

Supporting information

Interaction of bisbenzimidazole-substituted carbazole derivatives with G-quadruplexes and living cells

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1. Absorption and Fluorescence Spectra of 7a, 7c

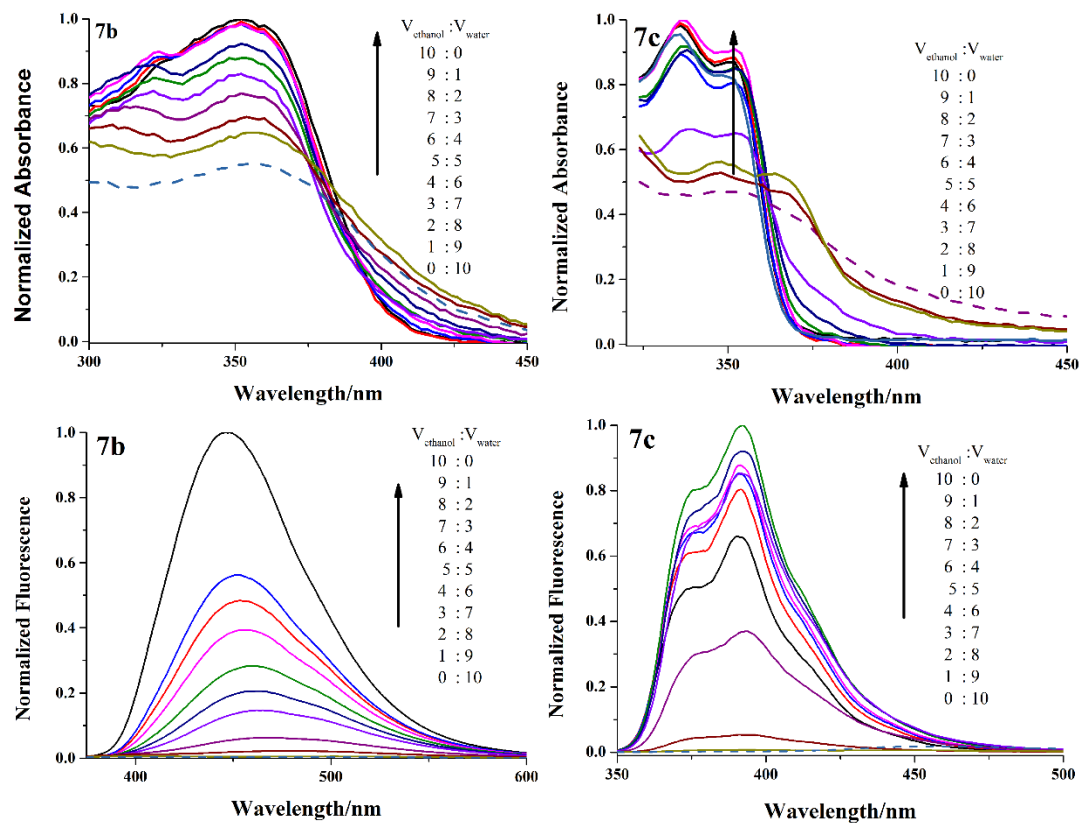


Figure S1. Absorption (a) and fluorescence spectra (b) of **7b** and **7c** (10 μ M) in mixed solvent of ethanol and water, excitation at 350 nm.

