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Designing ferrocene biphenyl pyridine modified electrode towards the non-enzymatic electrochemical detection of catechol

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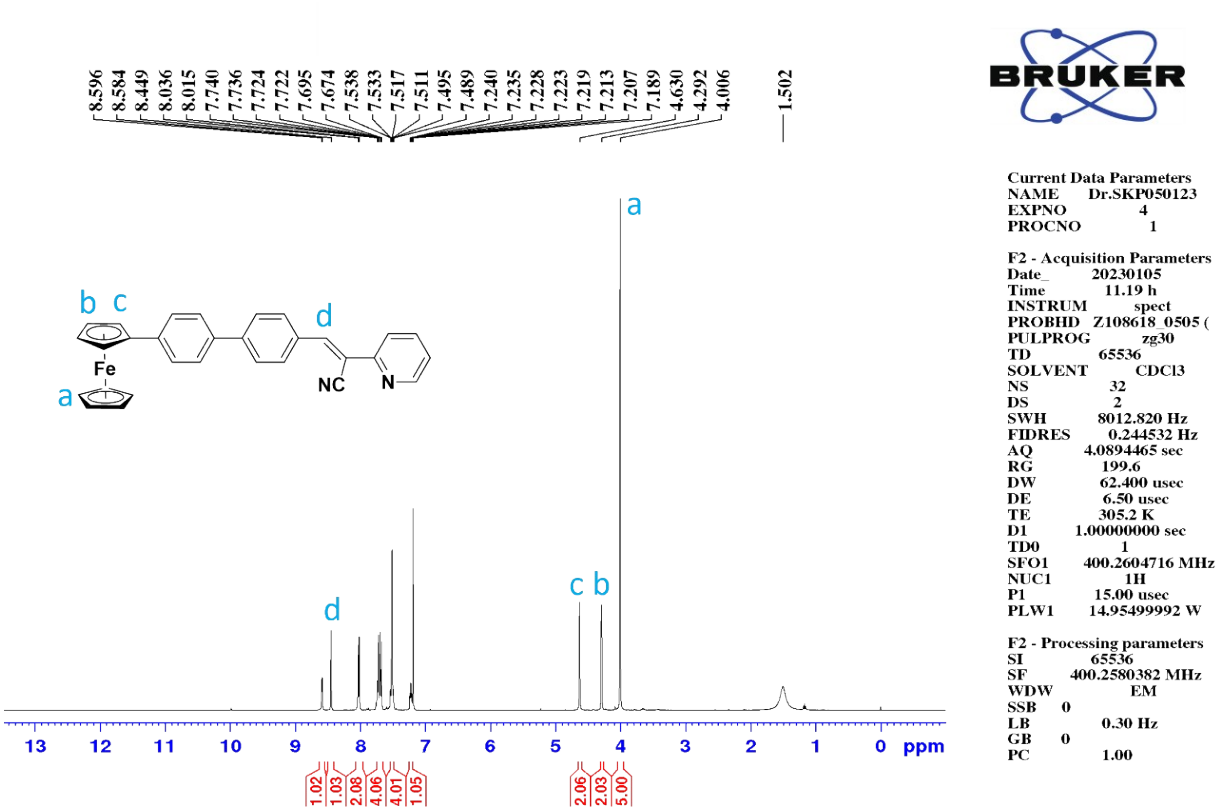

