

SUPPLEMENTARY DATA

Calixarene Modified Montmorillonite: A Novel Design for Biosensing Applications

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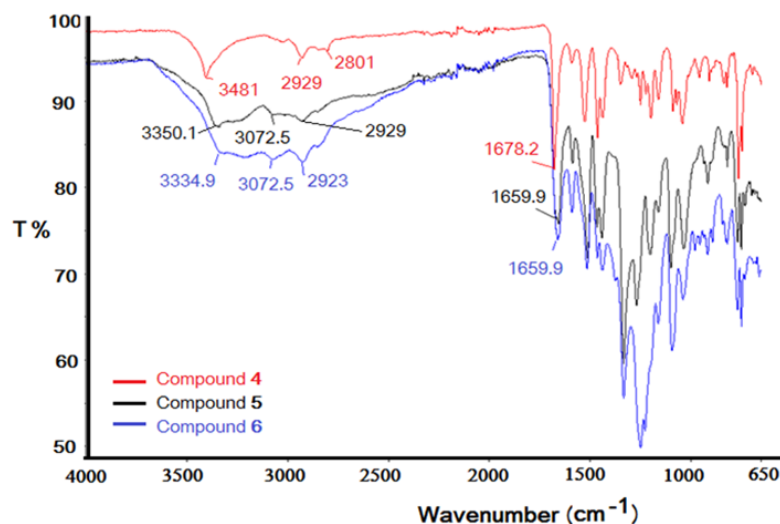


Fig. S1 FTIR (ATR) spectrum of Compounds 4-6.

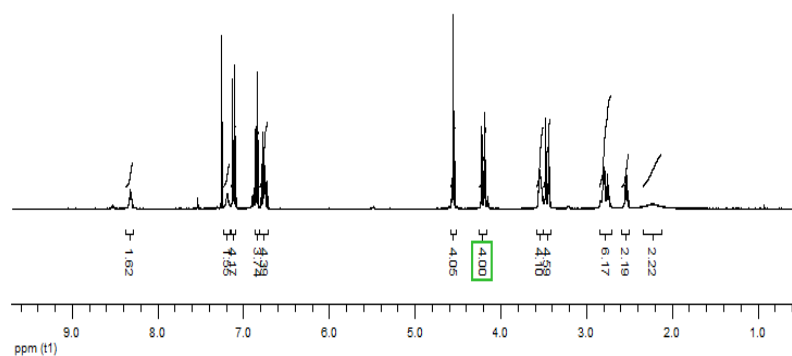
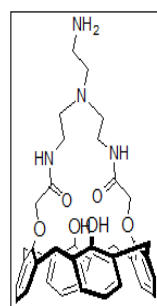


Fig. S2 ¹H-NMR spectrum of Compound 4.

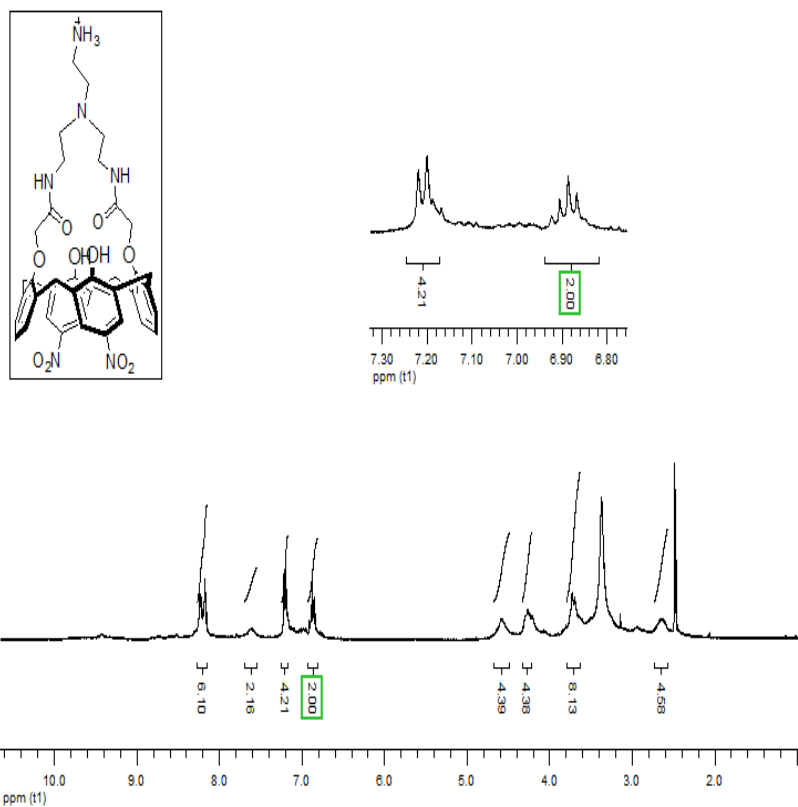


Fig.S3 ¹H-NMR spectrum of Compound 5.