2. Fluorometric titration

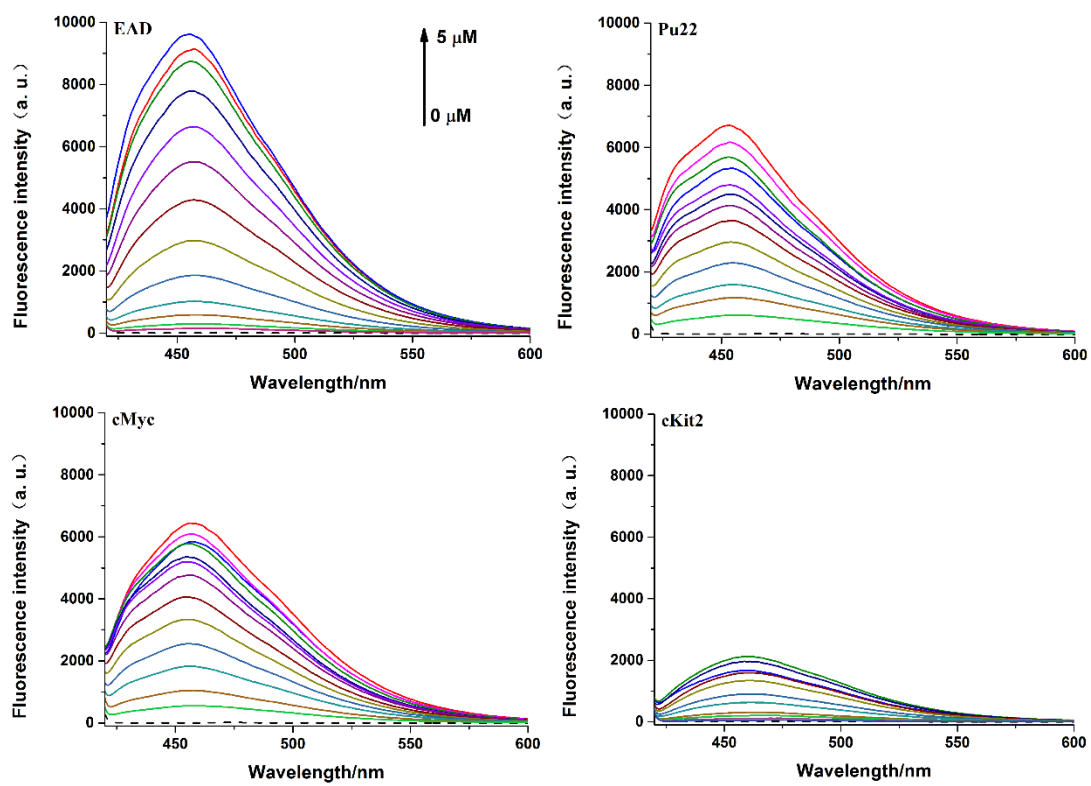


Figure S2. Fluorometric titration spectra of **7a** (1 μM) with different DNA ($\lambda_{\text{ex}} = 408$ nm).

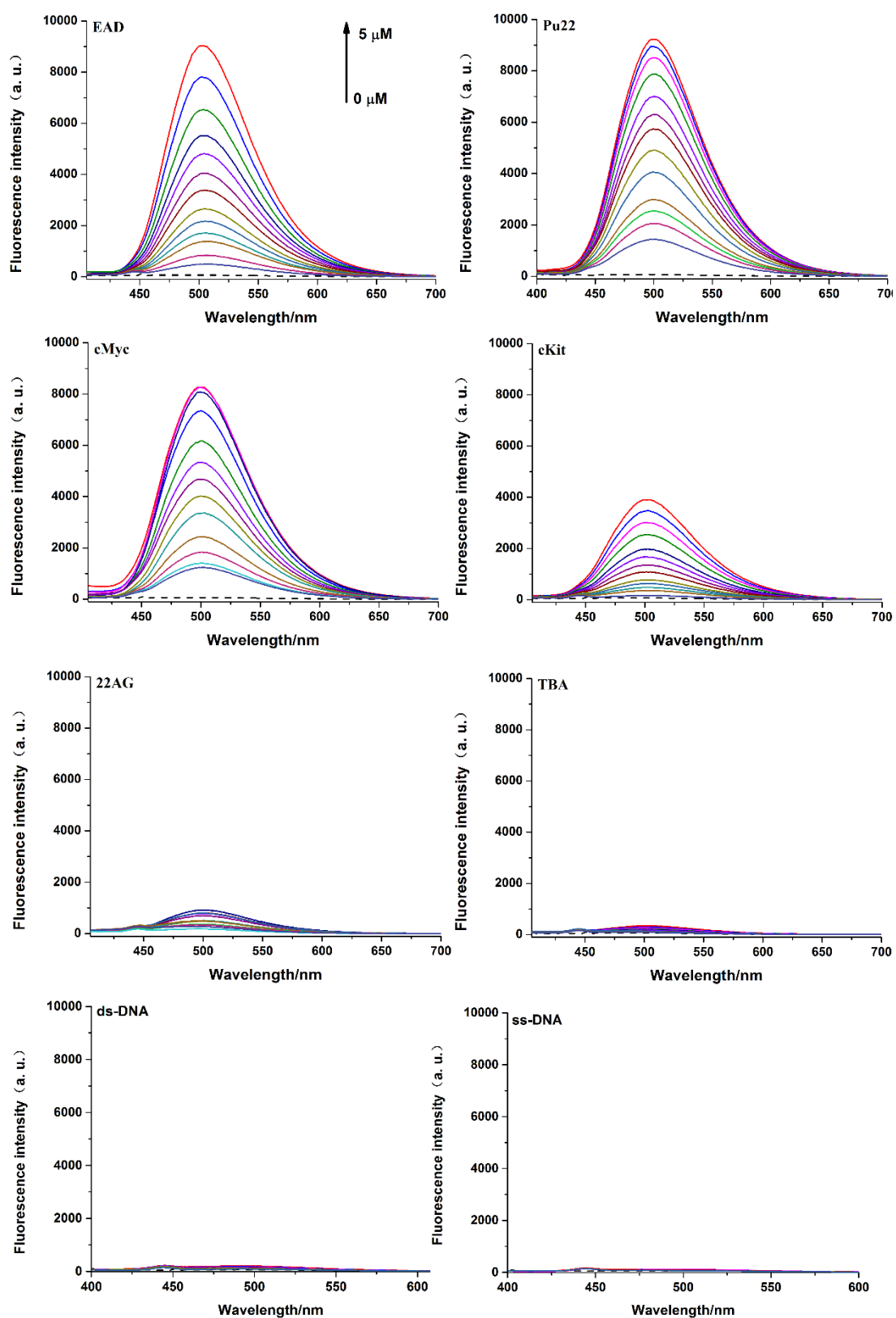


Figure S3. Fluorometric titration spectra of **7b** (1 μM) with different DNA ($\lambda_{\text{ex}} = 385 \text{ nm}$).

