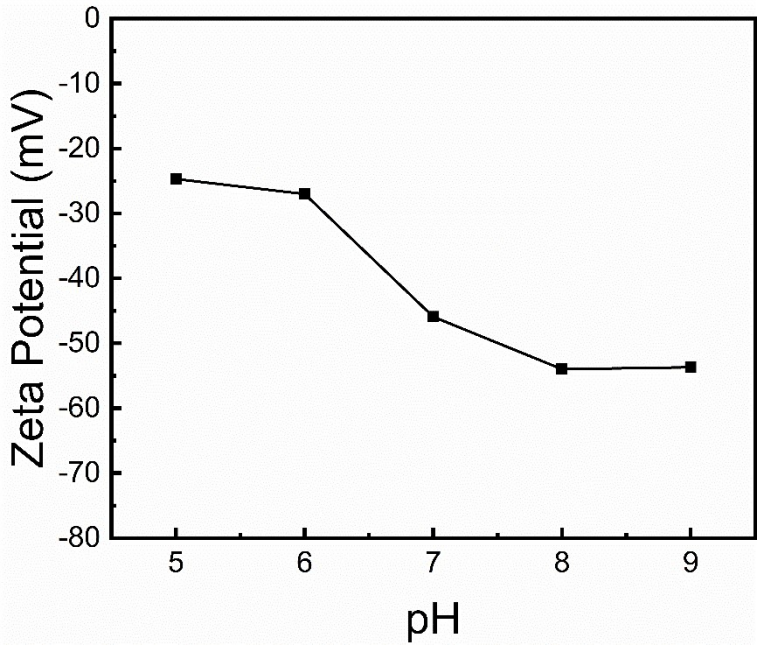

Figure S2. zeta potential of commercial Fe powder at pH 5-9.

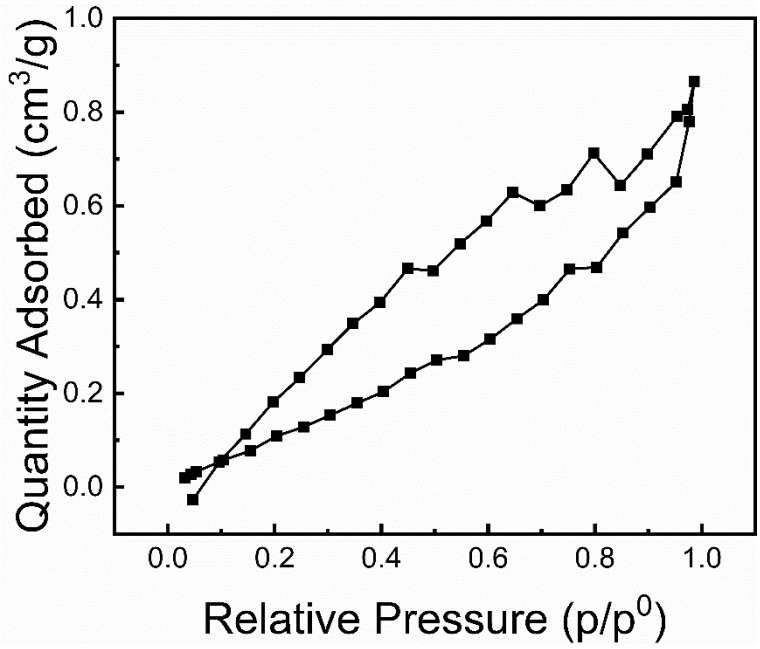

Figure S3. N_2 isothermal adsorption and desorption curve of commercial Fe powder.

