

Supplementary Materials

Enhanced Removal of Uranium(VI) by Nitrogen-Modified Zerovalent Iron Synthesized via Mechanochemically Ball Milling

Lianjie Ma^{1,2}, Peng Fan^{2,*}, Kunming Hou², Zhengwu Liu³, Meng Du², Chen Tian², Zhenye Liang³, Bing Nan², Luozhen Jiang², Lingling Guo², Yulin Qin², Zhuofan Zhang², Jisong Mi², Yingpeng Xie^{1,*} and Lina Li^{2,3,*}

¹ College of Chemical Engineering, Shenyang University of Chemical Technology, Shenyang 110142, China

² Shanghai Synchrotron Radiation Facility, Shanghai Advanced Research Institute, Chinese Academy of Sciences, Shanghai 201204, China

³ Shanghai Institute of Applied Physics, Chinese Academy of Sciences, Shanghai 201204, China

* Correspondence: fanp@sari.ac.cn (P.F.); ypxie@syuct.edu.cn (Y.X.); lilina@sinap.ac.cn (L.L.); Tel.: +86-21-55272920 (P.F.); +86-24-89385030 (Y.X.); +86-21-33932213 (L.L.)

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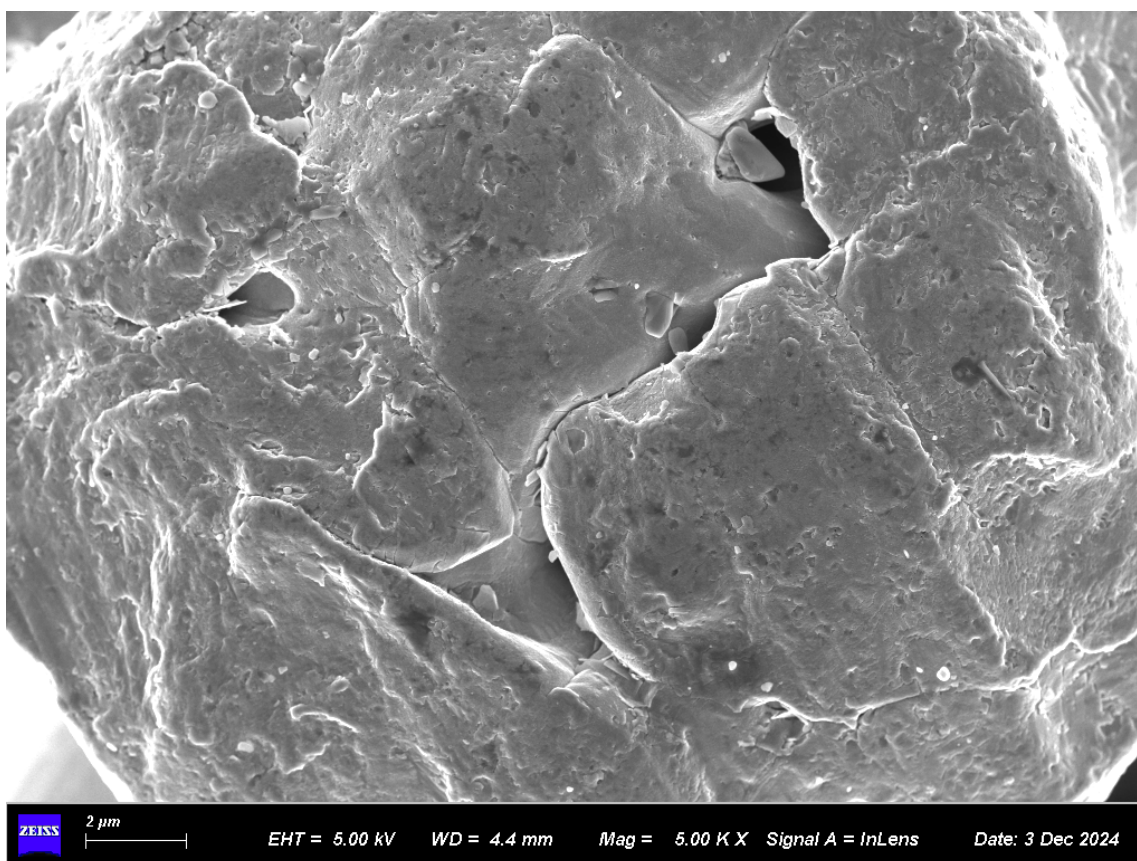


Figure S1. SEM images of ZVI.



