

Development of Chiral Metal-Organic Frameworks for enantioseparation of Racemates

Supplementary material

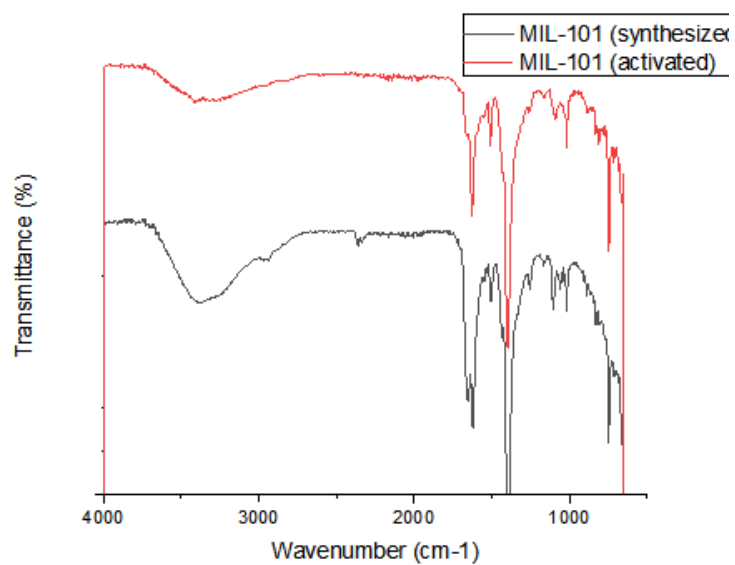


Fig. 1 FT-IR spectrum of MIL-101 (synthesized) and MIL-101 (Activated)

