SUPPLEMENTARY MATERIALS

Effect of Graphite Content on the Structural and Electrochemical Properties of MIL-88B(Fe)/Graphite Composites

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List of Content

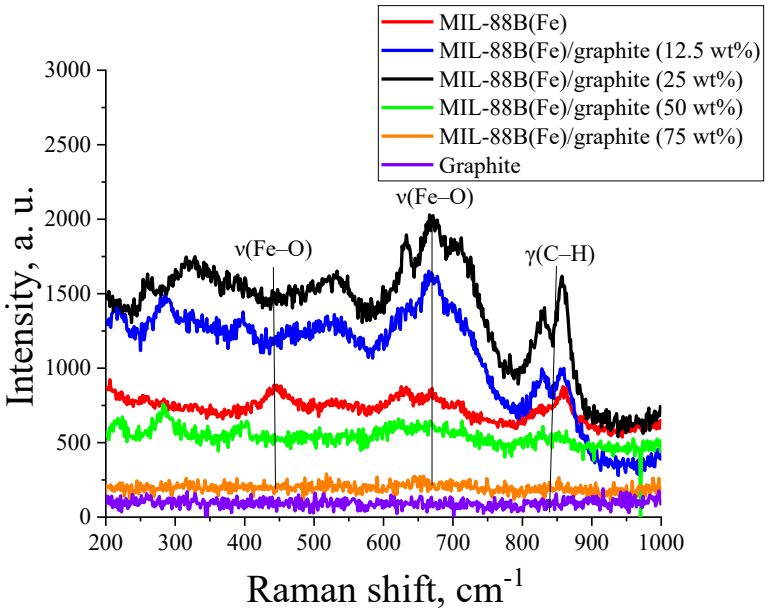


Figure S1. Raman spectra of pristine MIL-88B(Fe), graphite, and MIL-88B(Fe)/graphite composites with different graphite loadings in the 200–1000 cm^{-1} region

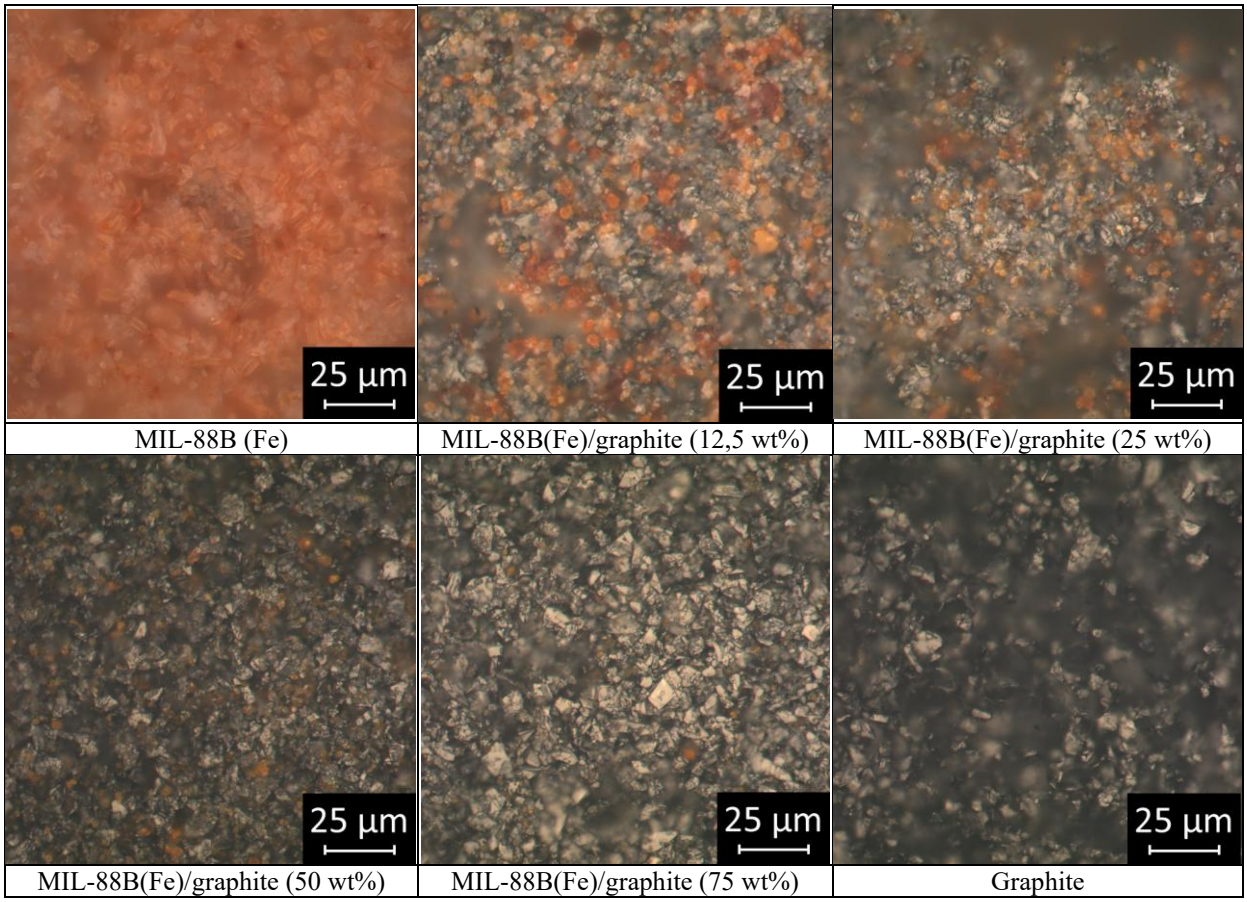


Figure S2. Optical micrographs of MIL-88B(Fe)/graphite composites with different graphite contents (×100 objective, 1850x magnification).