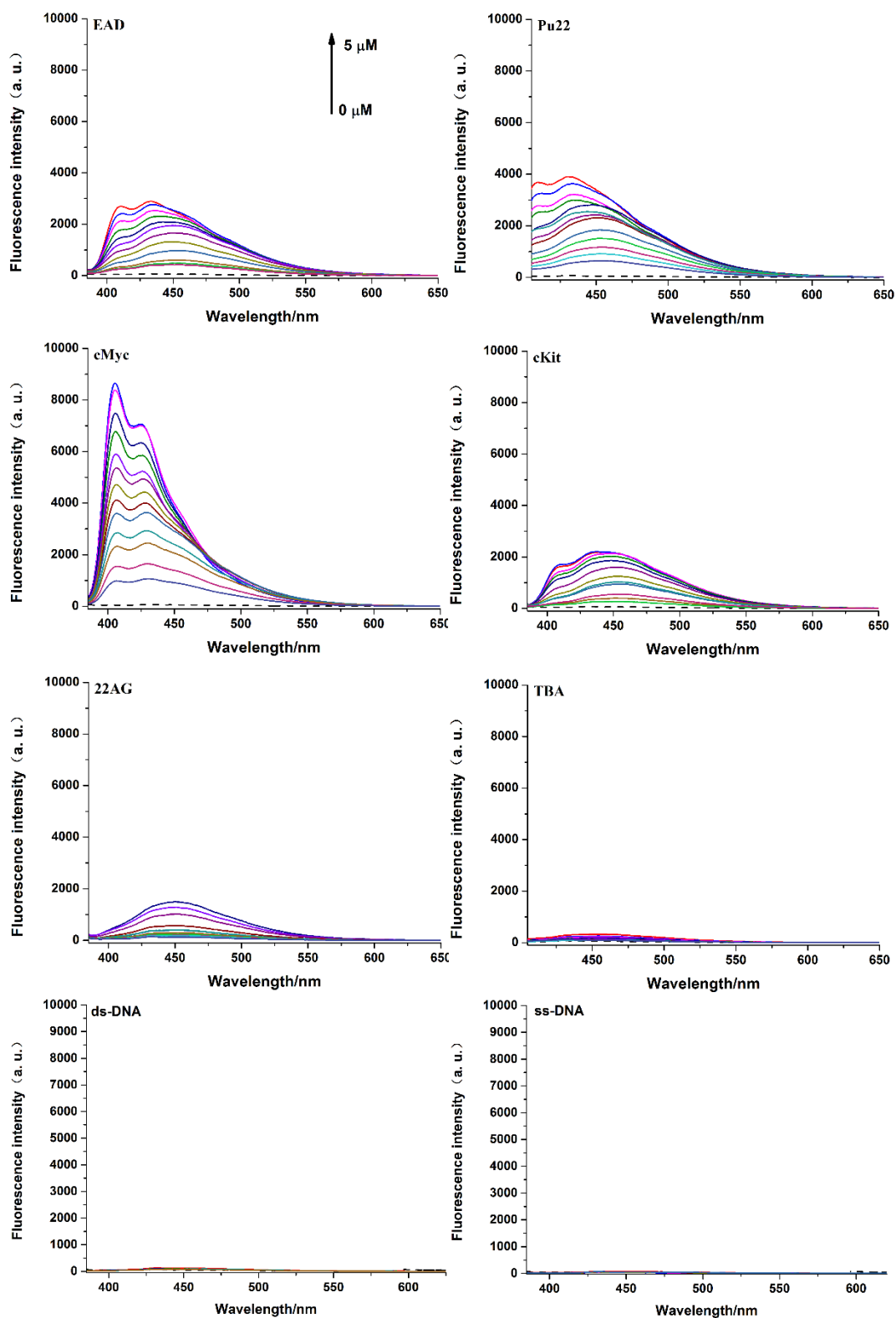


Figure S4. Fluorometric titration spectra of **7c** (1 μM) with different DNA ($\lambda_{\text{exc}} = 375 \text{ nm}$).

