Supplementary Data (Figures)

Captions for Supplementary Figures

Fig. S1. EDS Mapping of the Synthesized Fe-ZSM-5 Prior to Calcination

Fig. S2. Elemental Compositions of the Synthesized Fe-ZSM-5 Prior to Calcination.

Fig. S3. FTIR Spectra of ZSM-5 (a) and Fe-ZSM-5(b) and Fe(byp)-Complex(c).

Fig. S4. Contour Plot and Three Dimensional Plot Showing Combine Effect of Time and Temperature on Fe-MOF's Yield.

Fig. S5. Contour Plot and Three Dimensional Plot Showing Combine Effect of Time and Stirring Speed on Fe-MOF's Yield.

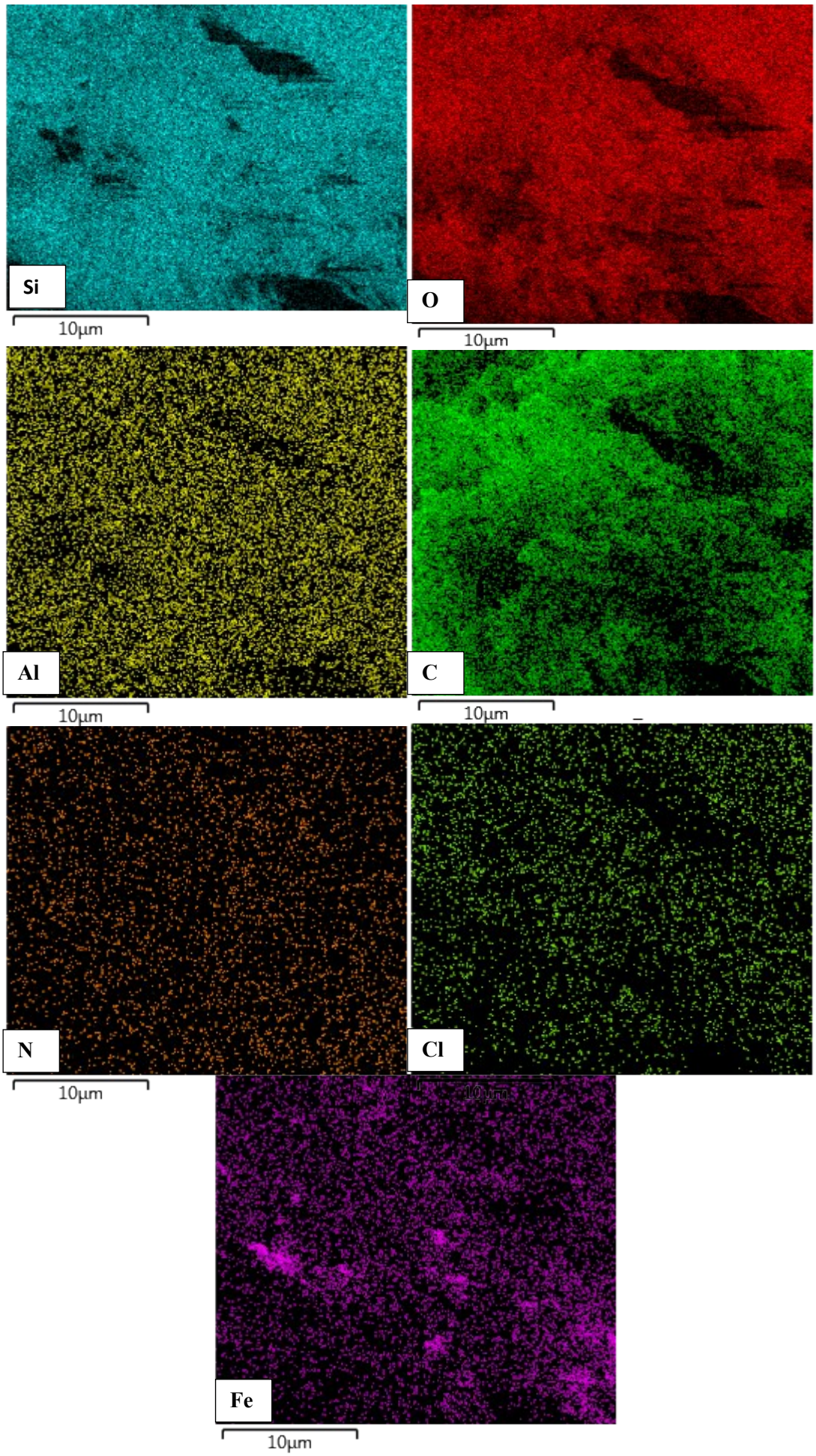

Fig. S1.

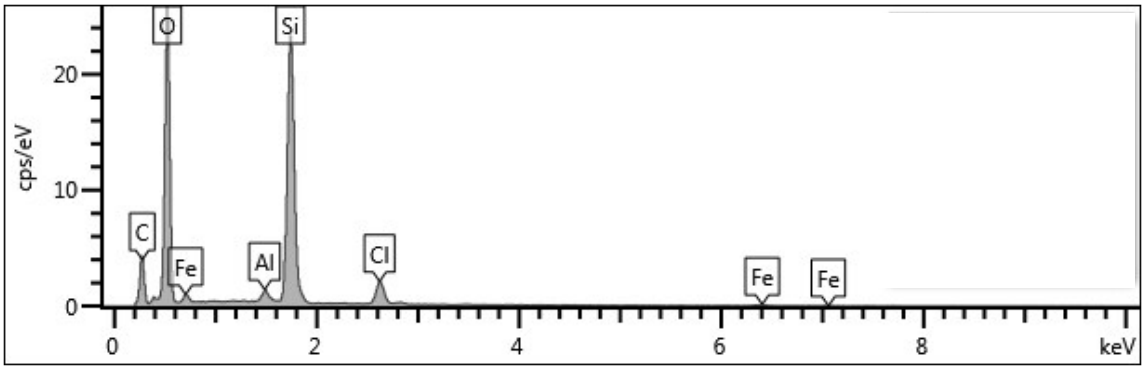
O
Si
C
Fe
Al
Cl
Fe
Fe
cps/eV
20
10
0
0
2
4
6
8
keV

Fig. S2.

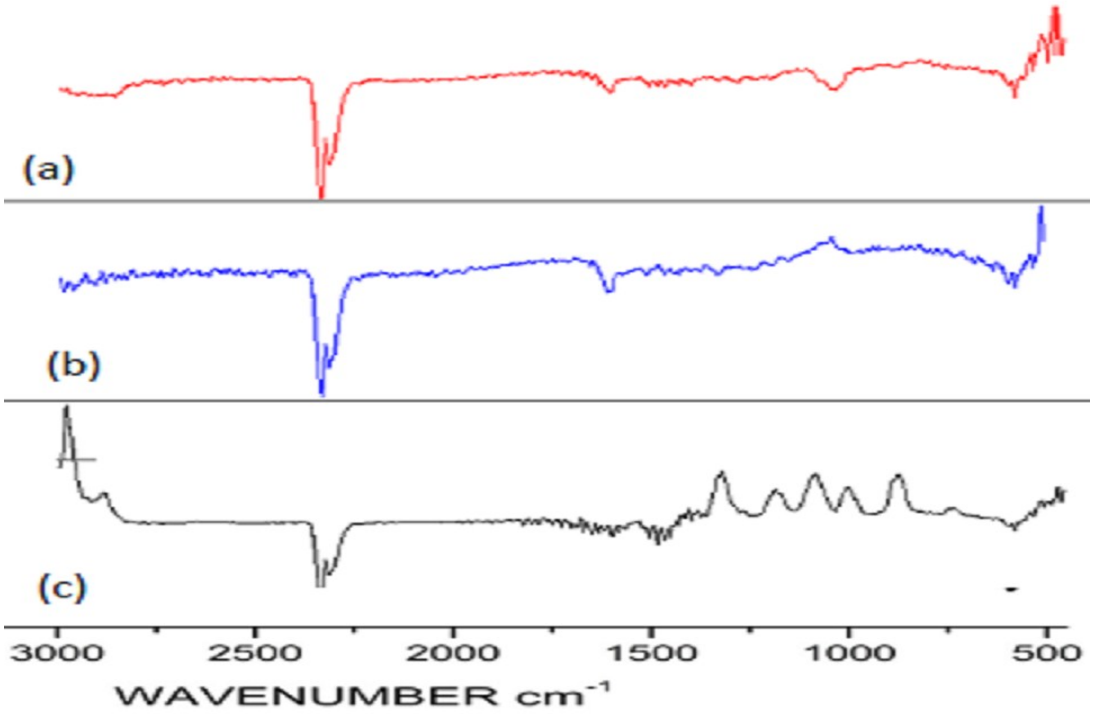
(a)
(b)
(c)
3000
2500
2000
1500
1000
500
WAVENUMBER cm⁻¹

