Supporting Information:

Table 1

Central composite rotatable design for the hydrolysis condition of EMR

Exp.no.	Design 1		Design 2	
	C	membrane flux	pH	T
	(mol/L)	(L·m^{-2}·h^{-1})		(℃)
1	0.20	102.6	8.5	25
2	0.05	197.7	5.5	40
3	0.20	197.7	7.0	40
4	0.10	287.4	7.0	55
5	0.20	287.4	8.5	55
6	0.10	197.7	7.0	40
7	0.05	197.7	5.5	50
8	0.10	197.7	7.0	40
9	0.10	197.7	7.0	40
10	0.05	102.6	5.5	25
11	0.10	102.6	7.0	25
12	0.10	197.7	7.0	40
13	0.10	197.7	7.0	40

C, substrate concentration

Table 2

ANOVA table for designs 1 and 2.

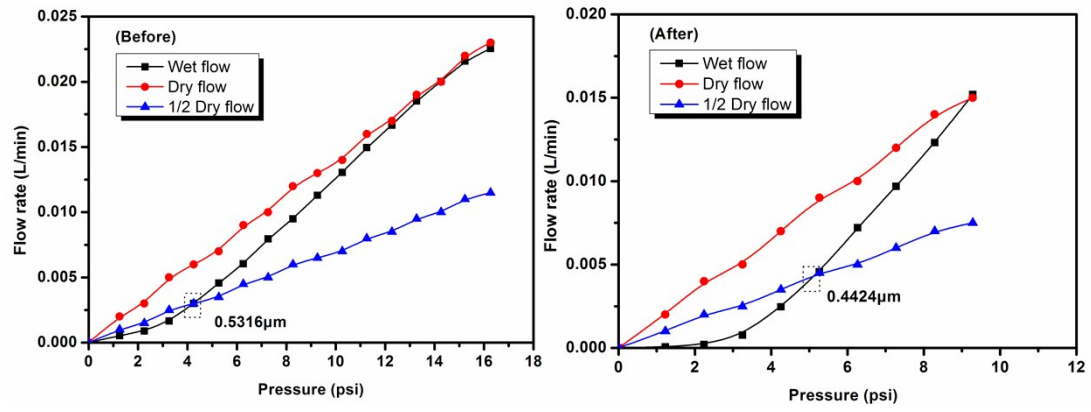|	SS		Df		MS		F-values		P-values	Probe>F
	1	2	1	2	1	2	1	2	1	2
Model	3.006×10^{-3}	0.025	5	5	6.012×10^{-4}	5.006×10^{-3}	36.53	49.85	0.0002	<0.0001
A	2.307×10^{-3}	1.583×10^{-3}	1	1	2.307×10^{-3}	1.583×10^{-3}	140.18	15.77	<0.0001	0.0054
B	2.407×10^{-6}	1.082×10^{-3}	1	1	2.407×10^{-6}	1.082×10^{-3}	0.15	10.77	0.7001	0.0134
Resudial	9.874×10^{-5}	7.029×10^{-4}	7	7	5.760×10^{-6}	1.494×10^{-5}				
Pure Error	2.330×10^{-6}	3.653×10^{-5}	4	4	7.767×10^{-7}	6.670×10^{-7}				
Cor Total	3.105×10^{-3}	0.026	12	12						

Figure 1 Sketch of the pressure-flow rate curves for the polysulfone hollow fiber membranes before and after the lipase immobilization measured by LLP