4. CD experiment

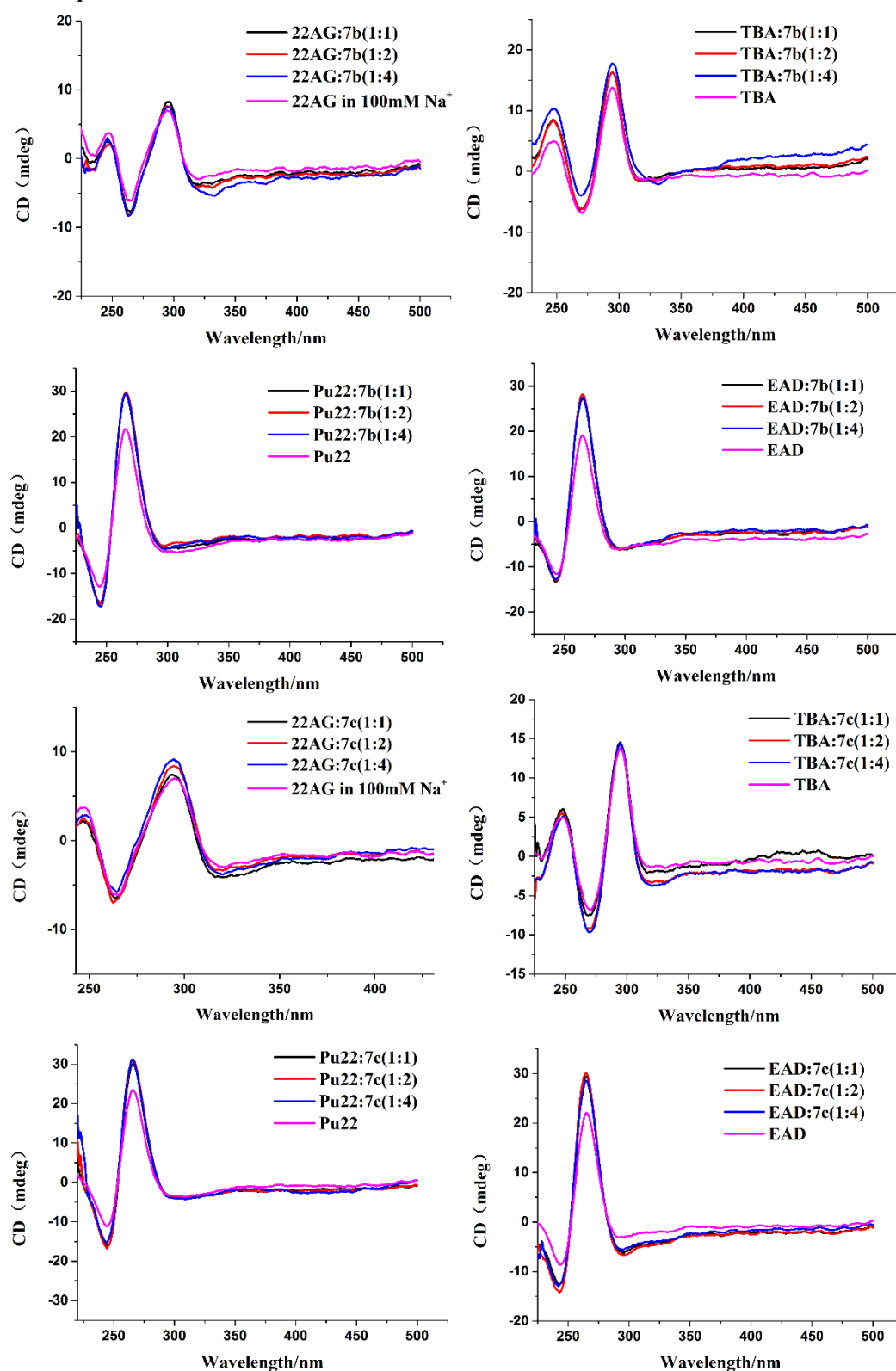


Figure S5. CD spectra of different G4s (4 μ M) (EAD, Pu22, TBA, 22AG) in the absence and presence of 7b and 7c.