Fig. S3.

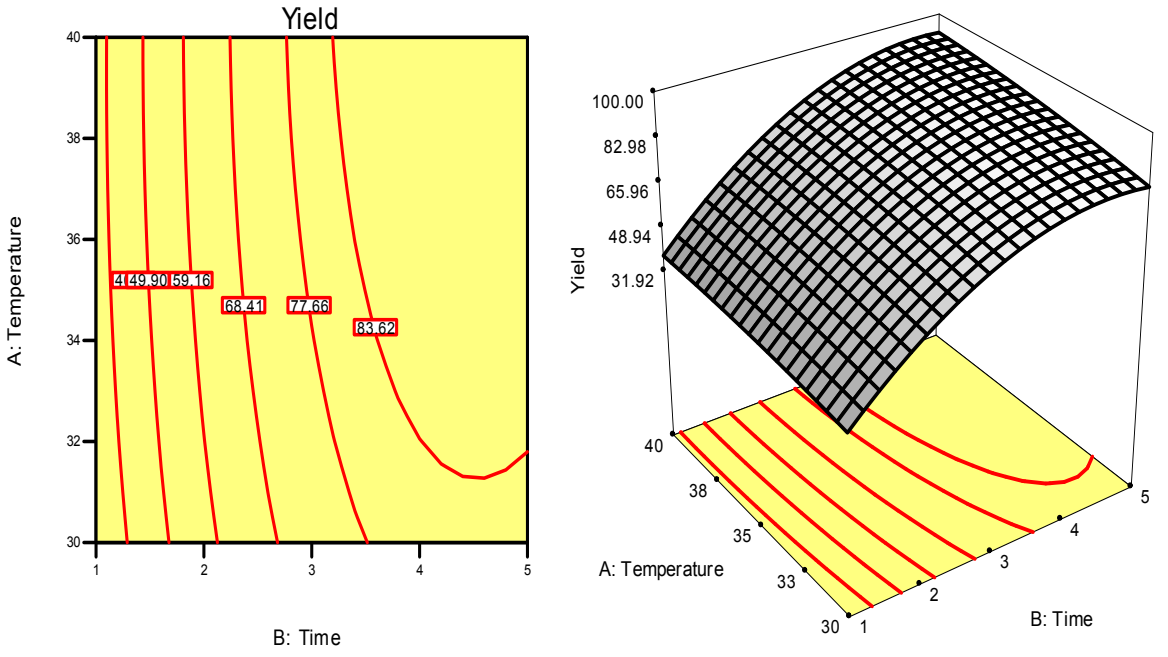
Yield
A: Temperature
B: Time
40
38
36
34
32
30
1
2
3
4
5
41
49.90
59.16
68.41
77.66
83.62
100.00
82.98
65.96
48.94
31.92
Yield
40
38
35
33
30
A: Temperature
1
2
3
4
5
B: Time

Fig. S4.