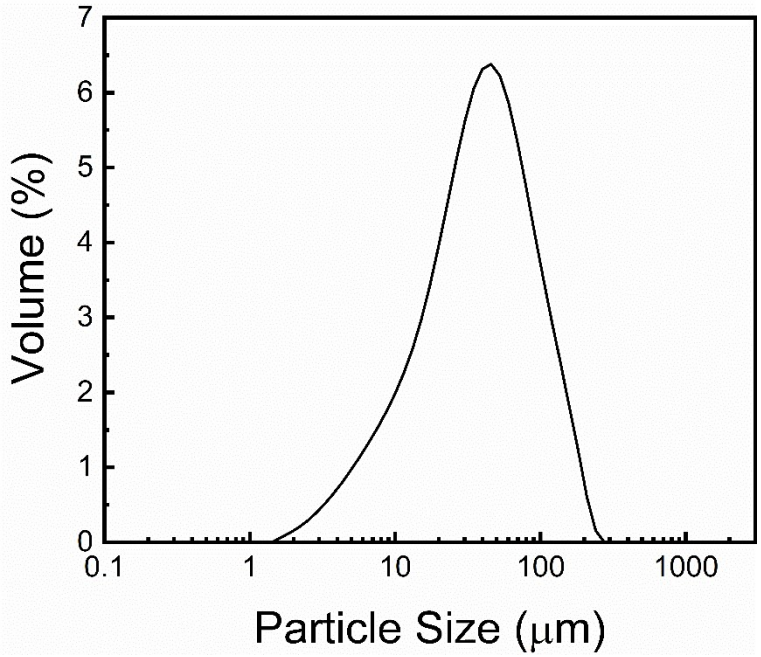

Figure S4. Particle size distribution curve of commercial Fe powder.

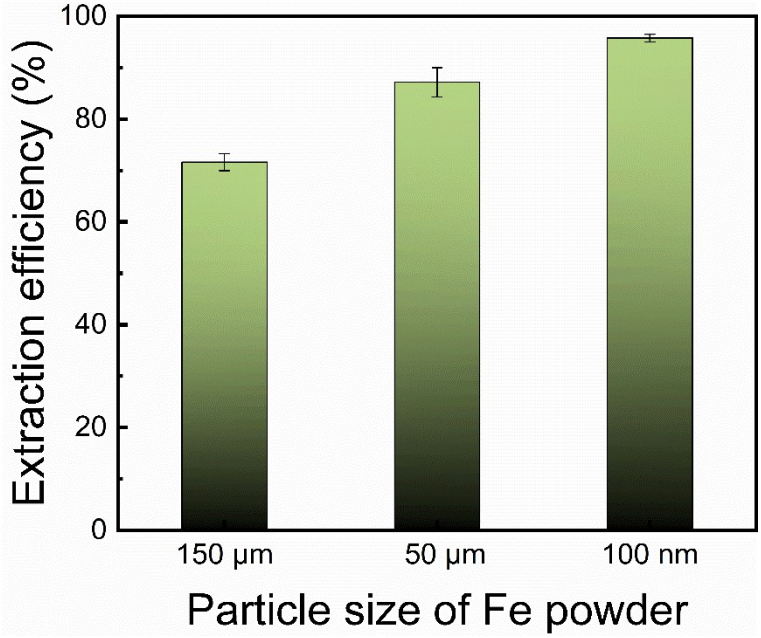

Figure S5. The extraction efficiency of U(VI) by ultrasonic coupling Fe powder with different particle sizes at 120 min (Fe powder dose: 5 mg).

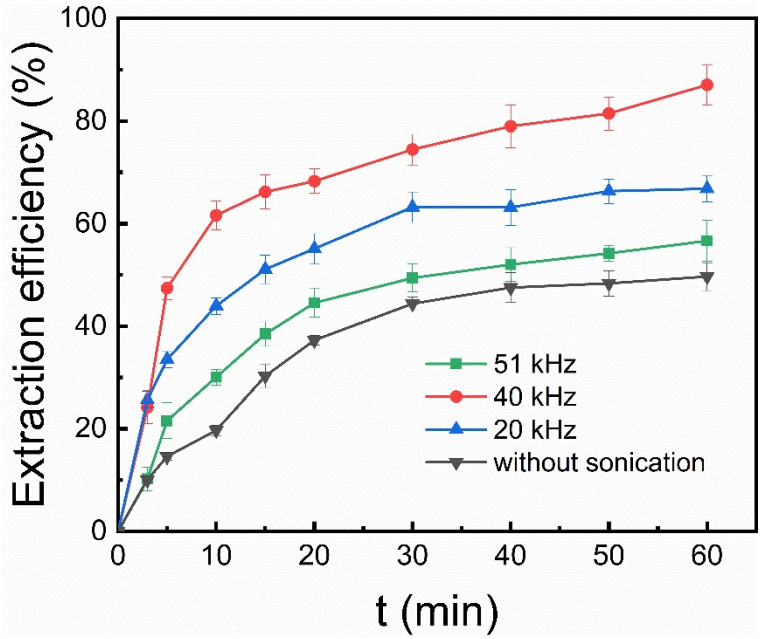

Figure S6. Effects of different ultrasonic frequencies on the extraction efficiency of U(VI).