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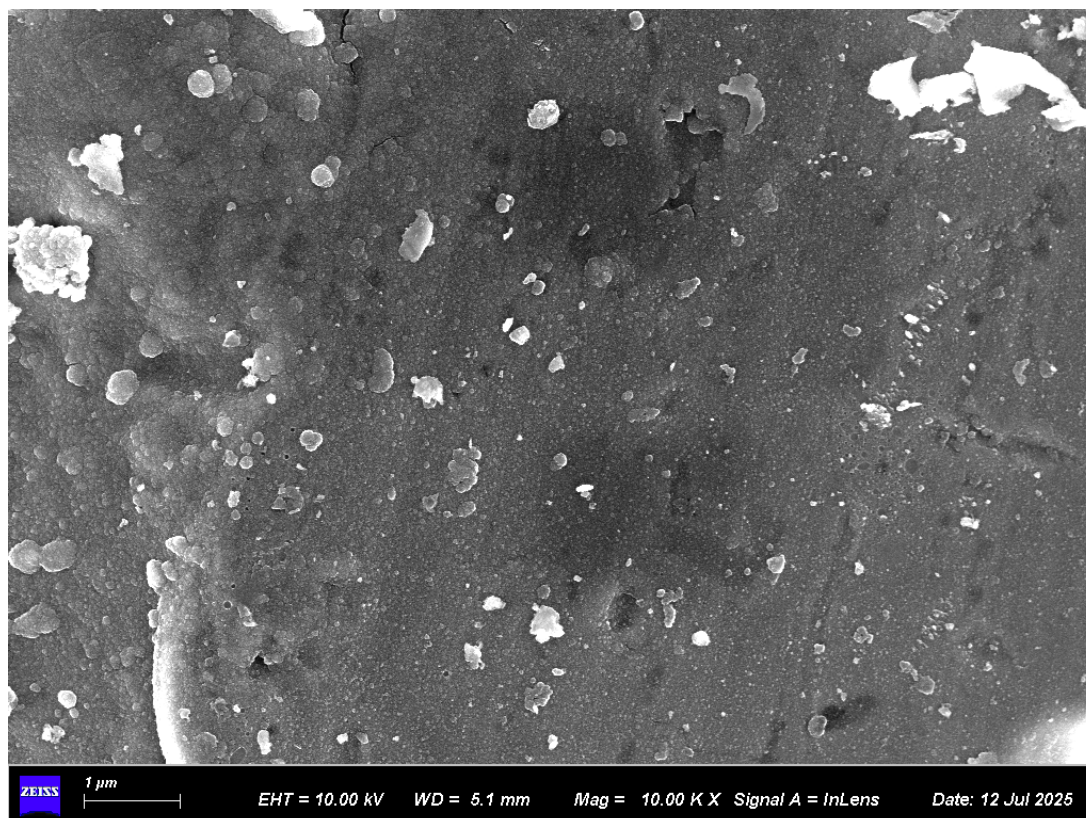


Figure S2. SEM images of ZVI^{bm}.