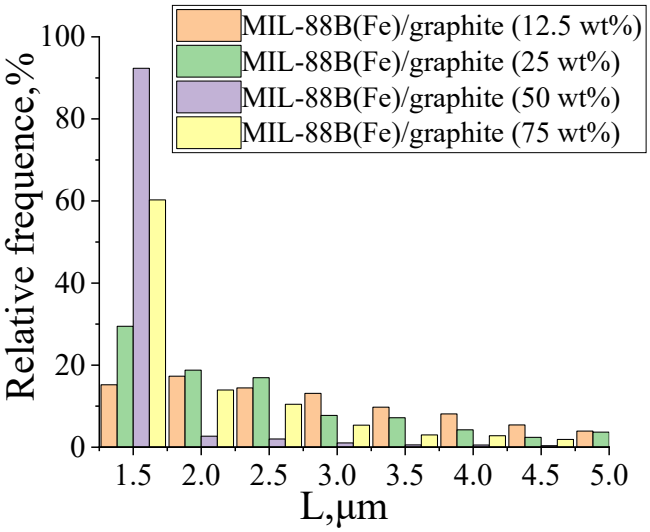
S1. Particle size determination

The equivalent particle length was derived from the measured cross-sectional area. MIL-88B(Fe) crystals are known to have a spindle‑like (elongated elliptical) morphology with an aspect ratio (k) of approximately 2 (Xu et al., 2016). Using an elliptical model, the particle length L was calculated from the projected area S as:

$$L=\sqrt{\frac{4kS}{\pi}}$$

Xu, B., Yang, H., Cai, Y., Yang, H., & Li, C. (2016). Preparation and photocatalytic property of spindle-like MIL-88B (Fe) nanoparticles. *Inorganic Chemistry Communications*, *67*, 29–31.

a)



b)

Graphite content (%)	Average particle length (μm)
12,5	3.05 ± 0.54
25	2.58 ± 0.56
50	1.42 ± 0.48
75	1.45 ± 0.49

Figure S2. Particle size distribution of MIL-88B(Fe) (as % of total particle count) (a) and average length of MIL-88B(Fe) particles in composites with different graphite contents (b)

a) b)

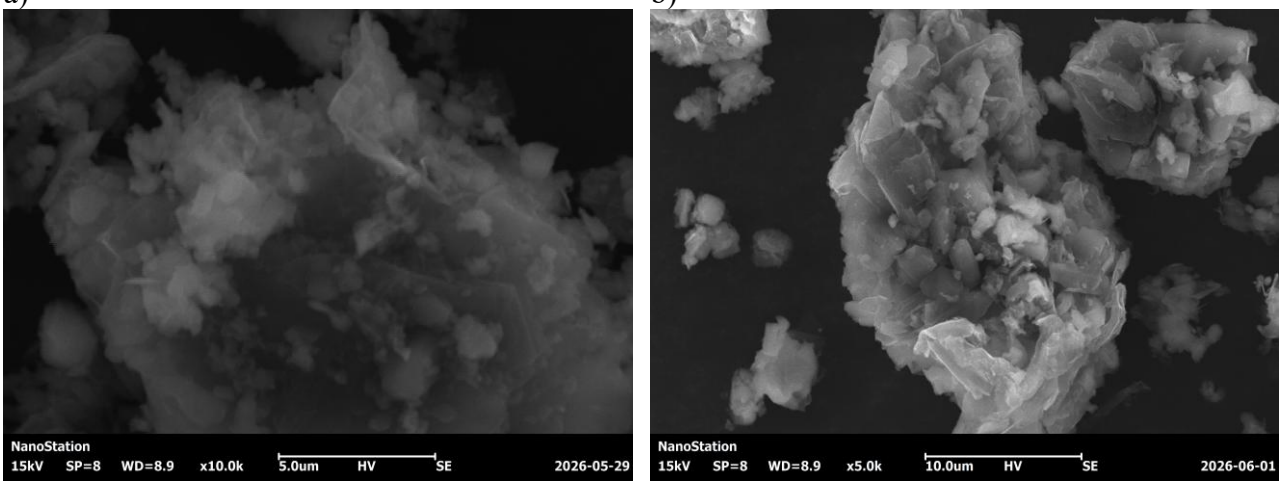


Figure S3. SEM images of the samples:(a) MIL-88B(Fe)/graphite (12.5 wt%); (b) MIL-88B(Fe)/graphite (25 wt%)