

Electronic Supplementary Information

New insight into N₂ adsorption and ion-exchange features of CuMFI with different Si/Al ratios

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Table 1 Preparation conditions of CuMFI and their notation

Cu sources	Cu concentration (mol dm ⁻³)	Temperature (K)	Exchange operation (times)	Si/Al ratio	Ion-exchange level (%)	Notation
Cu(C ₂ H ₅ COO) ₂	0.001	300	3	11.9	12	CuMFI(P)-11.9-12
Cu(C ₂ H ₅ COO) ₂	0.01	300	2	11.9	68	CuMFI(P)-11.9-68
Cu(C ₂ H ₅ COO) ₂	0.01	300	10	11.9	109	CuMFI(P)-11.9-109
Cu(CH ₃ COO) ₂	0.01	300	4	11.9	105	CuMFI(A)-11.9-105
CuCl ₂	0.03	363	1	11.9	74	CuMFI(C)-11.9-74
CuCl ₂	0.3	363	1	11.9	107	CuMFI(C)-11.9-107
Cu(C ₂ H ₅ COO) ₂	0.01	300	2	19.8	72	CuMFI(P)-19.8-72
Cu(C ₂ H ₅ COO) ₂	0.01	300	20	19.8	109	CuMFI(P)-19.8-109
Cu(CH ₃ COO) ₂	0.01	300	20	19.8	100	CuMFI(A)-19.8-100
CuCl ₂	0.3	363	10	19.8	113	CuMFI(C)-19.8-113
Cu(C ₂ H ₅ COO) ₂	0.005	300	1	35.0	50	CuMFI(P)-35.0-50
Cu(C ₂ H ₅ COO) ₂	0.01	300	5	35.0	105	CuMFI(P)-35.0-105
Cu(CH ₃ COO) ₂	0.01	300	4	35.0	103	CuMFI(A)-35.0-103
CuCl ₂	0.3	363	15	35.0	132	CuMFI(C)-35.0-132
Cu(C ₂ H ₅ COO) ₂	0.001	300	8	100	75	CuMFI(P)-100-75
Cu(C ₂ H ₅ COO) ₂	0.01	300	1	100	102	CuMFI(P)-100-102
Cu(CH ₃ COO) ₂	0.01	300	1	100	101	CuMFI(A)-100-101
CuCl ₂	0.3	363	3	100	90	CuMFI(C)-100-90
CuCl ₂	0.3	363	5	100	125	CuMFI(C)-100-125
Cu(NO ₃) ₂	0.3	363	7	100	73	CuMFI(N)-100-73

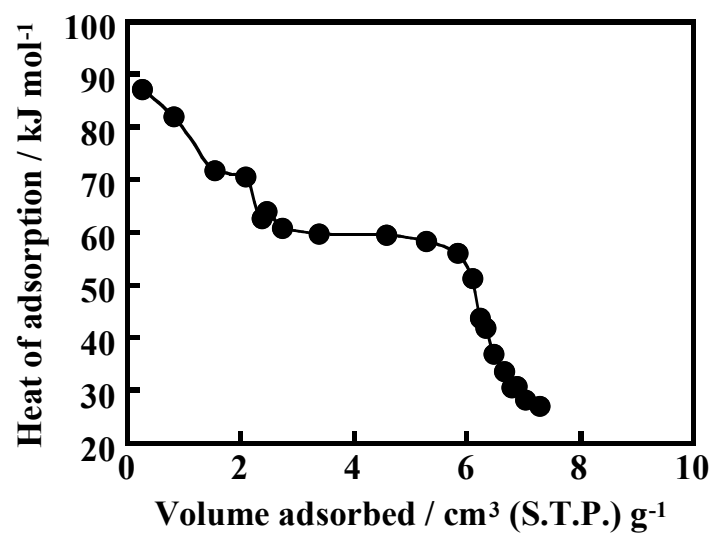


Fig. ESI1 Differential heats of adsorption of N₂ at 301 K for CuMFI(P)-19.8-109.

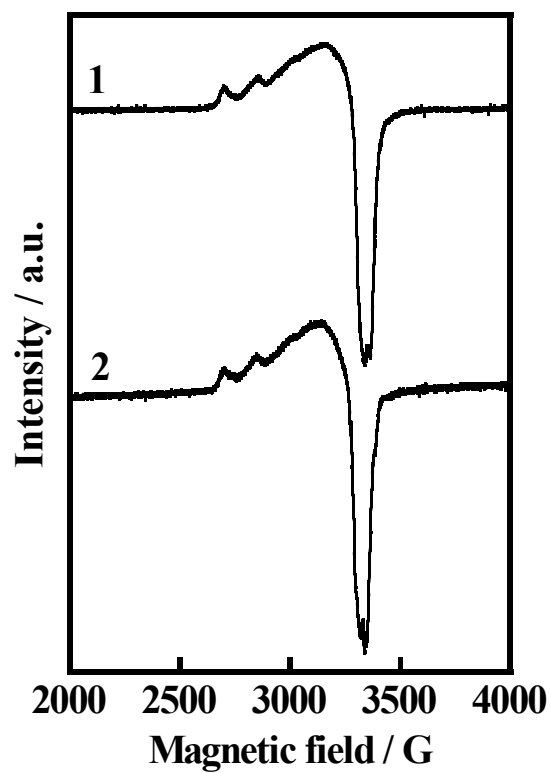


Fig. ESI2 EPR spectra of CuMFI evacuated at r.t. in vacuo:
(1) CuMFI(C)-35.0-132 and (2) CuMFI(N)-100-73.