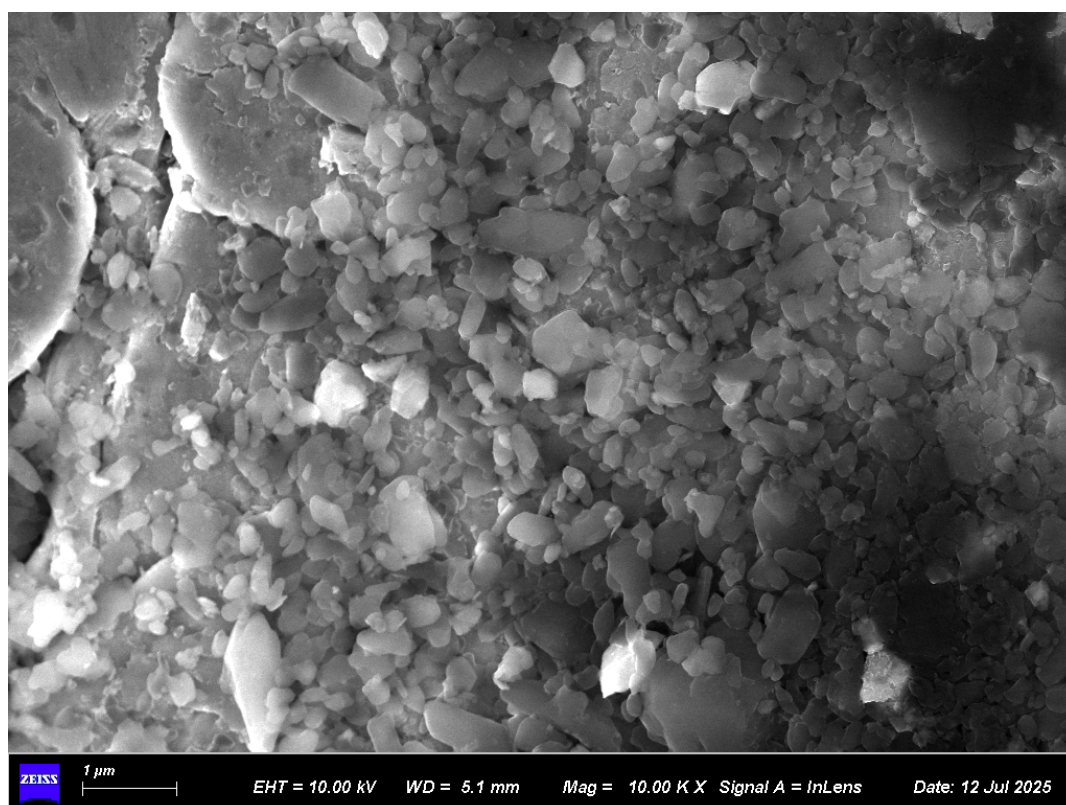


Figure S3. SEM images of N-ZVI^{bm}.

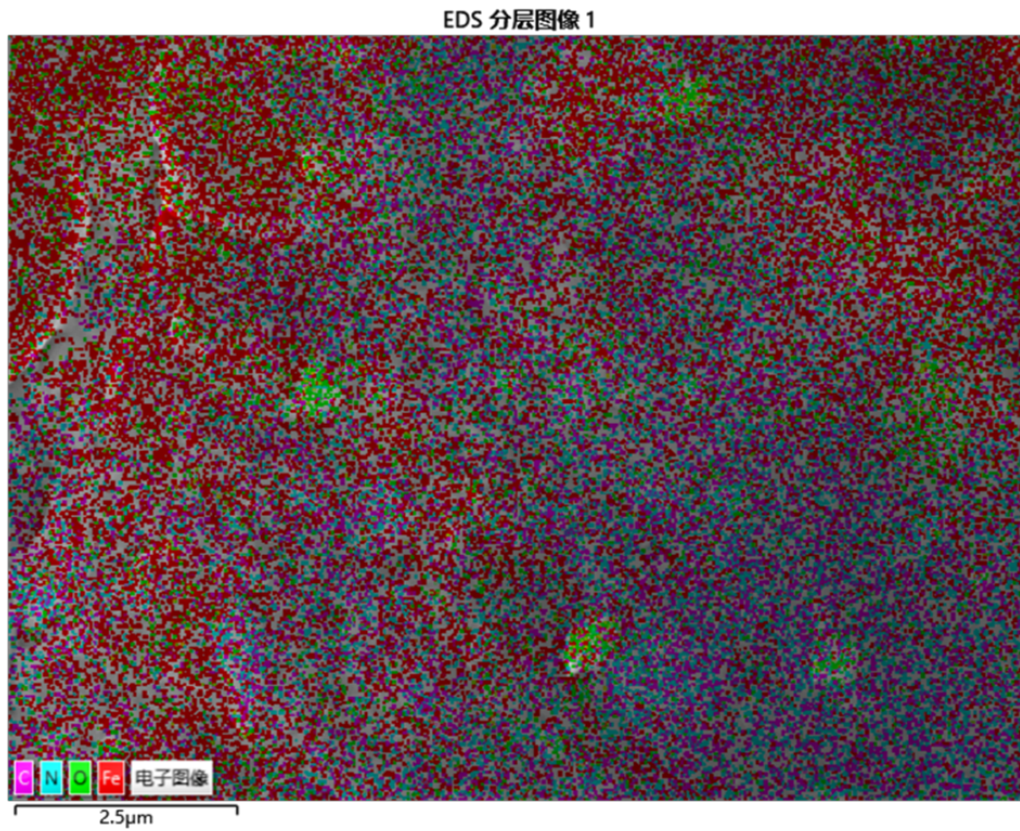


Figure S4. EDS mapping images of all elements for N-ZVI^{bm}.