Fig S1. ^{1}H NMR spectrum of Fc-BPy

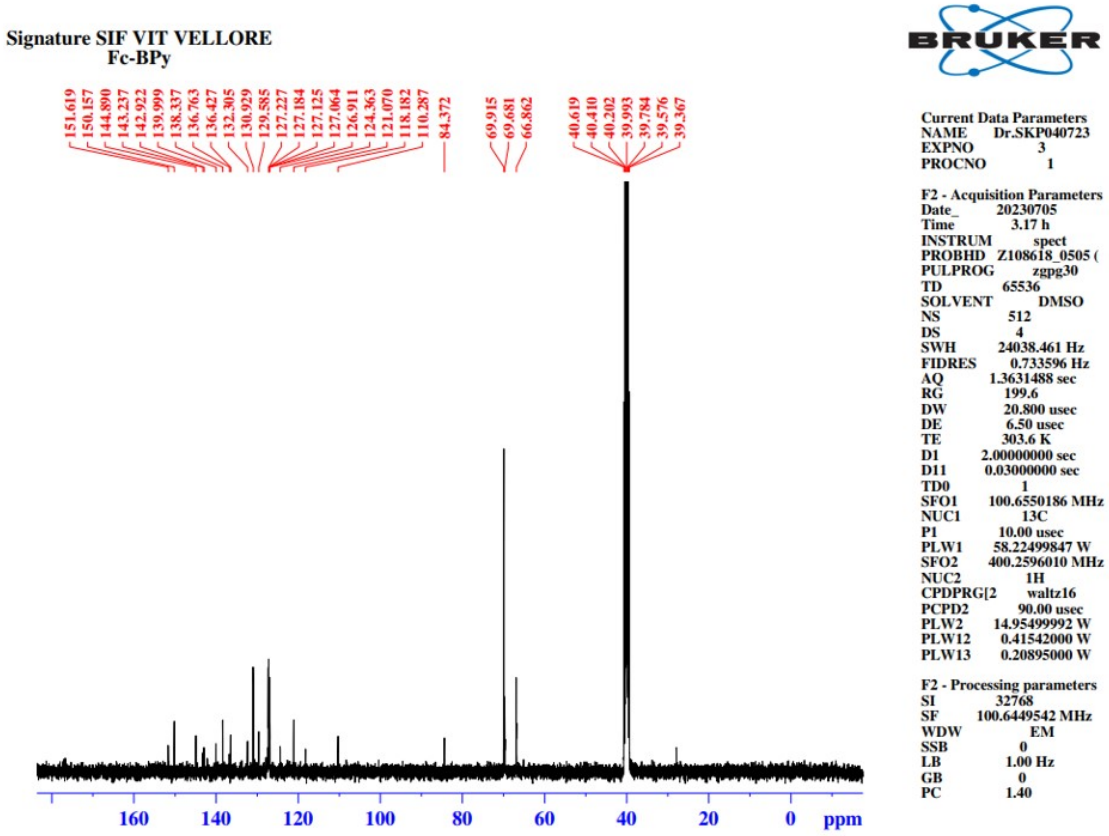

Fig S2. ^{13}C NMR spectrum of Fc-BPy

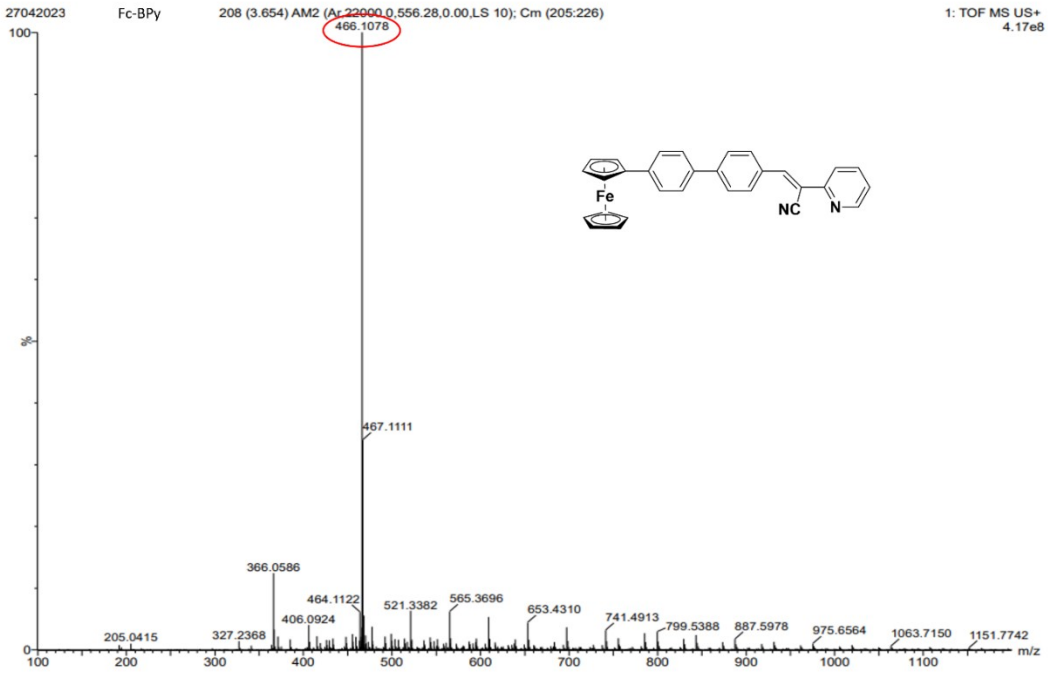

Fig S3. HRMS data of **Fc-BPy**

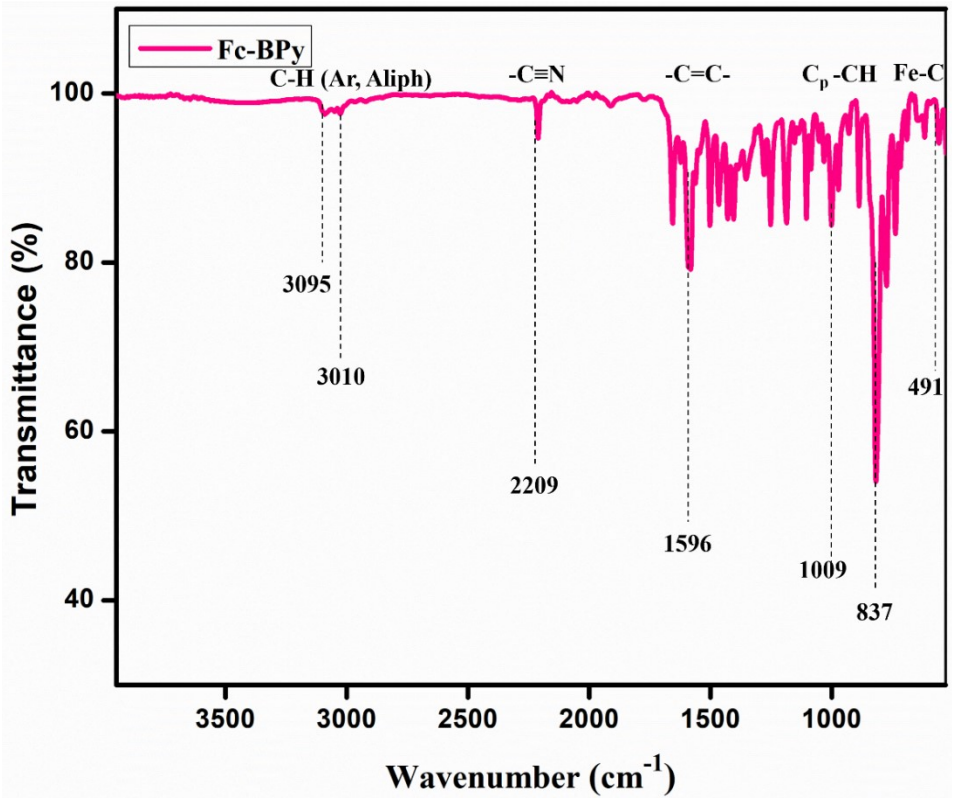

Fig S4. FT-IR Spectrum of **Fc-BPy**

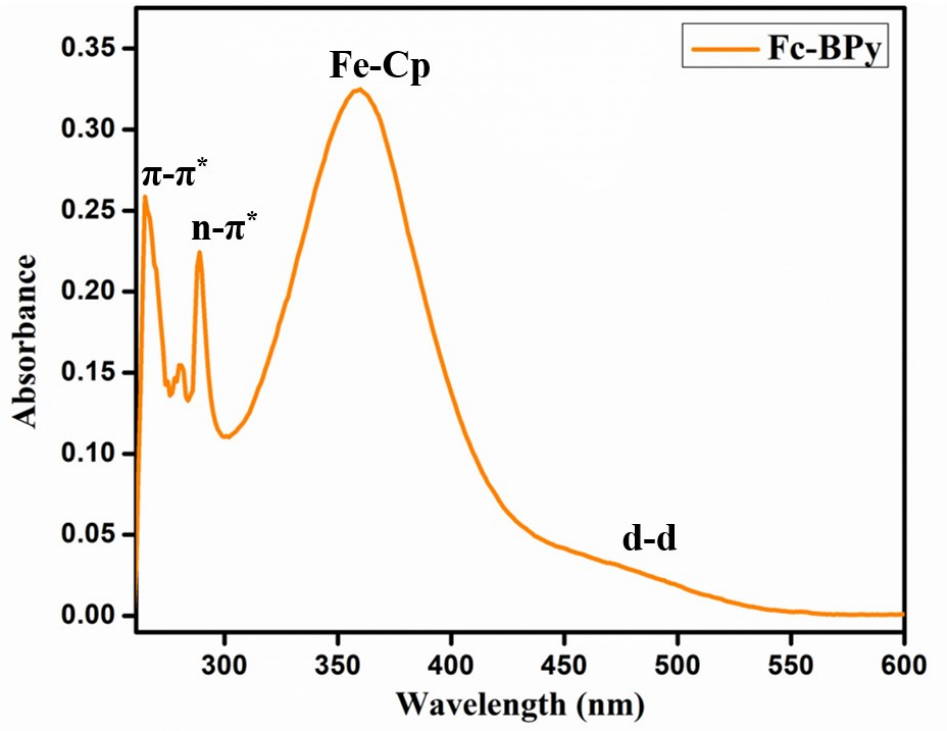

Fig. S5 UV-Vis spectroscopic response of **Fc-BPy**

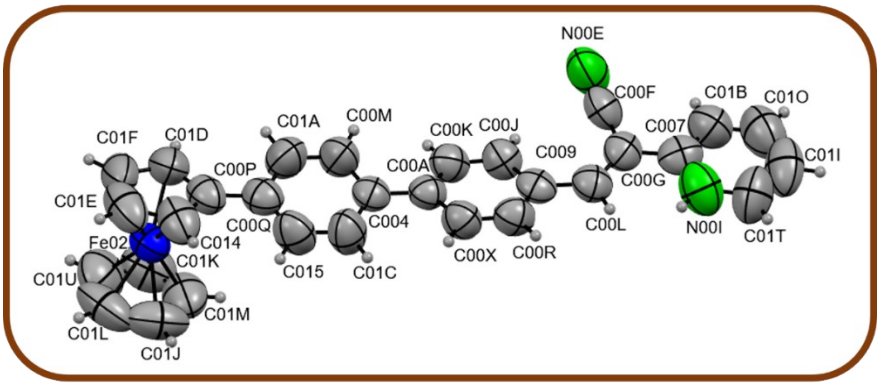

Fig. S6. Single crystal X-ray structure of Fc-BPy with atomic labelling (thermal ellipsoid at 50% probability level)

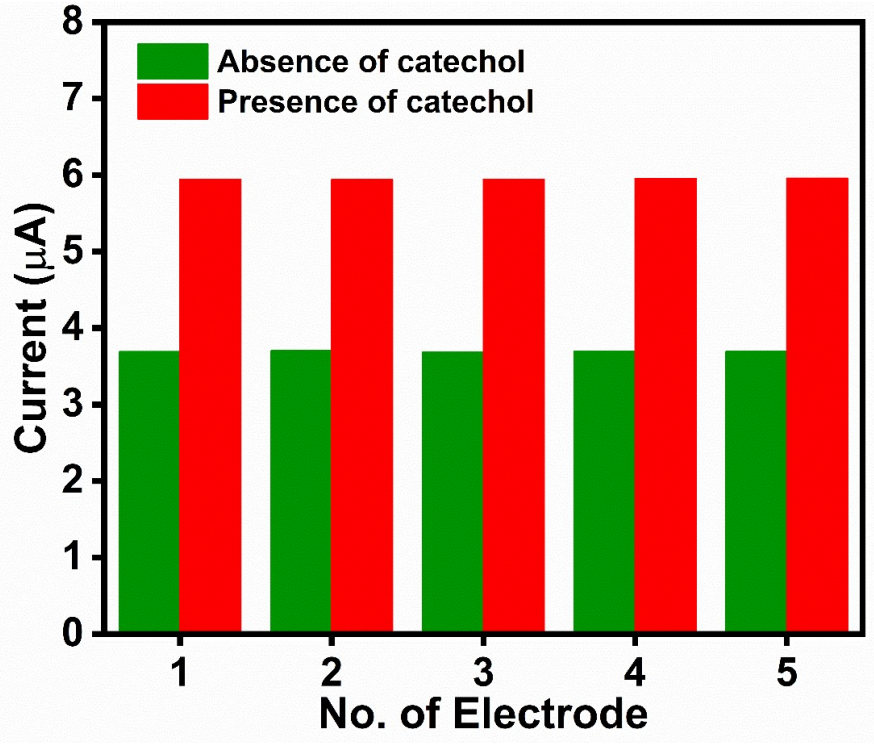