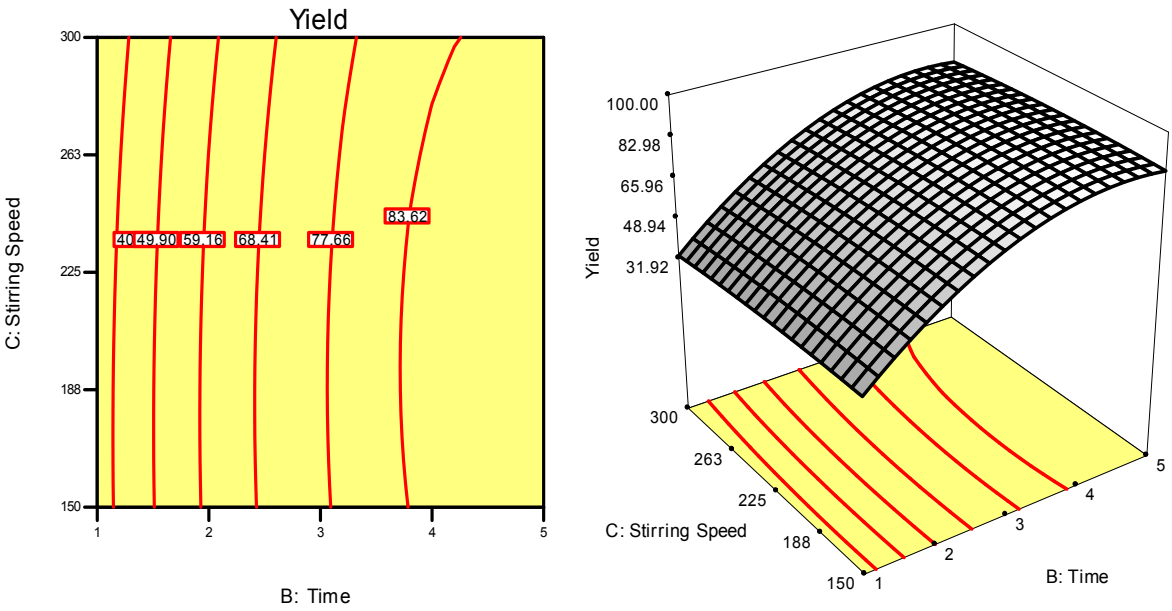
Yield
C: Stirring Speed
B: Time
300
263
225
188
150
1
2
3
4
5
40
49.90
59.16
68.41
77.66
83.62
100.00
82.98
65.96
48.94
31.92
Yield
300
263
225
188
150
C: Stirring Speed
1
2
3
4
5
B: Time

Fig. S5.

Captions for Supplementary Tables

Table S1. Optimized Values Used for the Heterogeneous Fenton Process.

Table S2. Mixtures of Three Dyes, Their Degradation and TOC Removal.

Table S3. Pore Structure Characteristics of the ZSM-5 Support and Fe-ZSM-5 Catalyst.

Table S1.

Dye/Catalyst	H_2O_2/Catalyst	pH	Time	Temperature
wt/wt	wt/wt		h	(^oC)
0.75	2.5	3	4	30

Table S2.

Name	Dye Conc.	AB113	RB-5	MO	Degradation	TOC Removal
	(mg/L)	(%)	(%)	(%)	%	%
Mixture 1	100	50	50	0	99.2	70
Mixture 2	100	50	0	50	99.3	73
Mixture 3	100	0	50	50	99.0	69
Mixture 4	100	50	25	25	99.1	72

AB113 (Acid Blue 113), MO (Methyl Orange), and RB-5 (Reactive Black- 5)

Table S3.

Sample	S_{BET} (m^2/g)	S_{micro} (m^2/g)	S_{ext} (m^2/g)	V_t (cm^3/g)	V_{micro} (cm^3/g)	Pore width (nm)
ZSM-5	297.65	242.75	51.85	0.17	0.11	2.45
Fe-ZSM-5	241.93	112.35	131.57	0.16	0.06	2.69

S_{BET} is the specific surface area, S_{ext} is the external surface area, V_t is the total pore volume, and V_{micro} is the micropore volume