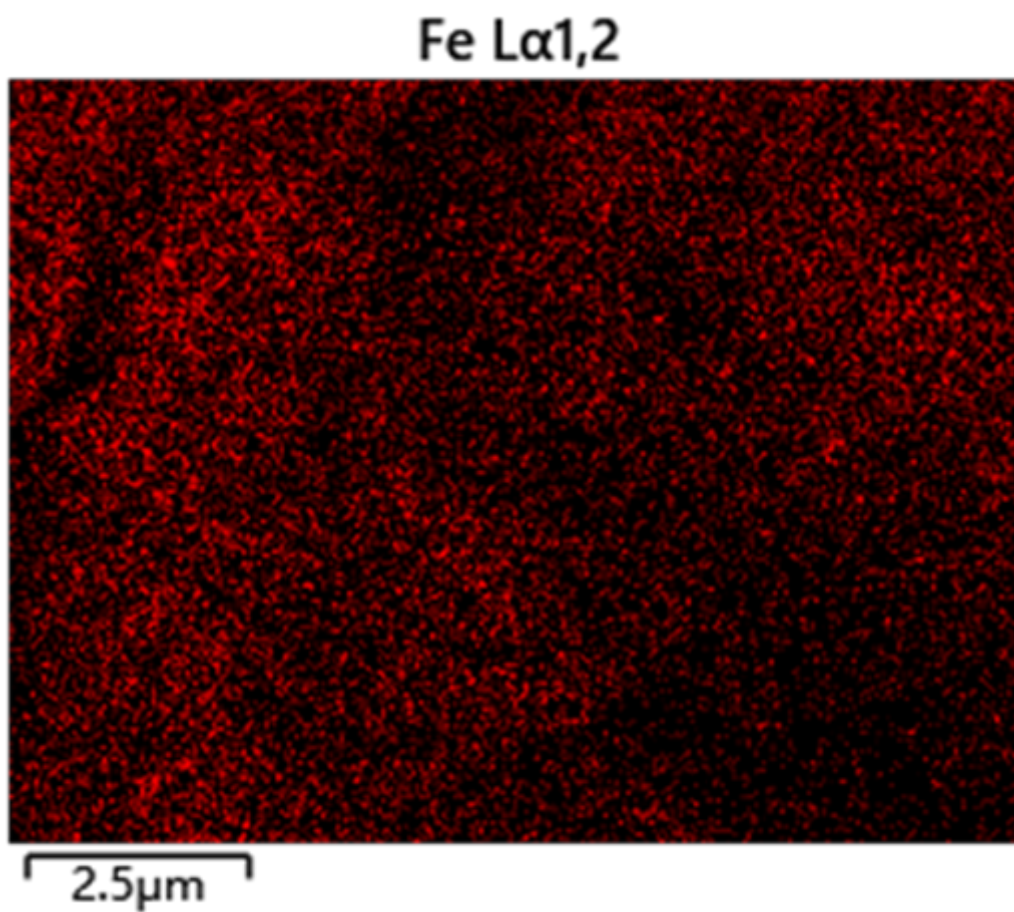


Figure S5. EDS mapping images of Fe element for N-ZVI^{bm}.