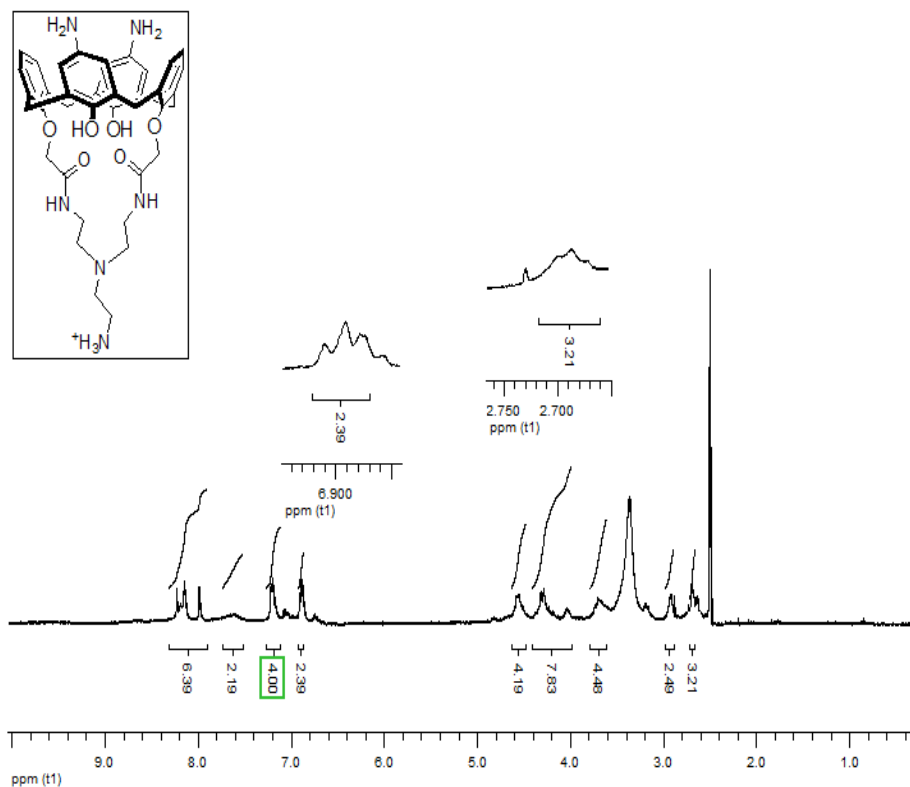


Fig. S4 ¹H-NMR spectrum of Compound 6.

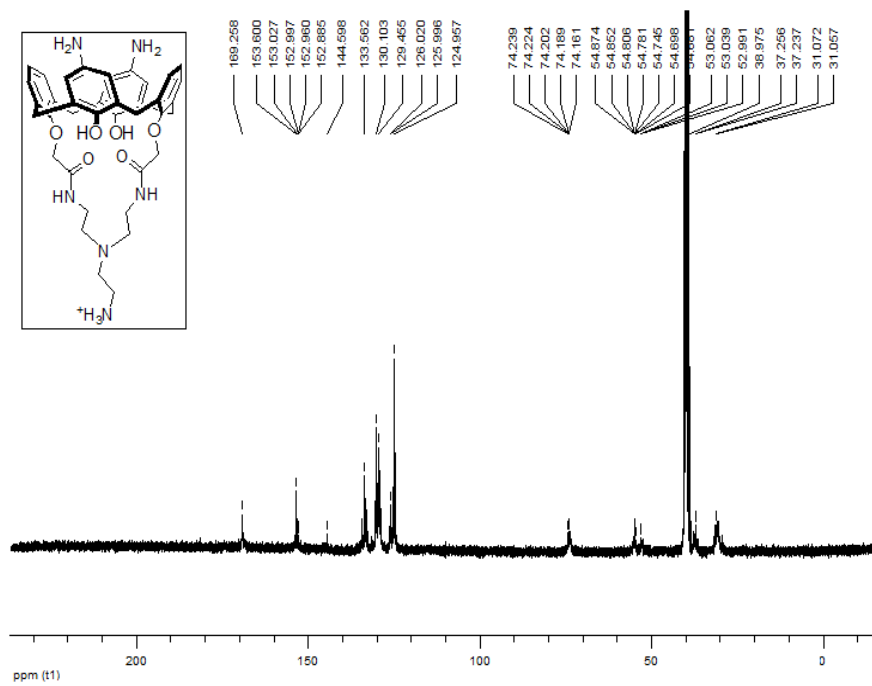


Fig. S5 ¹³C-NMR spectrum of Compound 6.

TABLES

TableS1. Comparison of various PyOx biosensors reported in literature.

Electrode configuration	Immobilization technique	Detection potential	Linear range for glucose	LOD	Operational stability	Reference
AuNPs–AgCl/PANI/gelatin modified PyOx	Entrapment via nanocomposite matrix	-0.7 V	0.05– 0.75 mM	-	12% decrease after 6 h	47
Carbon paste modified with MWCNT	Physicaladsorption	+0.9 V	0.2–30 mM	-	4% decrease after 7 h	39
PyOx–IL–Pt–MnOx/GCE	IL coating	+0.2 V	0.01–0.1 mM	2.0 μM	5 % decrease after 200 measurements	48
HKCN/PyOx	Cross linking	-0.7 V	0.01-1.0 mM	-	No decrease after 81 measurements	49
Osmium redox polymer II /PyOx	Cross linking	-0.08 V	0.13-4.0 mM	-	6 % decrease after 18 h	50
PAMAM/PyOx	Cross linking	-0.7 V	0.03-0.5 mM	7.45 μM	No activity lost during 8 h	33
Carbon paste/HRP/PyOx	Covalent bounding	-0.05 V	0.06-0.65 mM	-	20% decrease during the first 5 h of operation	51
Calix-NH ₂ /Mt/PyOx	Cross linking	-0.7 V	0.01-0.5 mM	0.50 μM	30 % decrease after 72 h	This Work