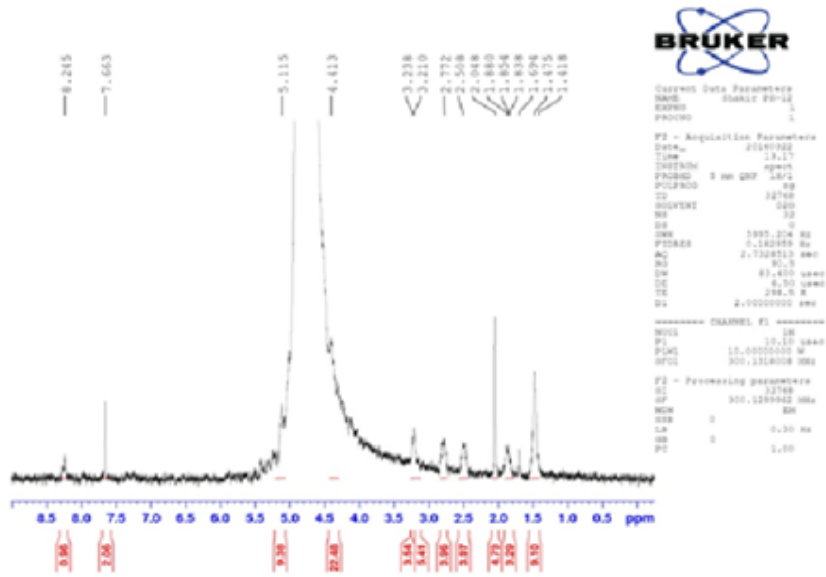


Fig. 2 ¹H NMR spectrum of CMOF-1

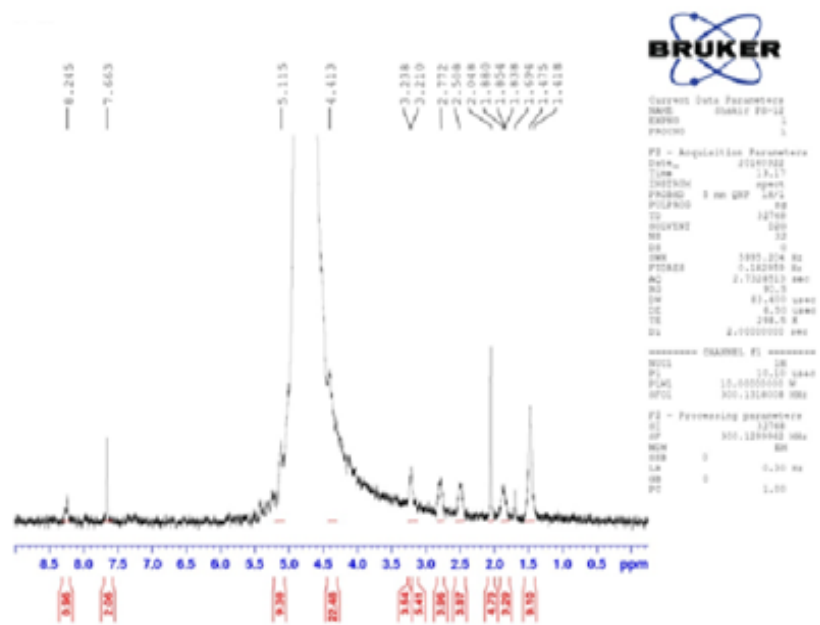


Fig. 3 ¹H NMR spectrum of CMOF-2

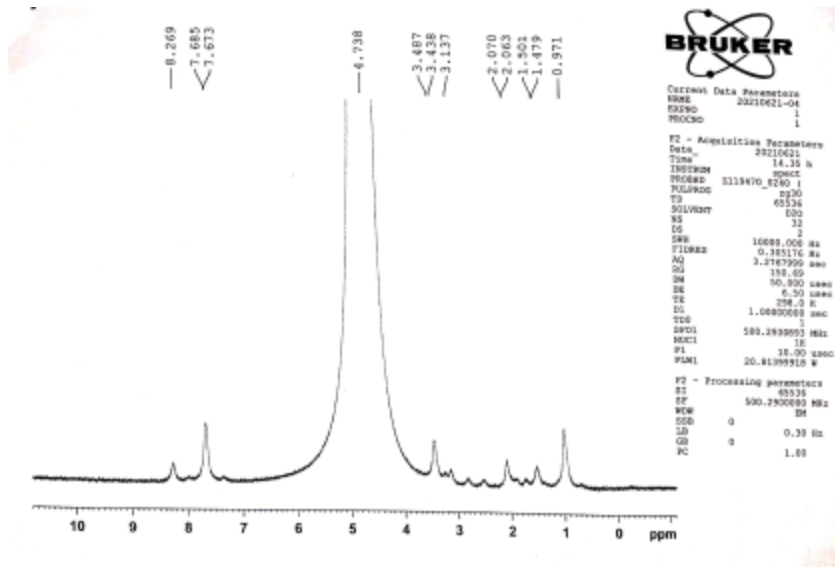
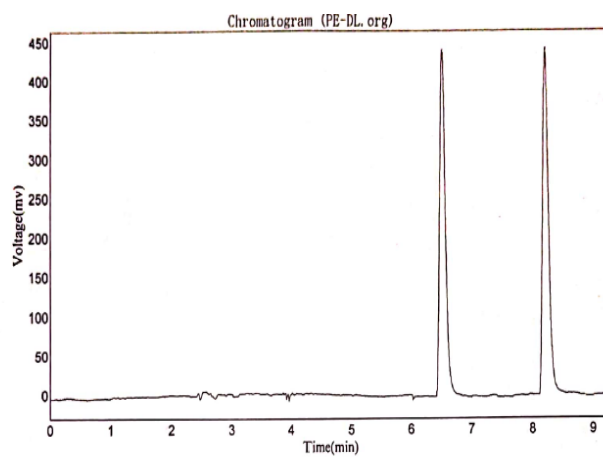


Fig. 4 ¹H NMR spectrum of CMOF-3

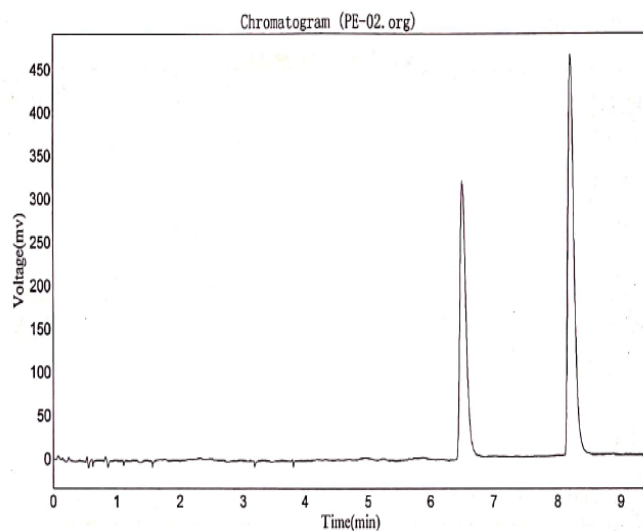
(a)