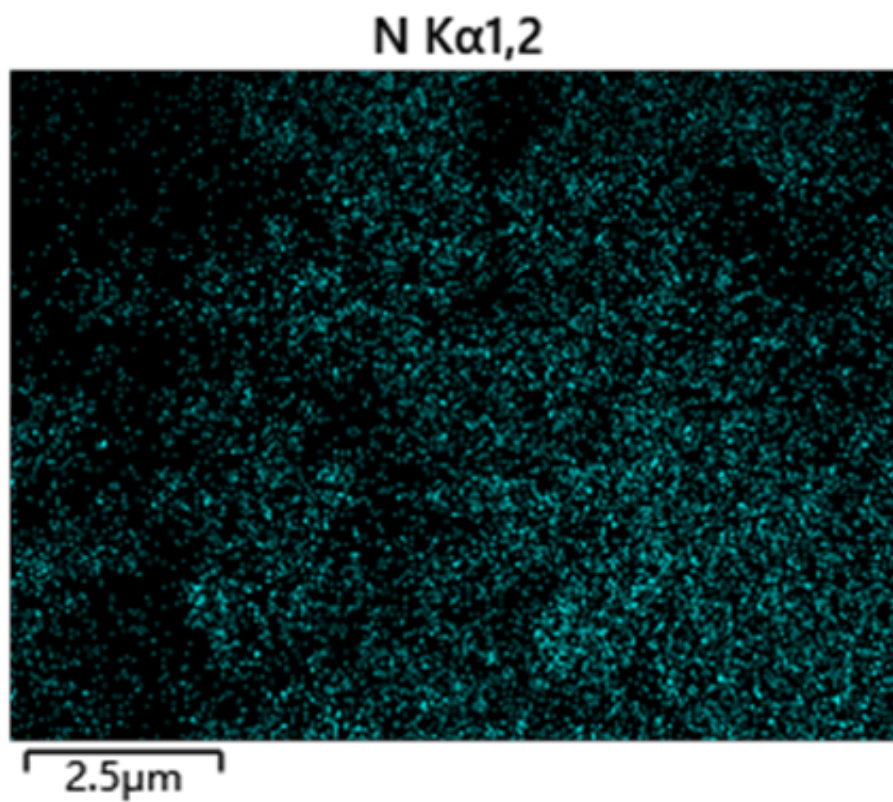


Figure S6. EDS mapping images of N element for N-ZVI^{bm}.

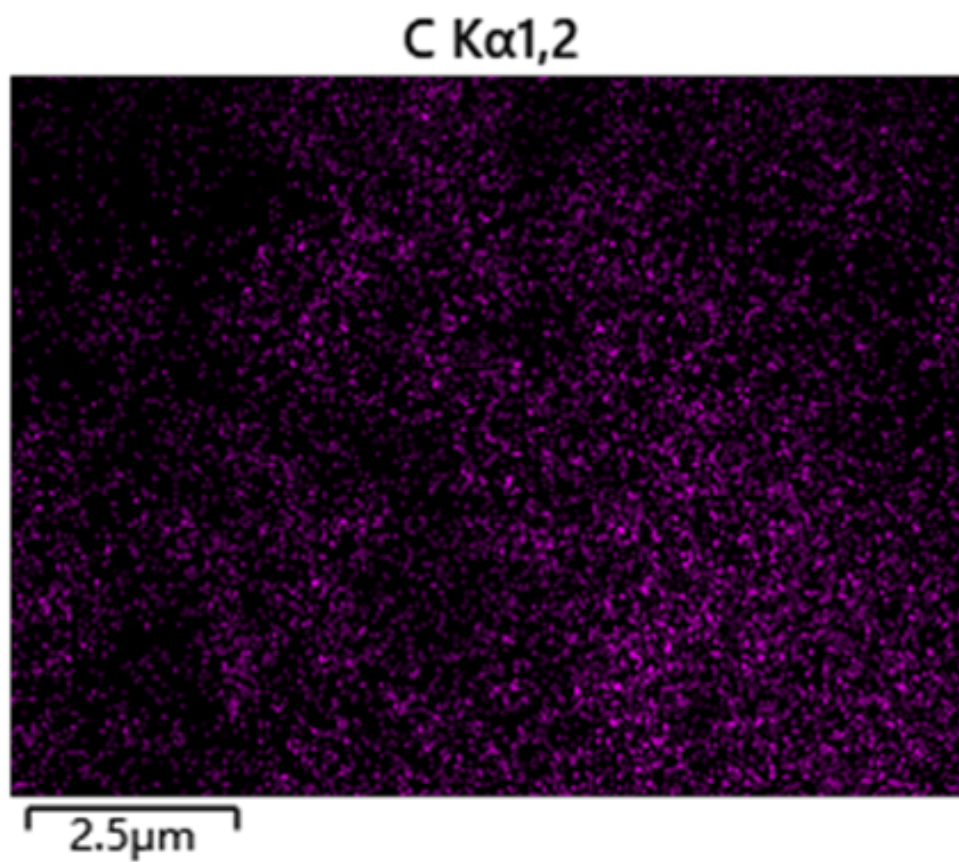


Figure S7. EDS mapping images of C element for N-ZVI^{bm}.

