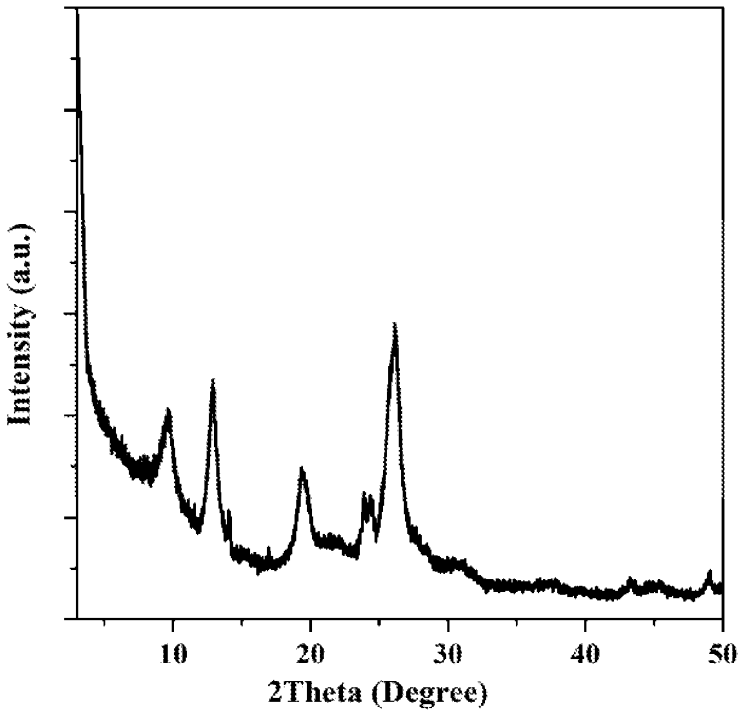


图 1

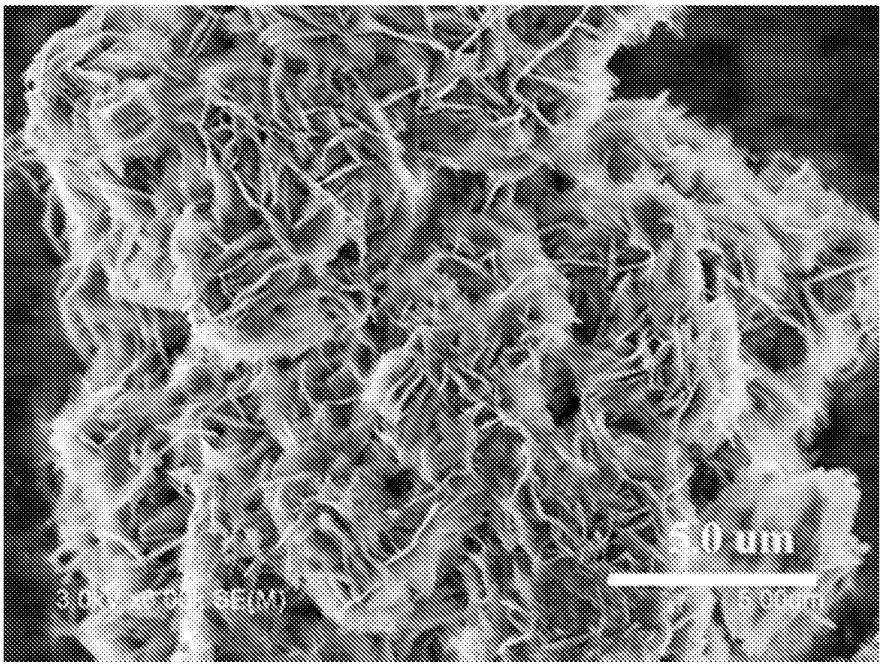


图 2

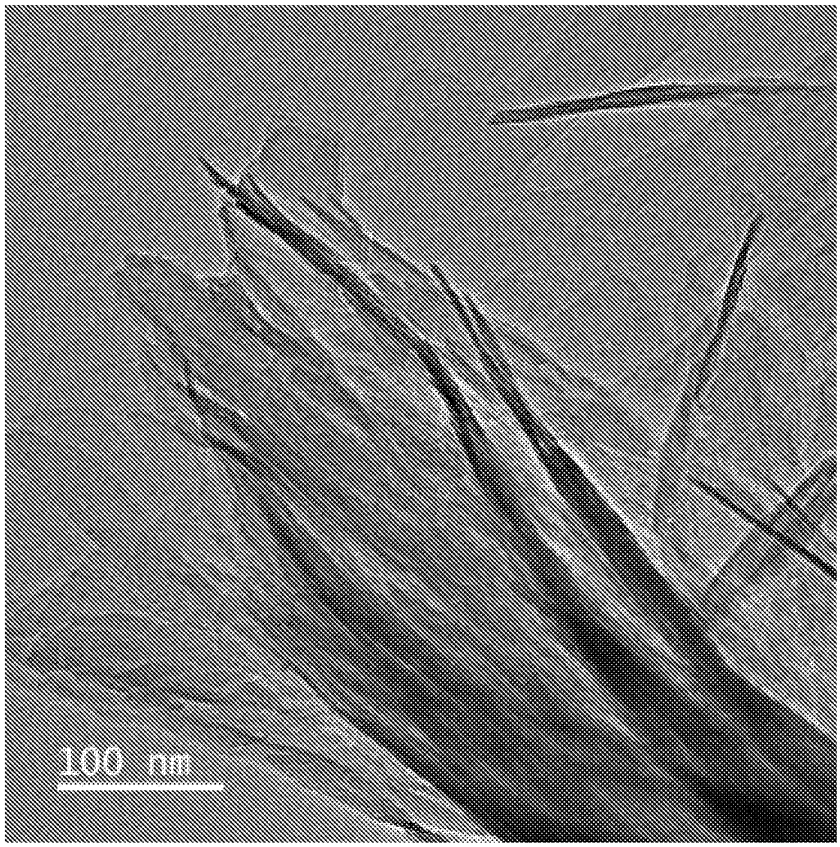


