Supporting Information

Synthesis, Characterization and DNA Binding Studies of Nanoplumbagin

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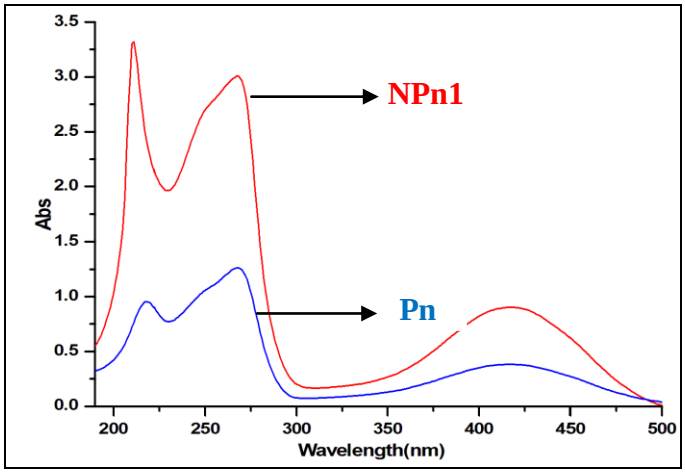

Figure S1 *UV-Vis., absorption spectra of* ***Pn*** *in aqueous media (1 X* 10^{-4}*M). The equivalent quantity of* ***NPn1*** *is fully dispersed in aqueous media (1 X* 10^{-4}*M).*