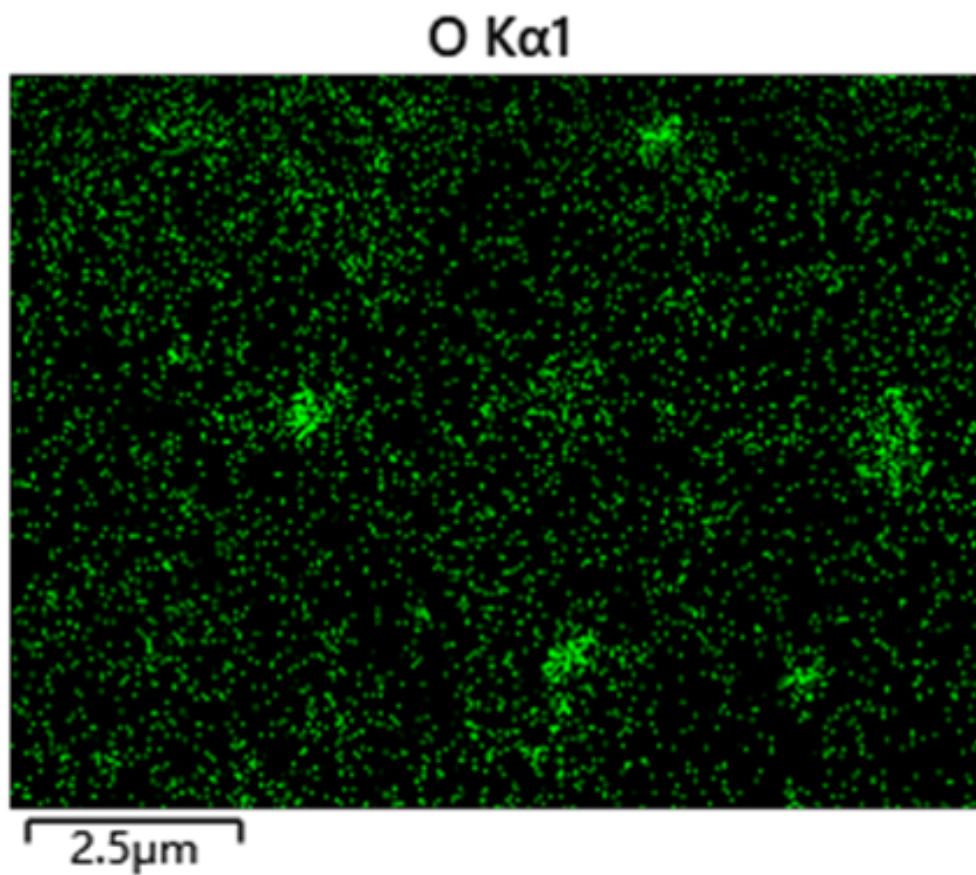


Figure S8. EDS mapping images of O element for N-ZVI^{bm}.