图 3

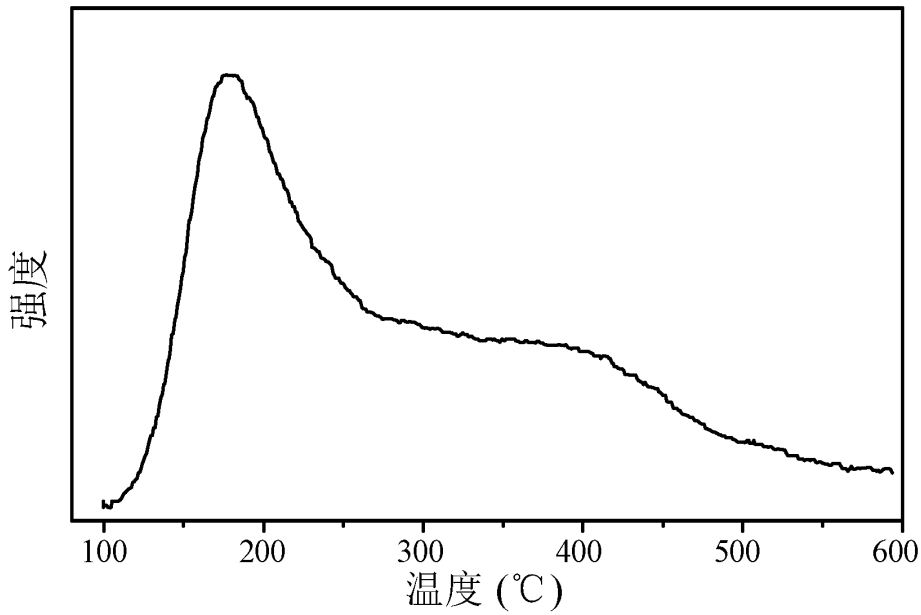


图 4

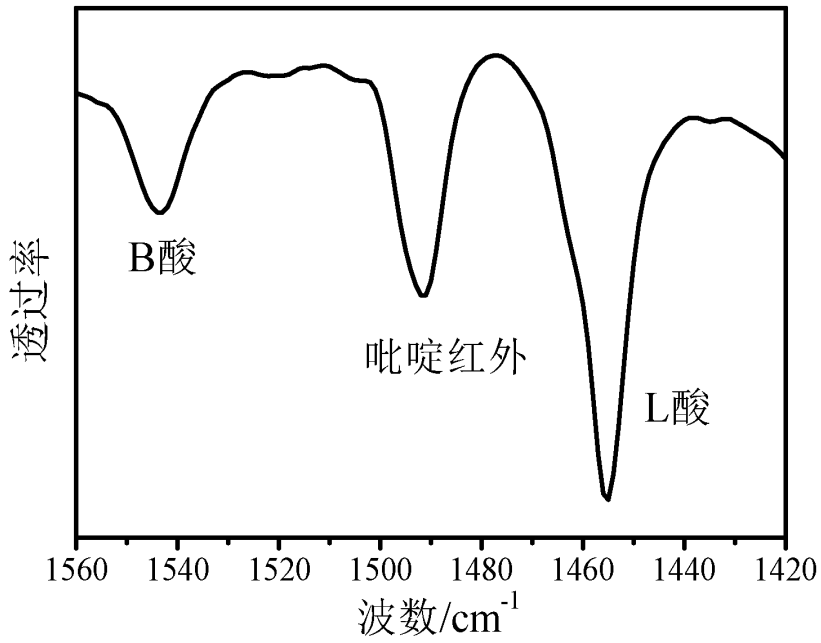

透过率
B酸
吡啶红外
L酸
1560
1540
1520