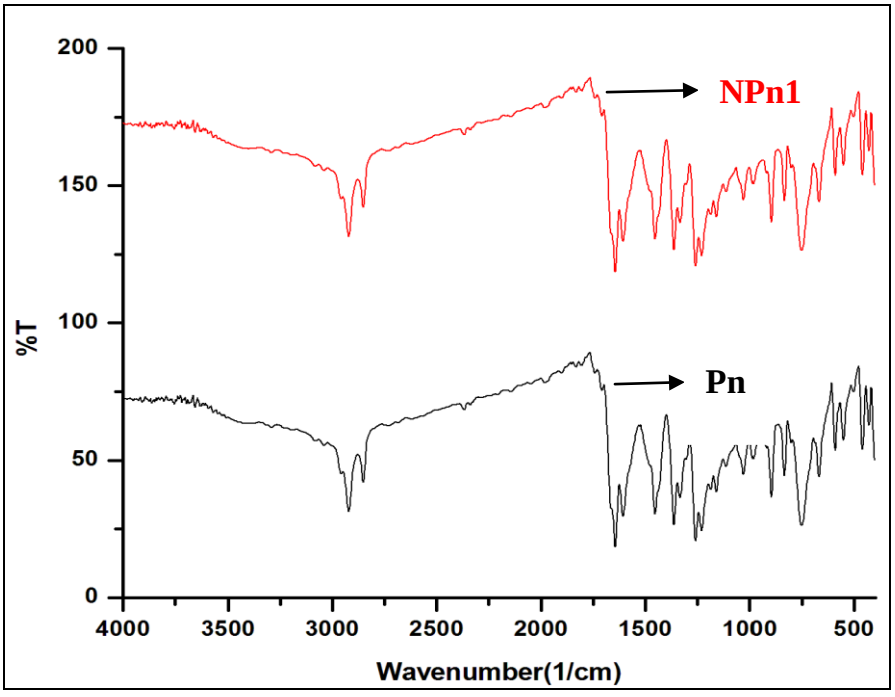

Figure S2 *FT-IR spectra of* ***NPn1*** *and commercial* ***Pn***

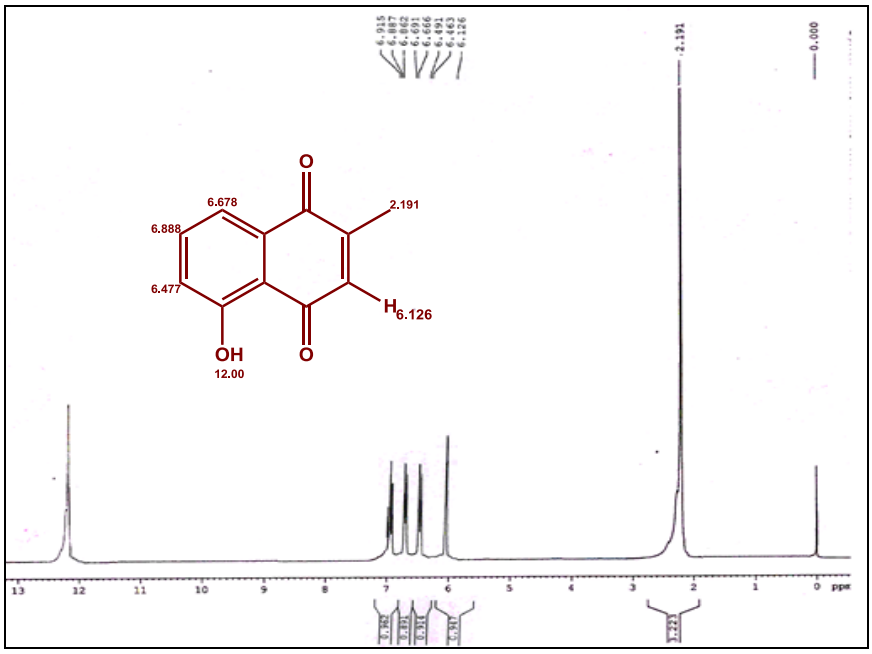

Figure S3 *^{1}H-NMR spectrum of* ***NPn1***

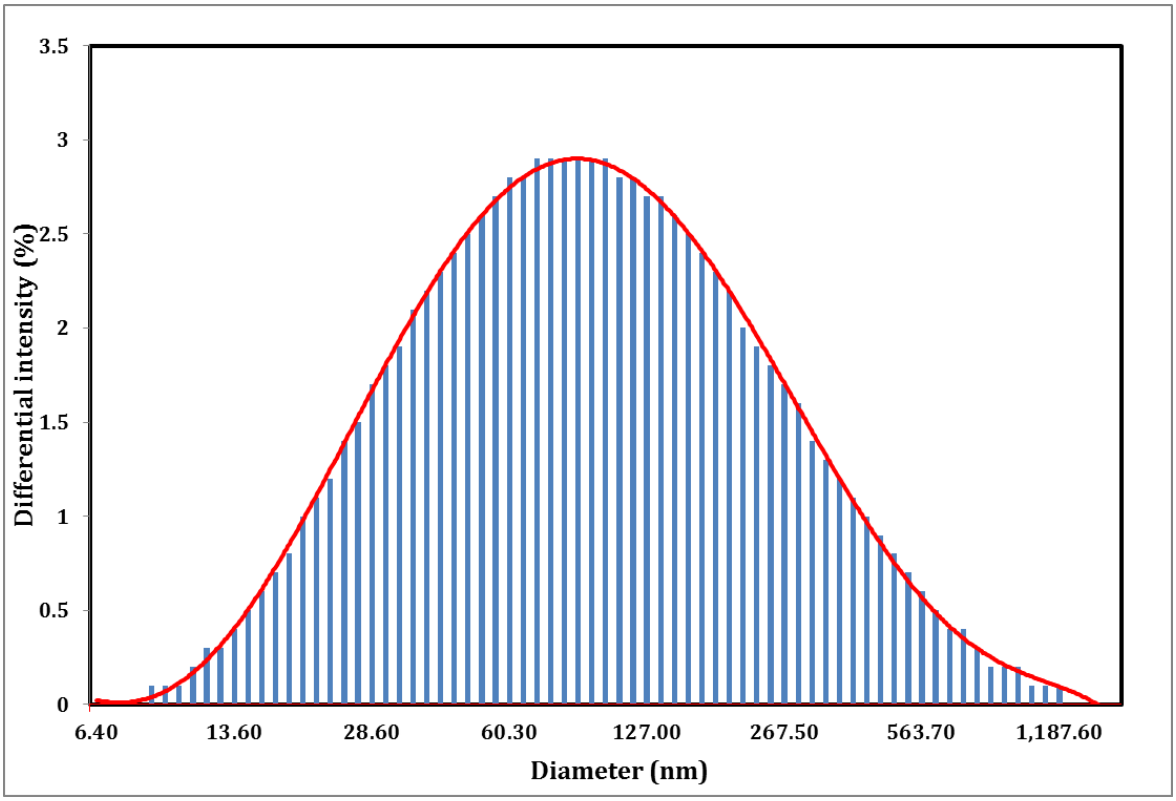

Figure S4 *Dynamic light scattering data of* ***NPn1***

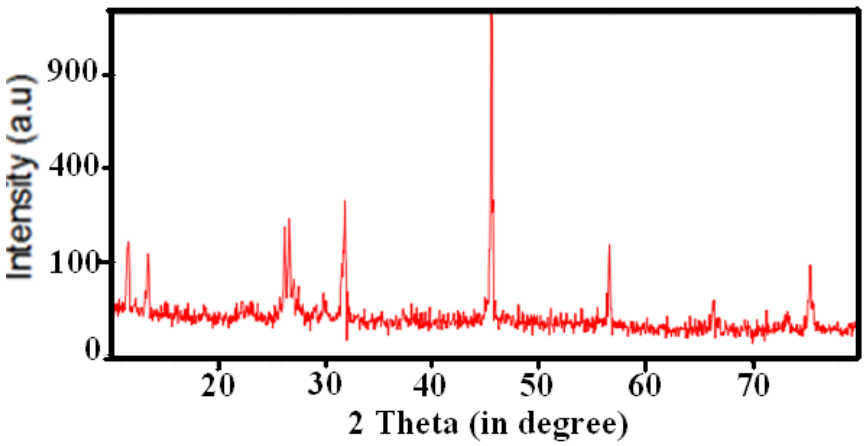

Figure S5 *XRD pattern of* ***NPn1***

Table 1 Absorption spectral properties of NPn1 & PLN bounda to HS-DNA in Tris-HCl buffer at pH 7.1

Compound	R	Red shift Δλ(nm)	K_b (M^{-1})
NPn1	0	-	**2.9 x 10^4**
	0.2	1	
	0.4	2	
	0.6	3	
	0.8	4	
	1	5	
PLN	0	-	**5.3 x10^3**
	0.2	-	
	0.4	-	
	0.6	-	
	0.8	1	
	1	2	

Table 2 Redox behaviour of **NPn1** and **PLN** in the presence and absence of DNA[a]