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc.
1		6.498	441833.156	2971522.500	49.0146
2		8.198	441579.031	3091001.750	50.9854
Total			883412.188	6062524.250	100.0000

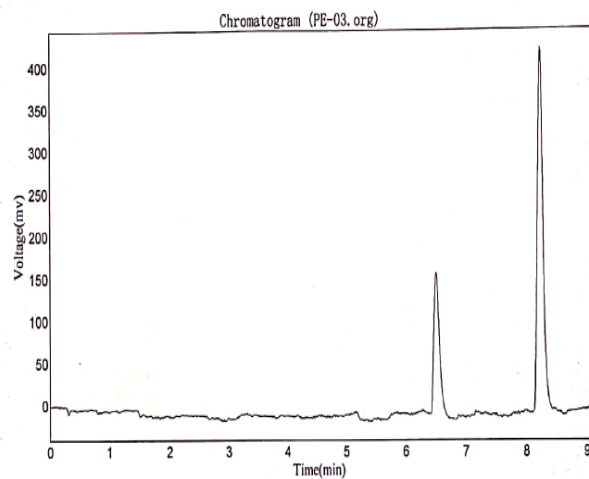
(b)



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc.
1		6.498	320514.563	2205822.250	40.8503
2		8.198	461251.938	3193953.750	59.1497
Total			781766.500	5399776.000	100.0000

(c)

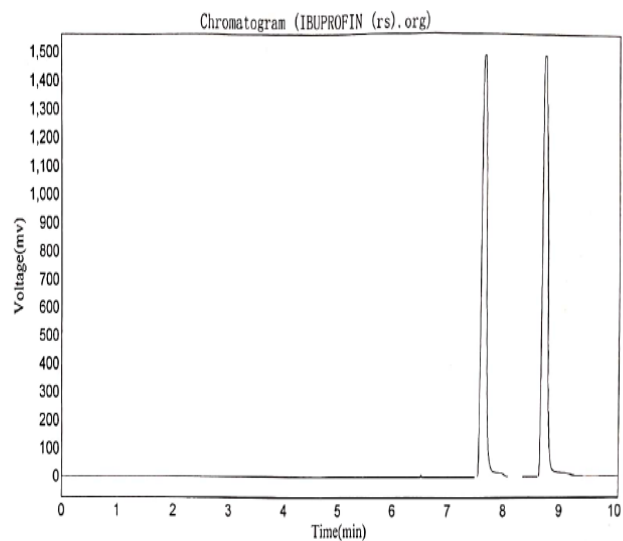


Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc.
1		6.490	175018.297	1201740.000	28.6828
2		8.198	432839.969	2988023.000	71.3172
Total			607858.266	4189763.000	100.0000

Fig. 5 HPLC chromatograms of 1-Phenylethanol, (a). Racemic 1-Phenylethanol (b). 1-Phenylethanol after enantioseparation on CMOF-1 and CMOF-2 (c) 1-Phenylethanol after enantioseparation on CMOF-3

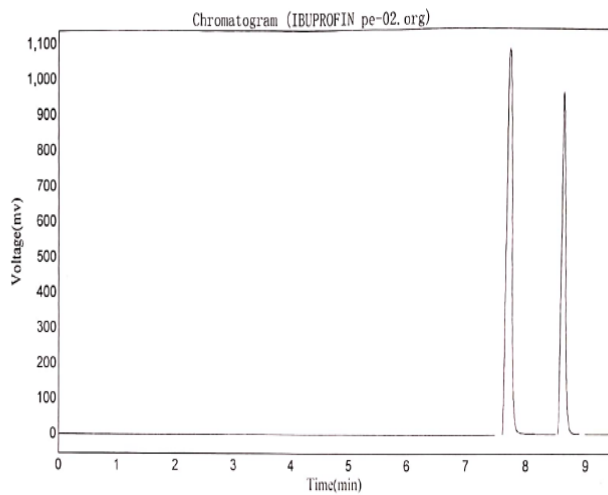
(a)



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc.
1		7.632	1487116.000	9557257.000	48.2469
2		8.715	1484745.250	10251783.000	51.7531
Total			2971861.250	19809040.000	100.0000