5. Confocal images

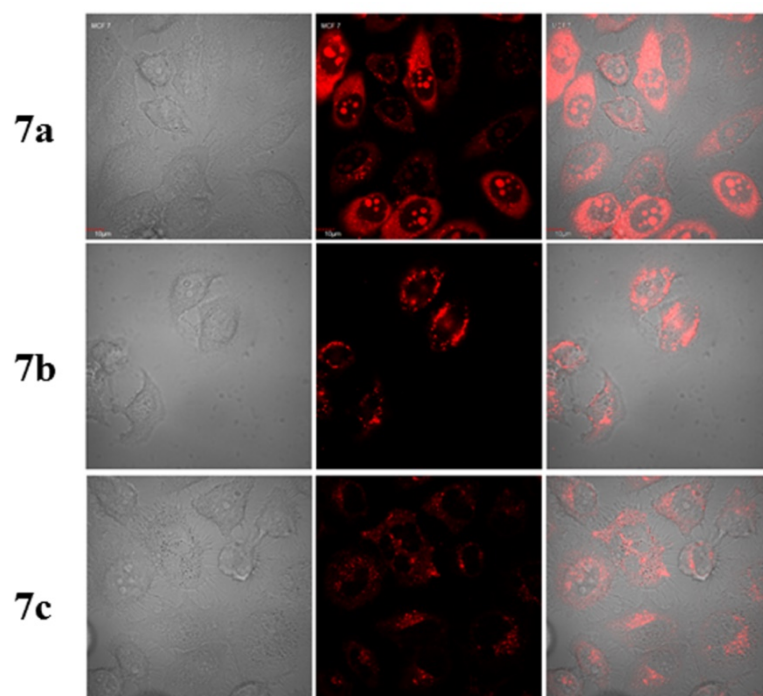
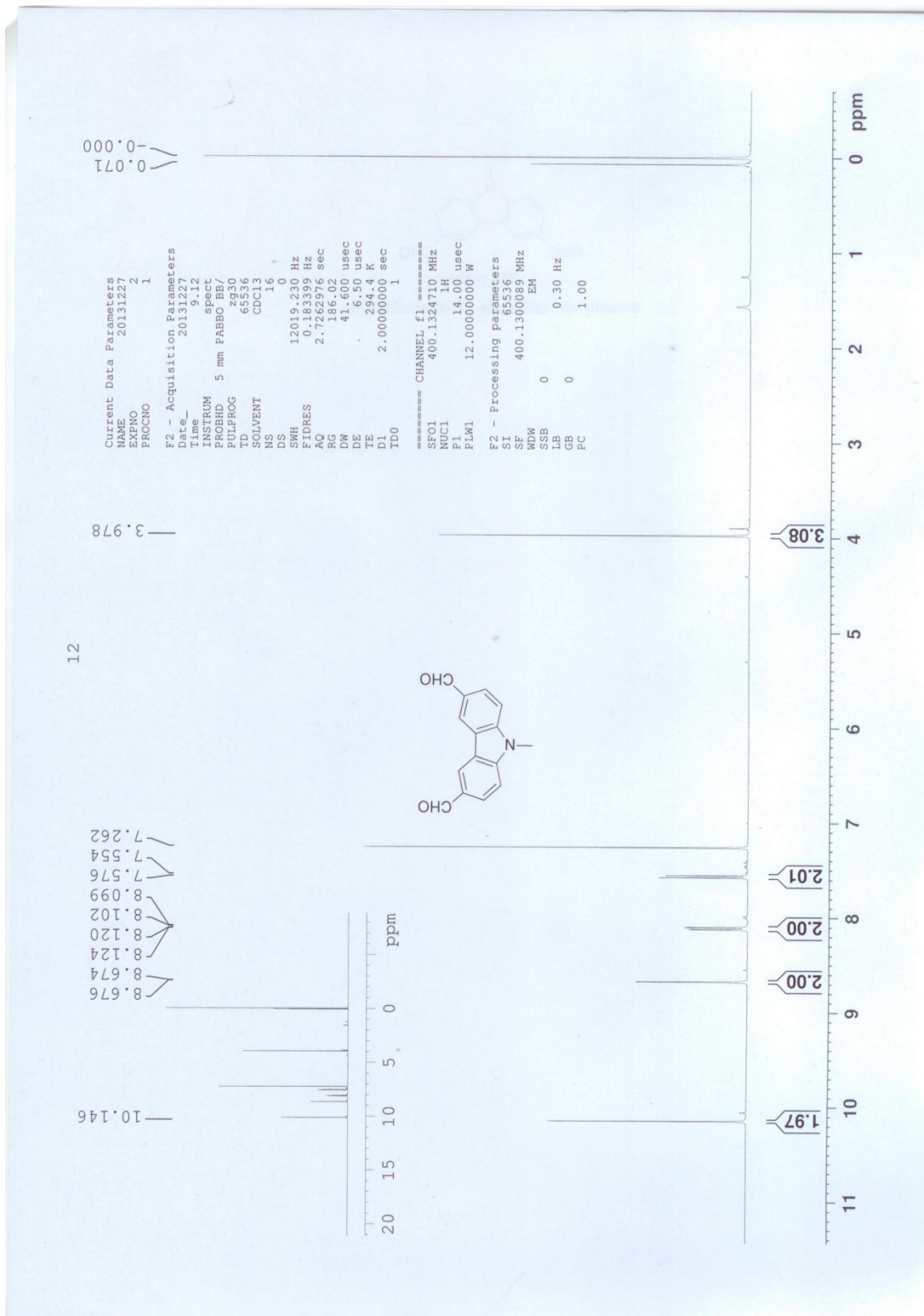


Figure S6. Confocal images of MCF-7 cells stained by **7a**, **7b** and **7c** (10 μ M).