Compound	R	E_{pc}(mV)	E_{pa}(mV)	ΔE_p(mV)	$E_{1/2}$(mV)	i_{pa}/i_{pc}	K_+/K_{2+}
NPn1	0	-336	-286	50	-311	0.92	1.34
	0.2	-333	-285	48	-309	0.89	
	0.4	-331	-283	48	-307	0.87	
	0.6	-324	-282	42	-303	0.88	
	0.8	-322	-282	40	-302	0.86	
	1	-318	-282	36	-300	0.82	
PLN	0	-313	-265	48	-289	0.87	1.18
	0.2	-309	-262	42	-286	0.83	
	0.4	-307	-262	45	-283	0.81	
	0.6	-305	-261	44	-282	0.81	
	0.8	-304	-260	44	-282	0.79	
	1	-302	-261	41	-281	0.77	

[a]Compounds were taken in Tris-HCl buffer pH and DNA taken in DMSO-buffer mixture at 7.1 pH.

* $E_{1/2}$ is the equivalent of the average of E_{pc} and E_{pa} in CV experiments and ΔE is the pulse amplitude (50 mV) R = [DNA/[compound].

Measured *Vs* Ag/AgCl electrolyte: Scan rate=50 mVs^{-1}; supporting electrolyte 5 mM Tris-HCl / 50 mM NaCl; [compound] = 100 µM.