1500
1480
1460
1440
1420
波数/cm-1

图 5

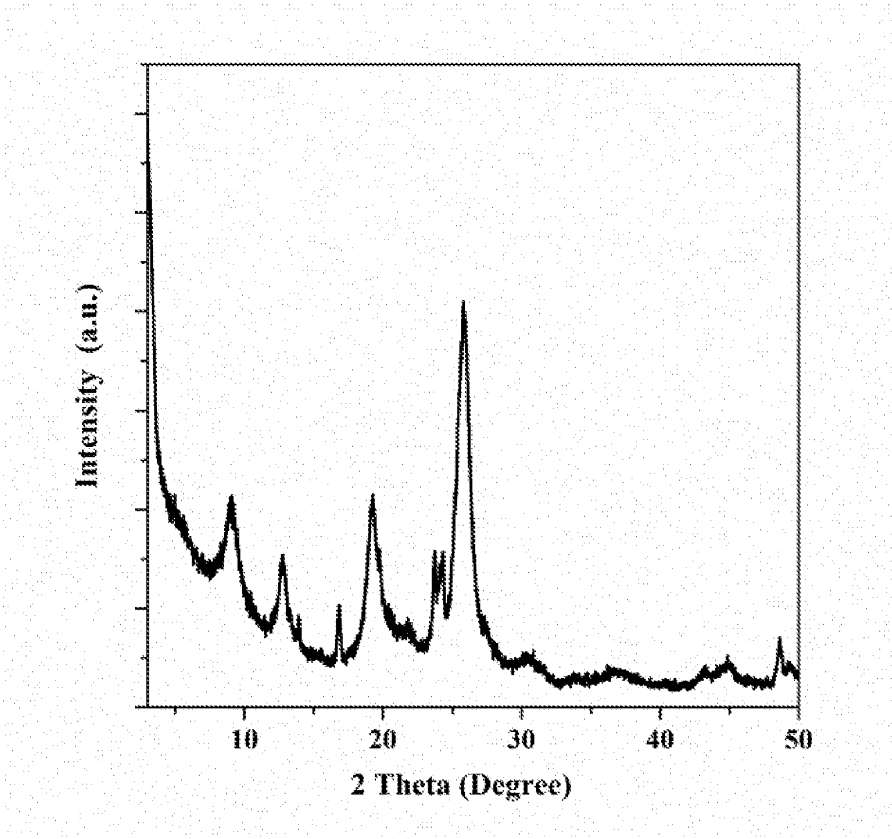

Intensity (a.u.)
10
20
30
40
50
2 Theta (Degree)