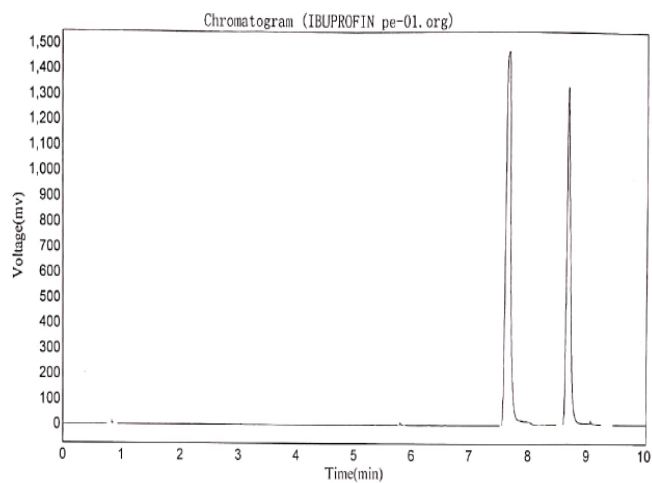
(b)



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc.
1		7.698	1079644.500	6809969.000	60.2845
2		8.598	953001.438	4486406.000	39.7155
Total			2032645.938	11296375.000	100.0000

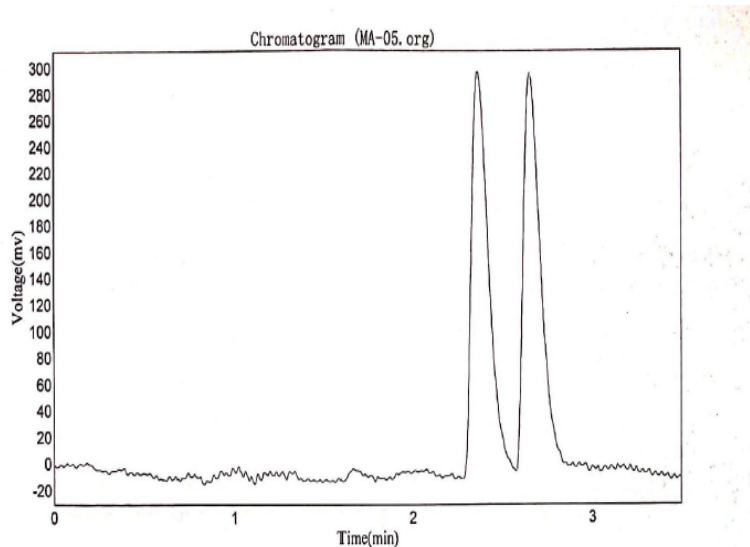
(c)



Results					
Peak No.	Peak ID	Ret Time	Height	Area	Conc.
1		0.848	11650.622	13366.705	0.0885
2		5.807	8171.346	10964.377	0.0726
3		7.648	1470515.250	9000597.000	59.5719
4		8.665	1331122.250	6083856.000	40.2670
Total			2821459.468	15108784.082	100.0000

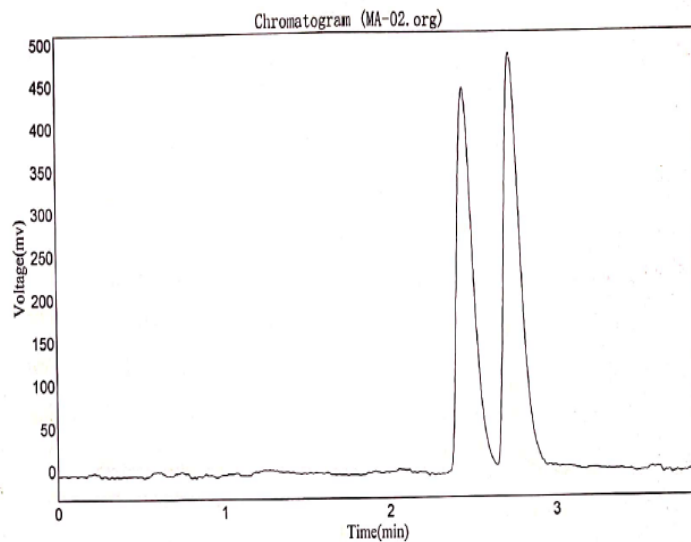
Fig. 6 HPLC chromatograms of Ibuprofen, (a).Racemic Ibuprofen (b).Ibuprofen after enantioseparation on CMOF-1 and 2(c). Ibuprofen after enantioseparation on CMOF-3