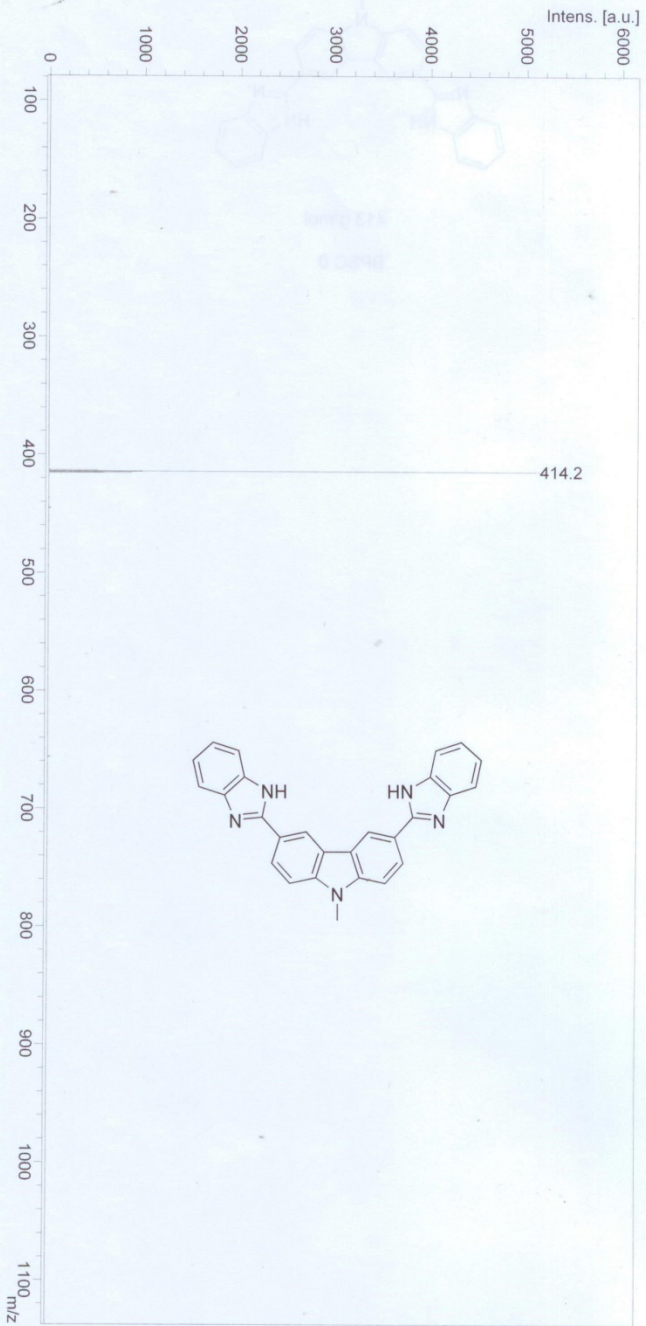
6. ¹H NMR spectra and MS of compounds



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MALDI-TOF, CCA, 4, 20140325



ESI(P),AO,20140916

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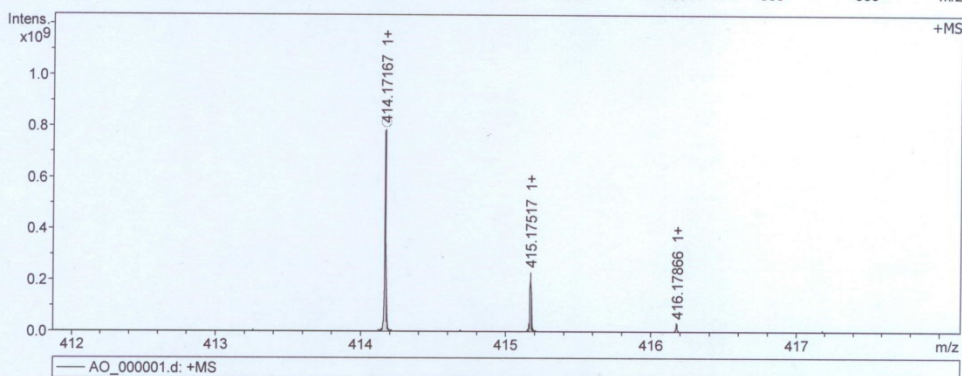
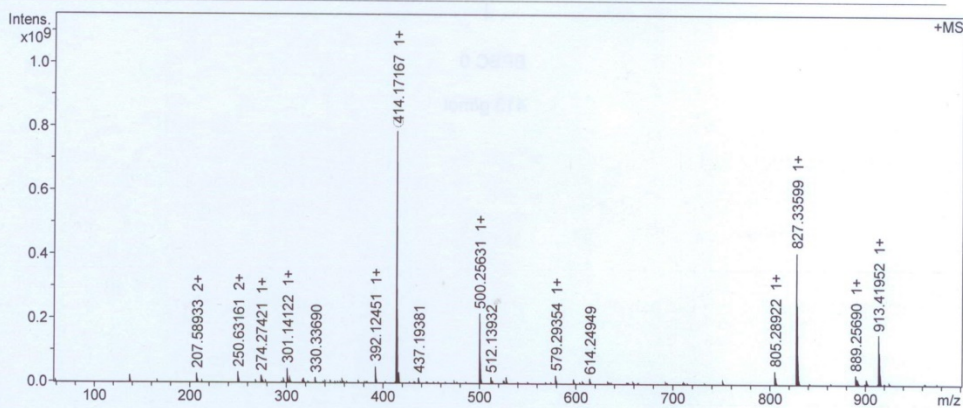
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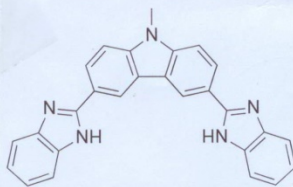
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Instrument solariX