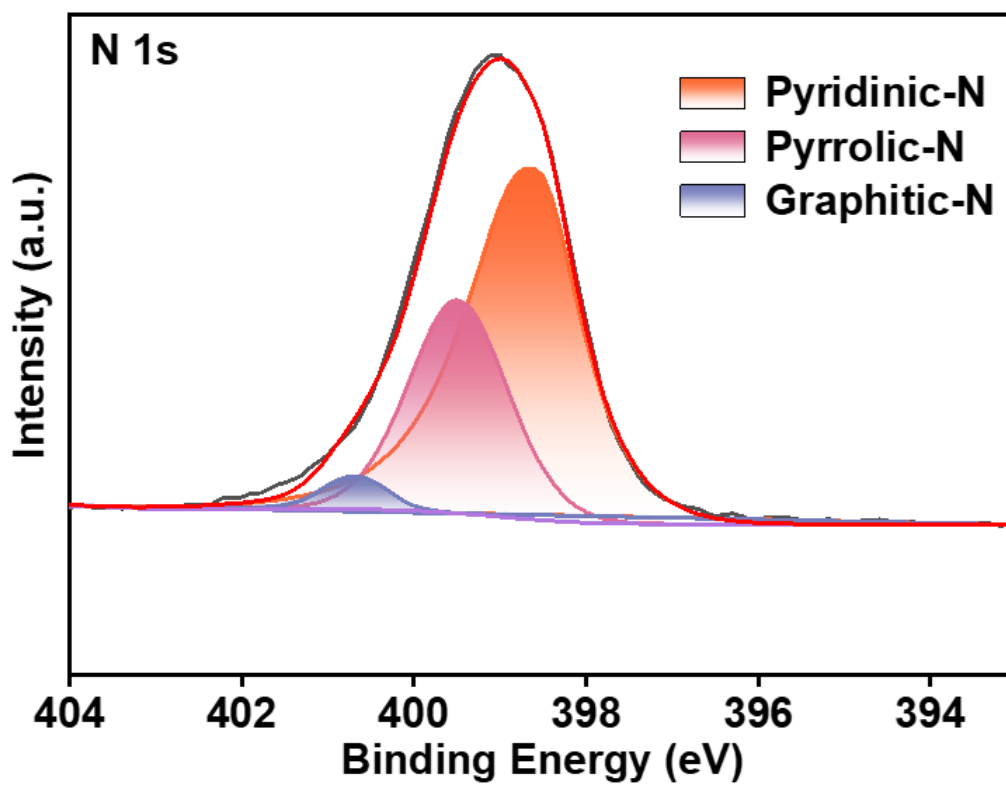
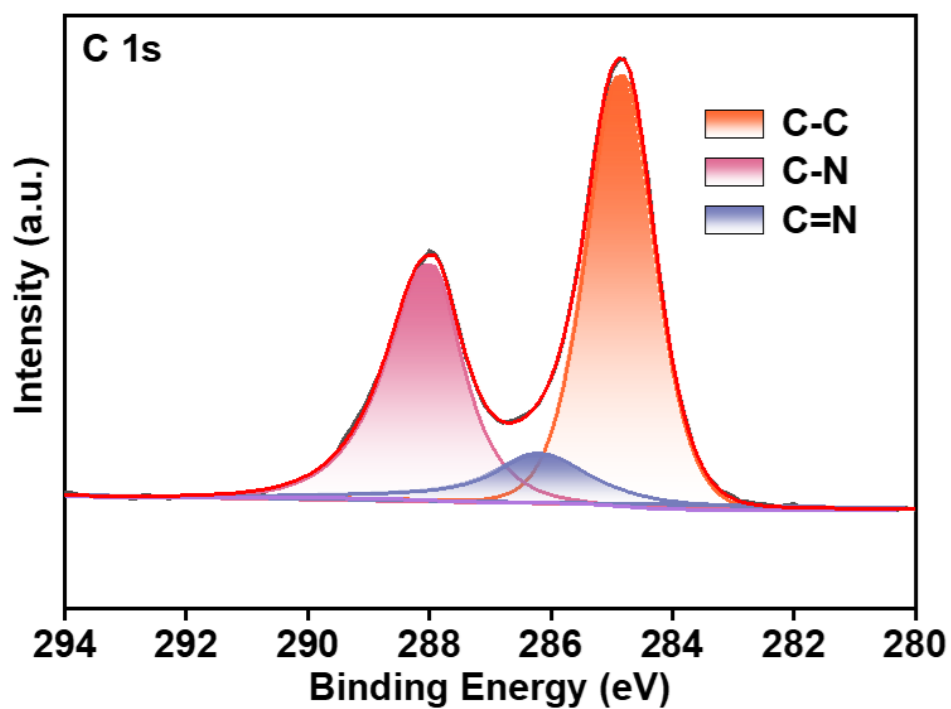
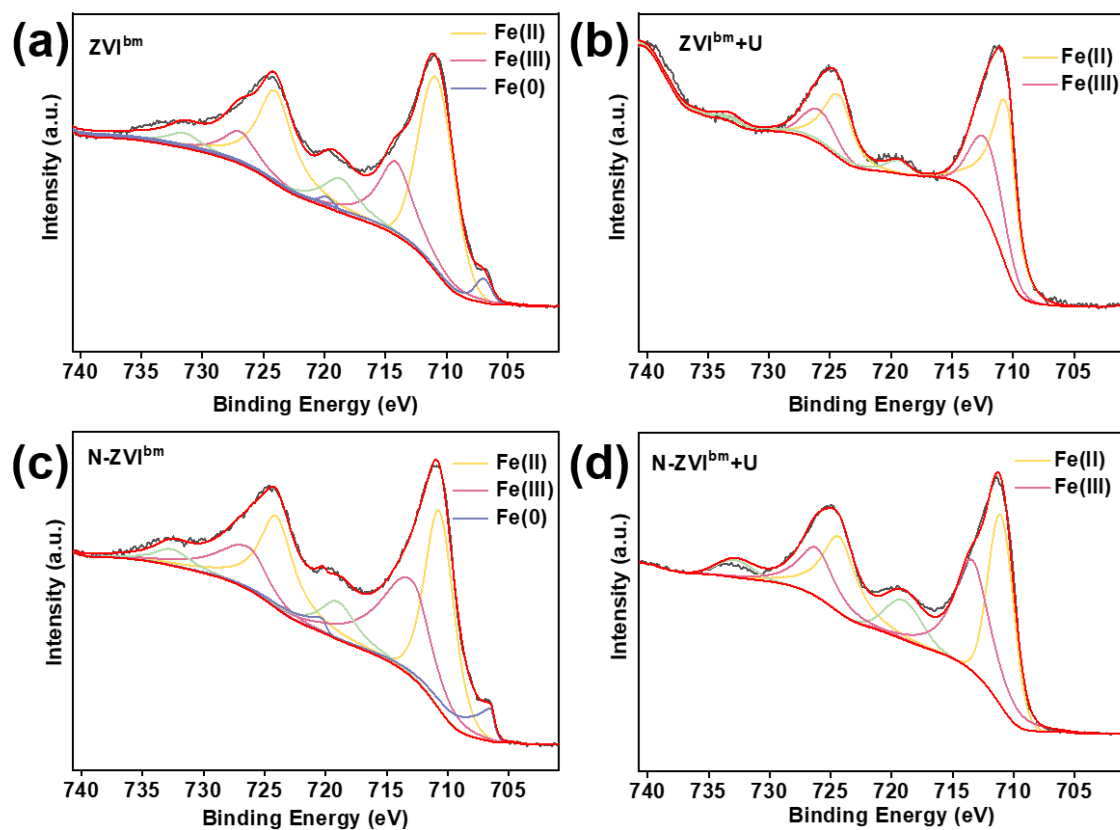