图 6

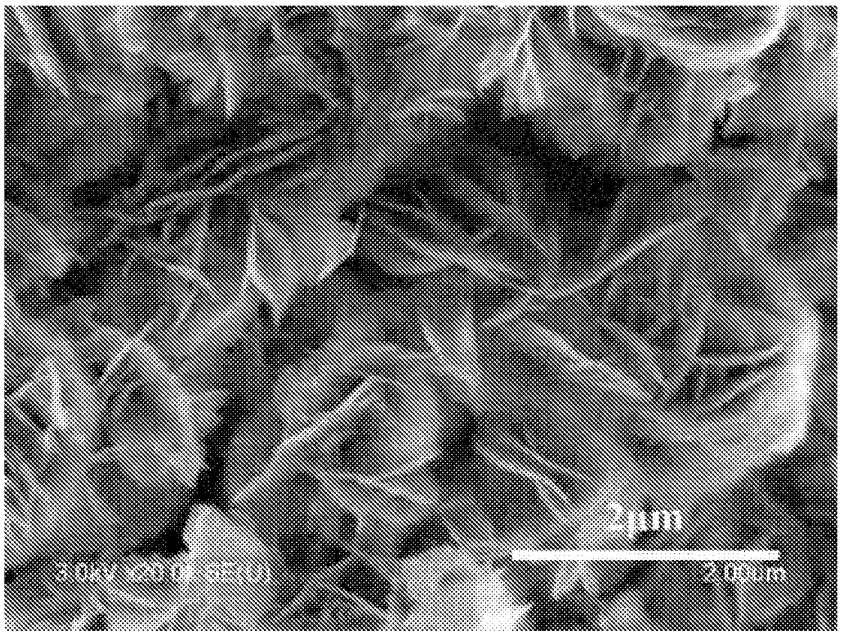

2μm
3.0kV x20.0k SE(U)
2.00μm

图 7

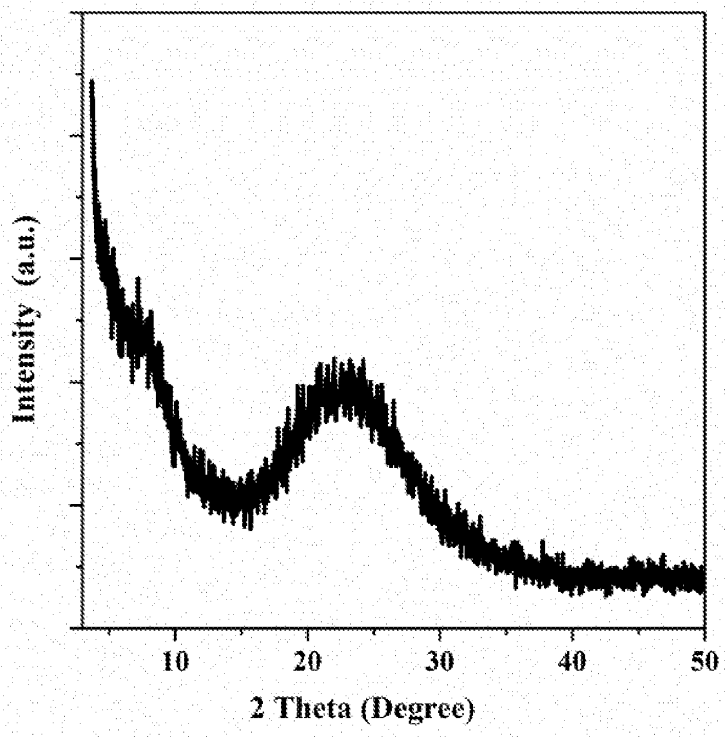

Intensity (a.u.)
10
20
30
40
50
2 Theta (Degree)