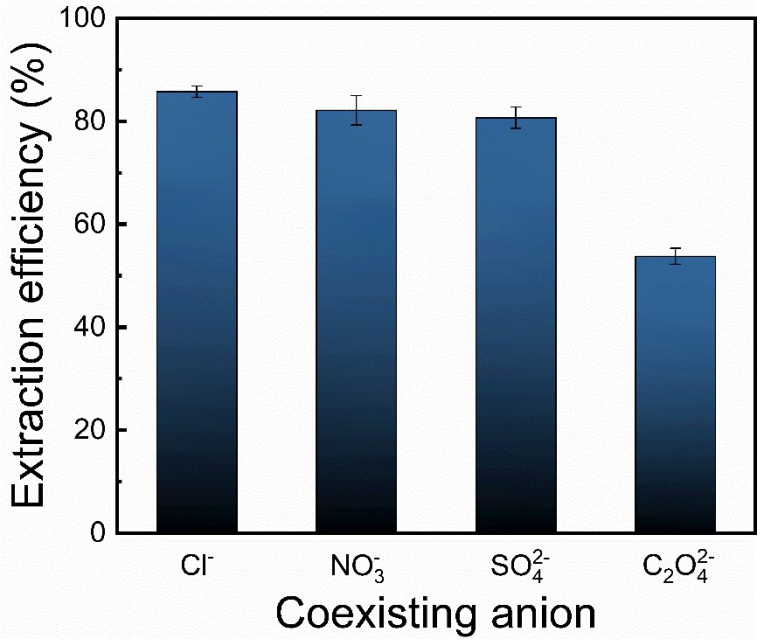

Figure S7. U(VI) extraction efficiency at 120 min under different coexisting anions.

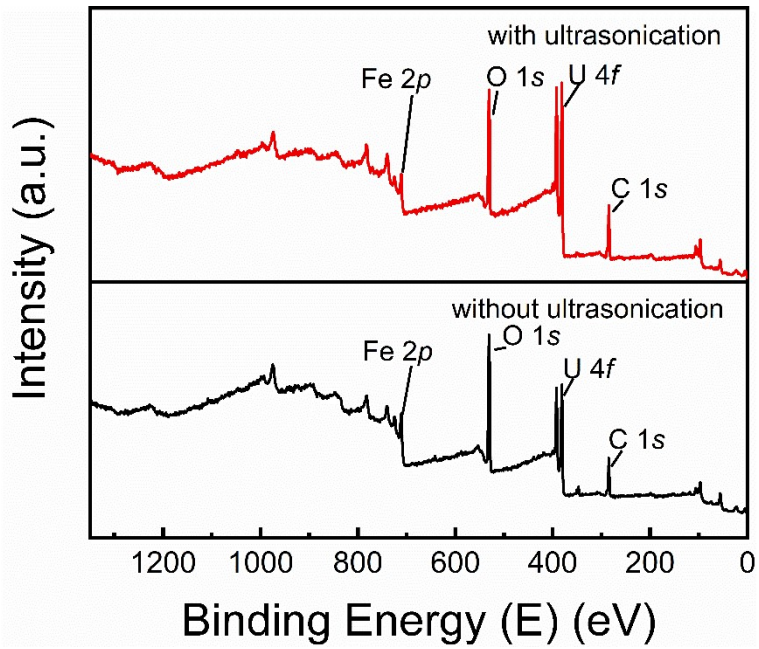

Figure S8. XPS spectra of Fe powder with and without ultrasonication after the reaction.

