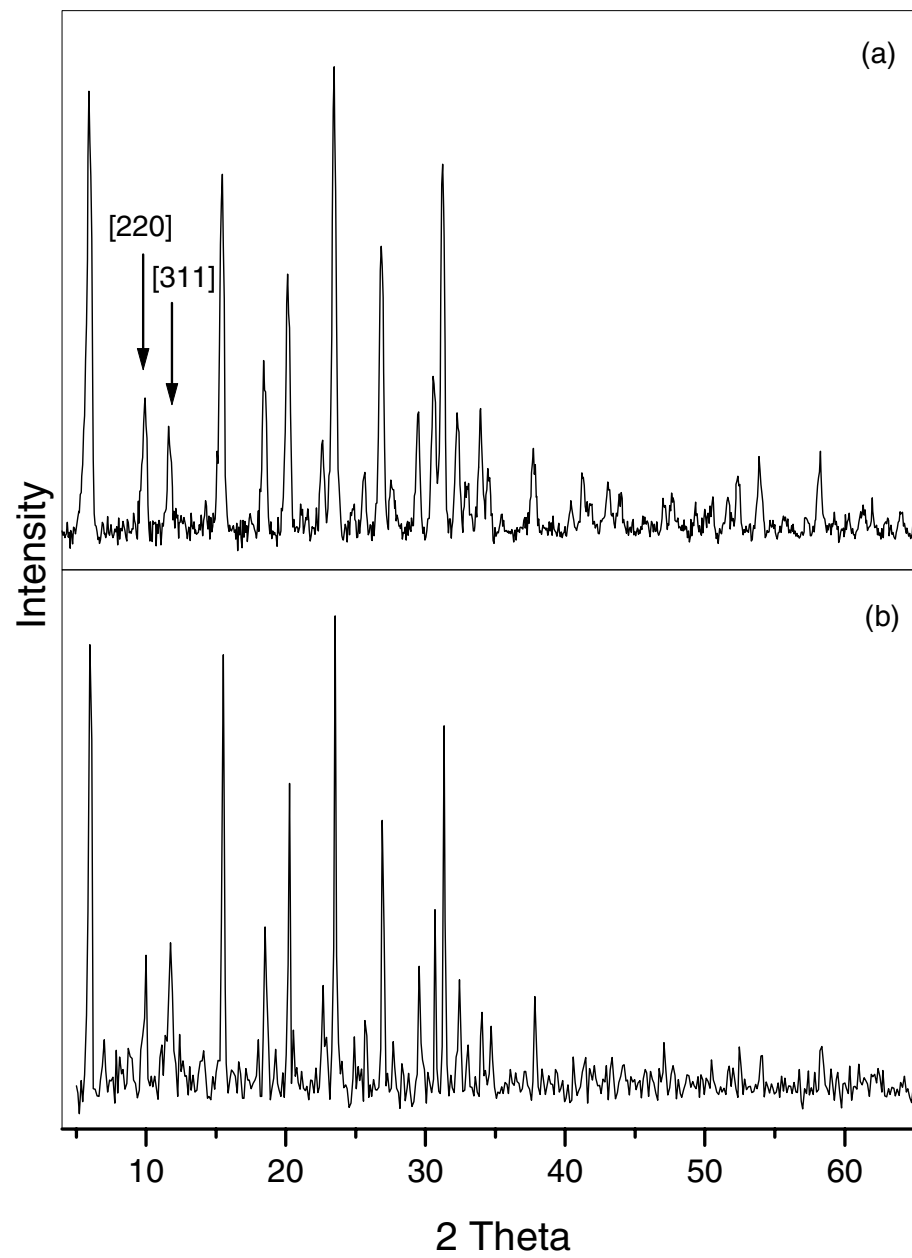


Supplementary material



Powder X-ray diffraction patterns of (a) zeolite-Y; (b) CoPc encapsulated in zeolite-Y

Table : Raman frequencies (cm^{-1}) of CoPc and CoPc encapsulated in zeolite-Y and their assignments (labeling of atoms is shown in the inset of Fig. 6).

CoPc (mixed with KBr)	CoPc encapsulated in zeolite-Y	Assignments
1560 (sh)		
1542 (vs)	1542 (vs)	$\text{C}_\alpha\text{-N}_\beta\text{-C}_\alpha$ stretch
	1528 (sh)	
	1510 (s)	$\text{C}_\alpha\text{-C}_\alpha$ macroring stretch
1484 (h)	1478 (w)	C-N-C bridge stretch and indole ring deformation
1457 (m)		
	1450 (s)	$\text{C}_\alpha\text{-C}_\alpha$ macroring stretch
	1426 (m)	$\text{C}_\gamma\text{-C}_\delta$ ϕ stretch
1419 (w)		C-N-C bridge stretch + indole ring breathing
1408 (w)	1407 (w)	
	1369 (w)	Out-of -phase indole breathing
	1341 (vs)	$\text{C}_\beta\text{-C}_\beta$, pyrrole stretch
1338 (s)		
	1312 (s)	
1308 (sh)		$\text{C}_\beta\text{-C}_\beta$ isoindole stretch
	1290 (w)	
	1227 (w)	
1220 (w)		$\text{C}_\delta\text{-C}_\delta$ isoindole deformation
1183 (m)	1181 (m)	
1144 (h)	1141 (vs)	
1134 (m)		$\text{C}_\alpha\text{-C}_\beta$ macroring stretch
	1116 (m)	

CoPc (mixed with KBr)	CoPc encapsulated in zeolite-Y	Assignments
1111(vw)	1109(m)	
1094 (m)		
	1082 (w)	
	1026 (m)	C _δ -H _β bend
1006 (w)	1008 (m)	C _δ -H _β bend
960 (w)	962 (w)	
916 (w)		
	889 (w)	
	835 (w)	N _α -M stretch
	795 (w)	
784 (w)		C _α -N _β isoindole deformation
752 (s)	751 (w)	C _γ -C _δ isoindole deformation
	723 (vs)	
684 (s)	681 (s)	C _α -N _β macroring breath
644 (m)		
	593 (w)	C _δ -C _δ benzene deformation
	567 (w)	
546 (w)	542 (w)	
483 (m)	481 (s)	C _α -C _β isoindole deformation
232 (w)	231 (w)	N _α -M out-of -plane deformation
	190 (w)	