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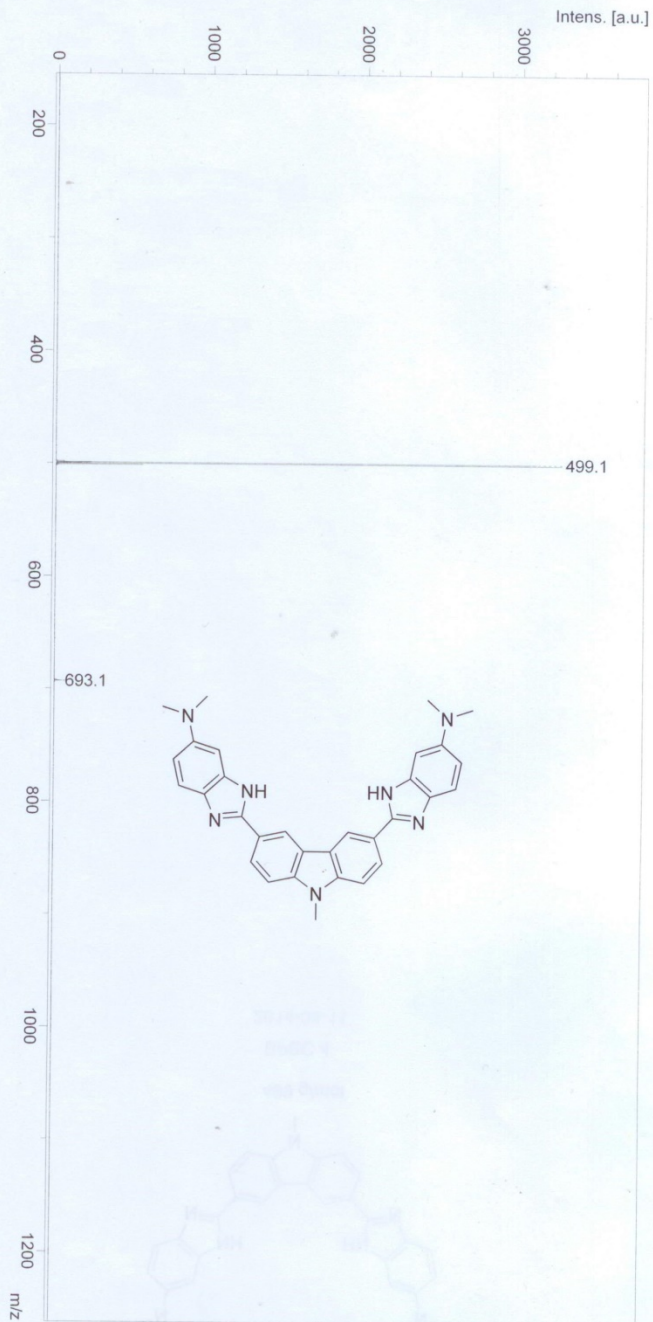
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Meas. m/z	#	Ion Formula	Score	m/z	err [ppm]	Mean err [ppm]	mSigma	rdb	e ⁻ Conf	N-Rule
414.171671	1	C ₂₇ H ₂₀ N ₅	100.00	414.171322	-0.8	-1.2	10.4	20.5	even	ok