Figure S9. XPS spectra of N 1s for the N-ZVI^{bm}.

Figure S10. XPS spectra of C 1s for the N-ZVI^{bm}.Figure S11. XPS spectra of Fe 2p before and after ZVI^{bm} and N-ZVI^{bm} reactions (a–d).

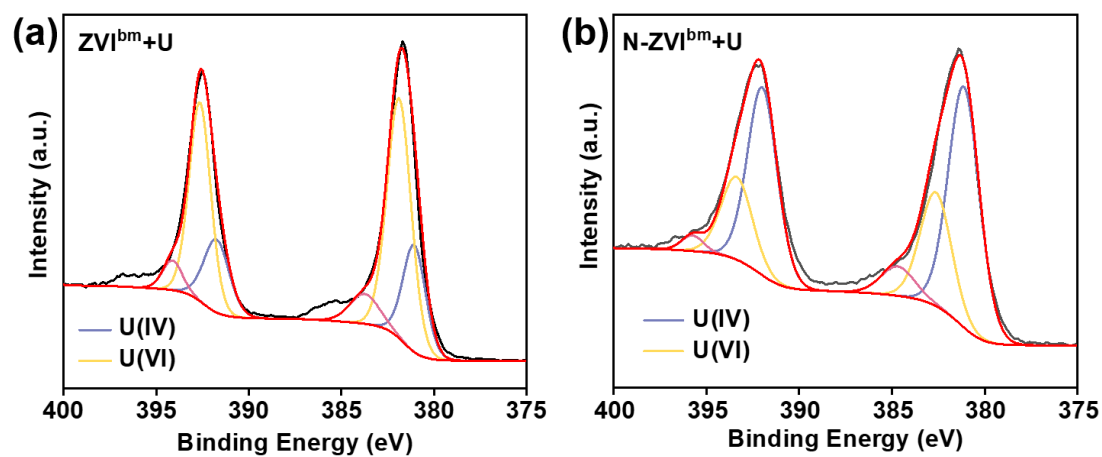


Figure S12. XPS spectra of the ZVI^{bm} (a) and N-ZVI^{bm} (b) systems U4f.

Table S1. The proportion of various Fe(III) oxides in solid precipitate samples obtained after different reaction times.

Sample	Fe ⁰	Fe ₃ O ₄	α -Fe ₂ O ₃	γ -Fe ₂ O ₃	α -FeOOH	γ -FeOOH
ZVI ^{bm} , 0 h	100%	-	-	-	-	-
ZVI ^{bm} , 6 h	77.7%	-	3.4%	6.6%	3.3%	9%
N-ZVI ^{bm} , 0 h	99%	1%	-	-	-	-
N-ZVI ^{bm} , 6 h	39.4%	7.9%	9.5%	21.8%	-	21.4%