Fig. S7. Columnar diagram for the current response of five similarly prepared Fc-BPy/GCE in absence and presence of CC. Electrolyte: 0.1 M PBS

Table S1. Crystal data and structural refinement of **Fc-BPy**.	
CCDC number	2270814
Empirical formula	$C_{30}H_{22}N_2Fe$
Formula weight	466.10
Temperature	296(2) K
Wavelength	0.71073 Å
Crystal system, space group	Triclinic, P -1
Unit cell dimensions	a = 10.3385(7) Å α = 94.760(2)° b = 11.3107(8) Å β = 98.914(2)° c = 20.2487(14) Å γ = 105.686(3)°
Volume	2232.6(3) $Å^3$
Z, Calculated density	4, 1.389 Mg/m^3
Absorption coefficient	0.697 mm^{-1}
F(000)	970
Crystal size	0.23 x 0.13 x 0.03 mm
Theta range for data collection	1.886 to 25.041 deg.
Limiting indices	-12<=h<=12 -13<=k<=13, -24<=l<=24
Completeness to theta = 25.04	99.8 %
Absorption correction	Semi-empirical from equivalents
Ratio of min. to max. transmission	0.8951
Refinement method	Full-matrix least-squares on F^2
Data / restraints / parameters	7894 / 0 / 596
Goodness-of-fit on F^2	1.035
Final R indices [I>2sigma(I)]	R1 = 0.0662, wR2 = 0.1368
R indices (all data)	R1 = 0.0987, wR2 = 0.1826
Largest diff. peak and hole	0.302 and -0.282 e. $Å^{-3}$