图 8

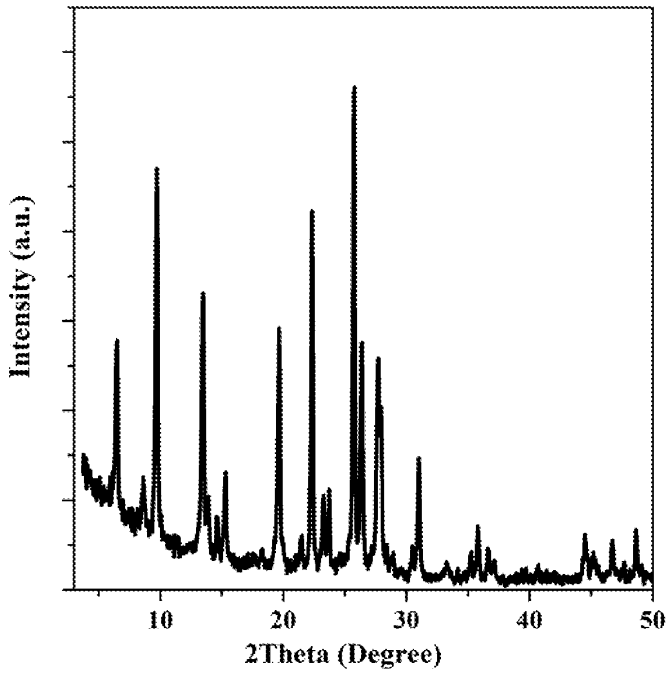

Intensity (a.u.)
10
20
30
40
50
2Theta (Degree)

图 9

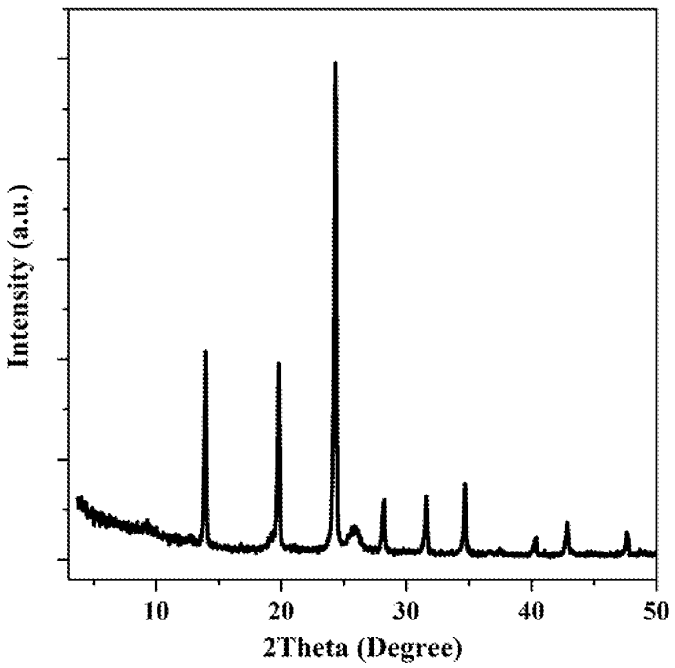

Intensity (a.u.)
10
20
30
40
50
2Theta (Degree)