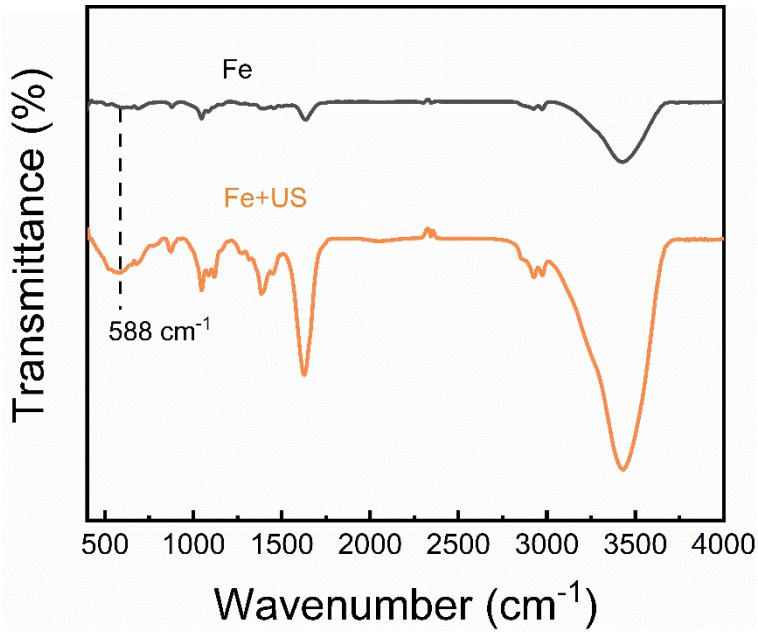

Figure S9. FTIR spectra of commercial Fe powder before and after the reaction.

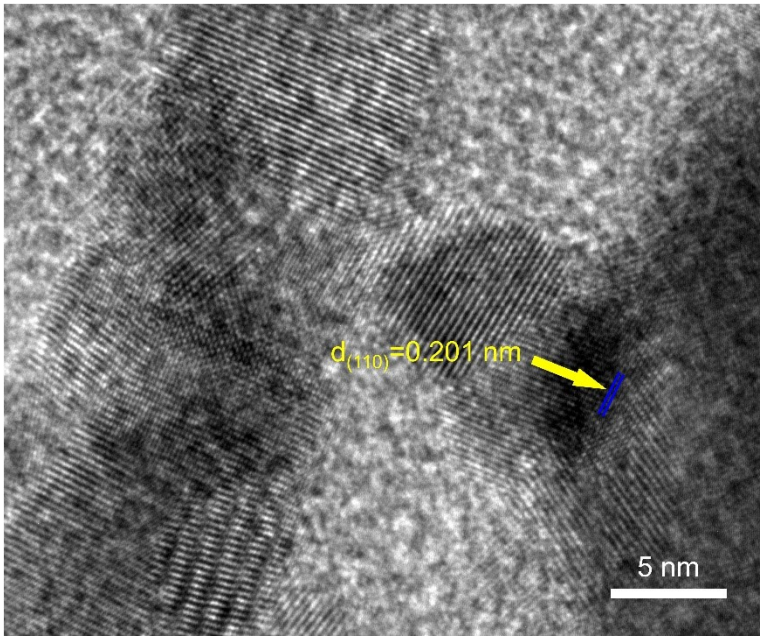

Figure S10. The HRTEM images of the nanoparticles exfoliated from the commercial Fe powder for 15min reaction.

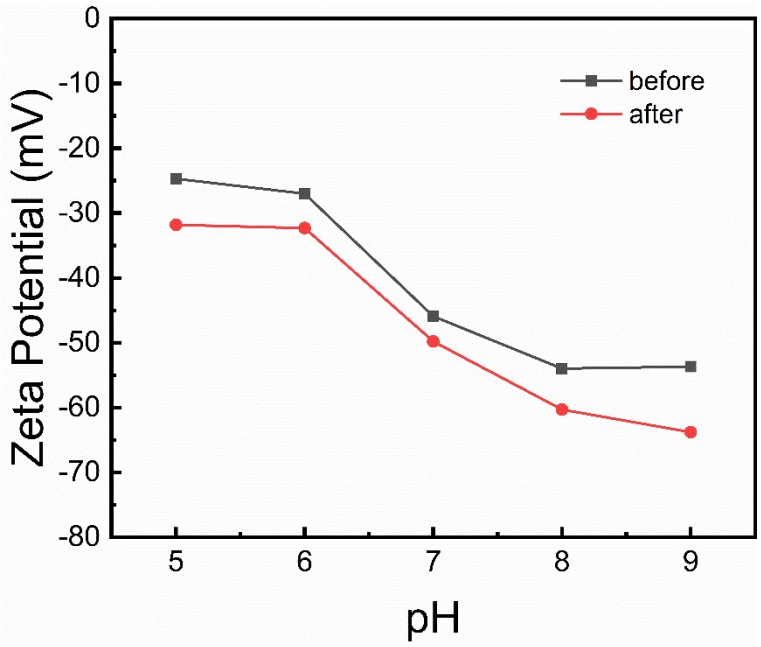

Figure S11. zeta potential of commercial Fe powd5er before and after the reaction.