Supplementary Information:

Progress in adsorptive removal of volatile organic compounds by zeolites

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Table S1. Adsorption performance of zeolite molecular sieve on VOCs molecules

Zeolite	Si/Al	VOCs	Concentration	T（℃）	Adsorption amount（mg/g）	References
NaY	5.5	Toluene			11.26	(Yin et al., 2020)
	12.41				128.85	
NaY	2.7	Toluene	0.27mg/L	25	0.2873mL/g	(Zhang et al., 2012b)
Silicalite-1	∞	p-Xylene	392.99ppm	25	147.34	(Cosseron et al., 2013)
chabazite					167.48	
SSZ-23					110.24	
beta					147.34	
ZSM-5	397	Toluene	1000 ppm	30	87	(Wu et al., 2021)
DeAl-50%Y/ZSM-5	92				139	
DeAl-65%Y/ZSM-5	64				136	
ZSM-5_1	300	Toluene	500ppb	25	5.74	(Megías-Sayago et al., 2020)
ZSM-5_2	200				4.95	
ZSM-5_3	150				7.01	
ZSM-5_4	100				6.92	
ZSM-5_5	50				11.01	
ZSM-5_1	300	Xylene	500ppb		18.49	
ZSM-5_2	200				18.6	
ZSM-5_3	150				16.44	
ZSM-5_4	100				18.06	
ZSM-5_5	50				19.97	
NaY	5.5	Toluene	2716ppm ,RH=50%		178.6	(Yin et al., 2020)
NH_4Y	5.5				174.3	
SY-0	5.47				168.8	
SY-1	7.16				150.12	
SY-2	9.03				141.47	
SY-3	12.41				132.55	
SY-4	13.75				113.82	
ZSM-5	2100	Toluene		25	0.93mmol/g	(Zaitan et al., 2016)
NaX	1.07	Toluene	800ppm	30	249	(Deng et al., 2020)
USY	23.77				179	
BETA					185	
Silicalite-1	∞				138	
silicalite-1	∞	p-Xylene		25	1.30mmol/g	(Cosseron et al., 2013)
beta					1.17mmol/g	
MCM-41		Toluene	1500ppm	25	262	(Ma and Ruan, 2013)
S-MCM					277	
5A		Benzene	0.064 g/ml Benzene	25	250	(Hussein and

		Toluene	and 0.201 g/ml Toluene		263	Ahmed, 2016)
ZSM-5	2100	Toluene	50 ppm	25	0.93mmol/g	(Zaitan et al., 2016)
NaZSM-5	10	Toluene	8000 ppm	100	0.92mmol/g	(Serra et al., 2012)
Cs7NaZSM-5	10				0.88mmol/g	
NH4ZSM-5	15				0.69	
Cs7HZSM-5	15				0.62	
NH4ZSM-5	140				0.5	
Cs7HZSM-5	140				1.08	
NaMOR	6.5				1.34	
NH4MOR	10				1.07	
X(Na+)	3	Benzene	37.5mg/L。	25	151	(Zhang et al., 2012a)
MFI	470	Toluene	350ppm	45	30.1	(Shen et al., 2021)
	117				33.2	
	60				36.4	
	50				38.2	
	25				63.85	
	25				86.1	
	25				91.66	
BEA	60				58.99	
Y	8.5				165.21	
ZSM-5	316	p-Xylene	10ppm		174.4μmol/g	(Megías-Sayago et al., 2020)
	198				175.5μmol/g	
	132				155.1μmol/g	
	113				170.4μmol/g	
	79				188.4μmol/g	
	316	Toluene			62.3μmol/g	
	198				53.7μmol/g	
	132				76.1μmol/g	
	113				75.1μmol/g	
	79				119.5μmol/g	
ZSM-5	40.5	Toluene o-Xylene 1,3,5-Trimethylbenzene		25	95μmol/g 15μmol/g 2μmol/g	(Wang et al., 2018)
Y	40	Butyl acetate	4500ppm,RH=0	28	71.7	(Bhatia et al., 2009)
			1000ppm,RH=0		40.3	
			4500ppm,RH=35%		41.7	
			1000ppm,RH=35%		25.7	

ZSM-5	140		4500ppm,RH=0		46.6	
			1000ppm,RH=0		25.7	
			4500ppm,RH=35%		43.4	
			1000ppm,RH=35%		23.7	
Silicalite-1	∞	Acetone		25	106.87	(Cosseron et al., 2013)
pure silica chabazite zeolite	∞				166.11	
SSZ-23	-				124.87	
Beta	-				159.14	
ZSM-5	397	Methyl ethyl ketone (MEK)	1000 ppm	30	122	(Wu et al., 2021)
DeAl-50%Y/ZSM-5	92				113	
DeAl-65%Y/ZSM-5	64				97	
ZSM-5	397	Isopropyl alcohol	1000 ppm	30	62	(Wu et al., 2021)
DeAl-50%Y/ZSM-5	92				42	
DeAl-65%Y/ZSM-5	64				28	
H-MOR	230	Toluene		25	61.73	(Brodu et al., 2015)
H-FAU	13.8				108.73	
Na-Z	360				46.99	
H-Z	2100				46.07	

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