图 10

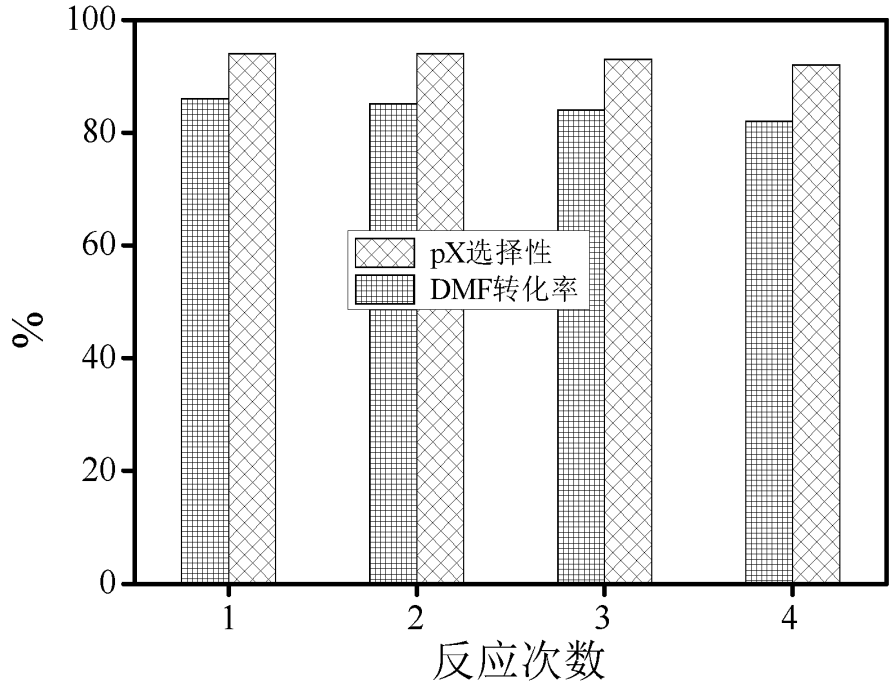

100
80
60
40
20
0
%
pX选择性
DMF转化率
1
2
3
4
反应次数

图 11

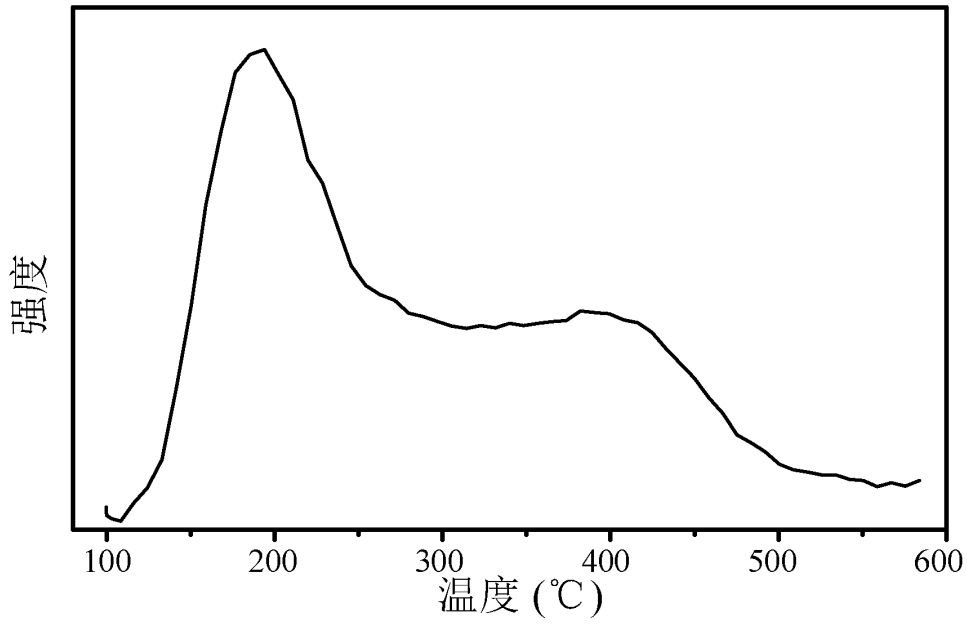

强度
100
200
300
400
500
600
温度 (℃)

图 12

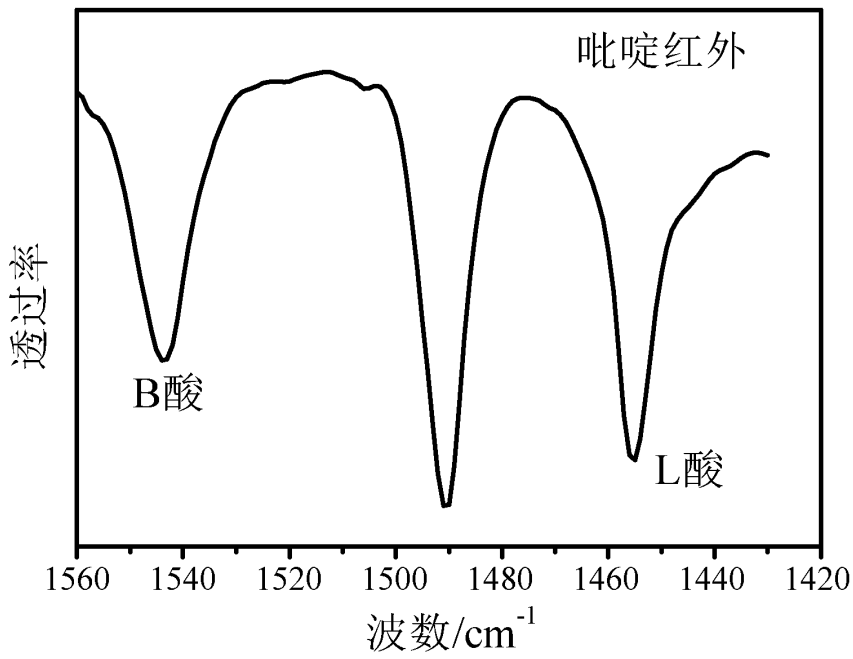


图 13