(a)



Results					
Peak No.	Peak ID	Ret Time	Height	Area	Conc.
1		2.365	307129.781	2061127.750	49.8766
2		2.657	304657.469	2071326.500	50.1234
Total			611787.250	4132454.250	100.0000

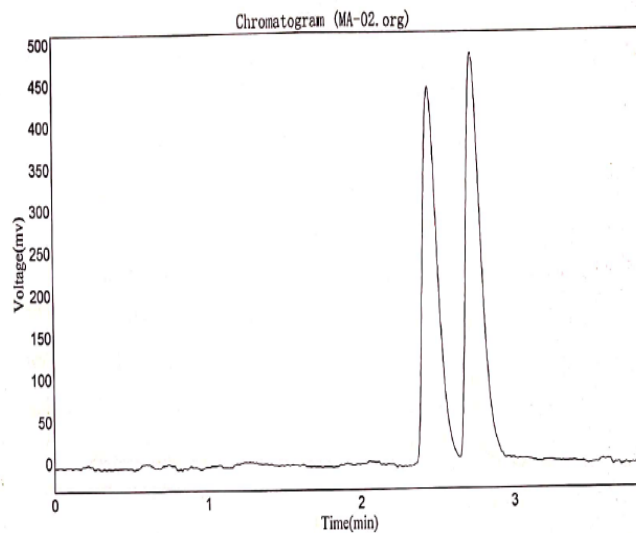
(b)



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc.
1		2.448	450548.813	3061013.250	47.2996
2		2.732	489339.000	3410523.250	52.7004
Total			939887.813	6471536.500	100.0000

(c)



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc.
1		2.448	450548.813	3061013.250	47.2996
2		2.732	489339.000	3410523.250	52.7004
Total			939887.813	6471536.500	100.0000

(d)

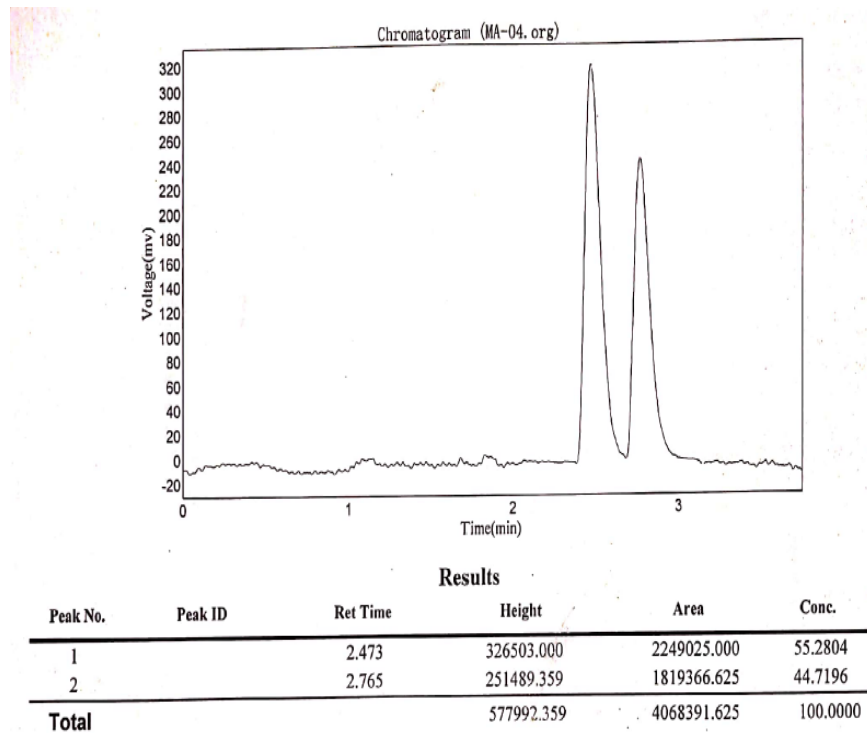


Fig. 7 HPLC chromatograms of Mandelic acid, **(a)**.Racemic Mandelic acid**(b)**.Mandelic acid after enantioseparation on CMOF-1 **(c)**.Mandelic acid after enantioseparation on CMOF-2 **(d)**. Mandelic acid after enantioseparation on CMOF-3