MALDI-TOF, CCA, 20, 20140410



ESI(P),D4,20140916

Analysis Info

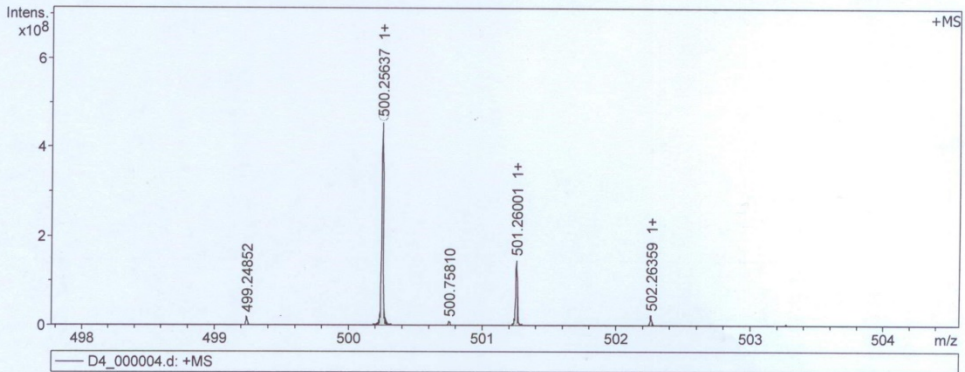
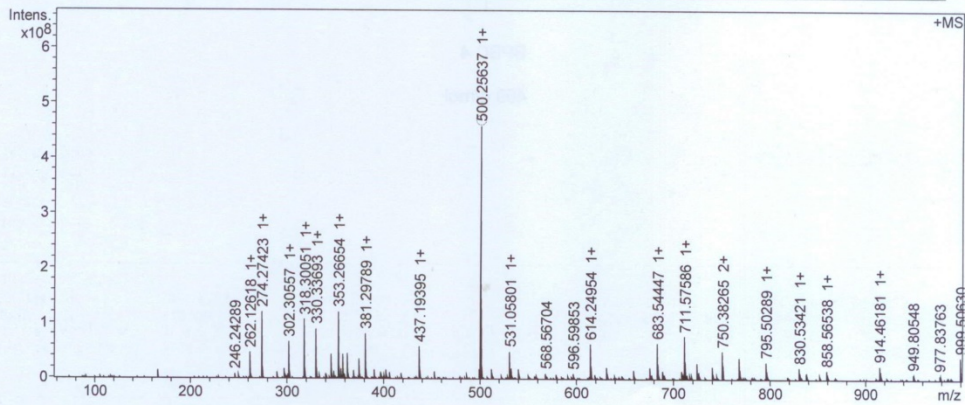
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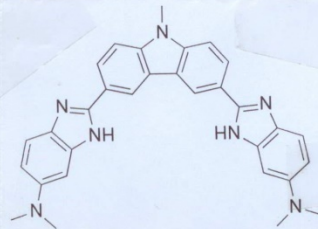
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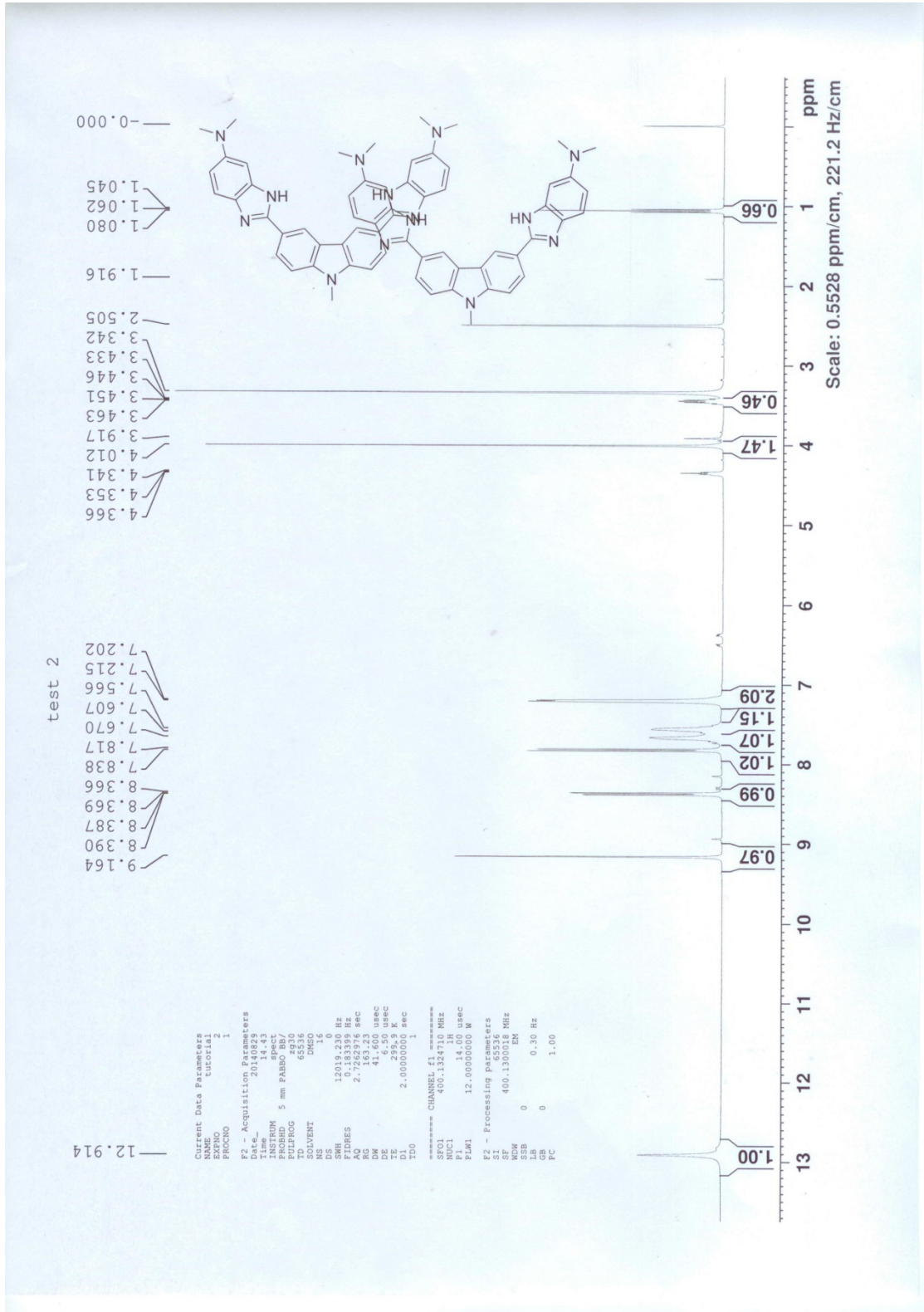
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Polarity	Positive	No. of Cell Fills	1	Data Acquisition Size	2048576
Broadband Low Mass	57.8 m/z	Source Accumulation	0.001 sec	Data Processing Size	2097152
Broadband High Mass	1000.0 m/z	Ion Accumulation Time	0.001 sec	Apodization	Sine-Bell Multiplication



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500.256365	1	C31H30N7	100.00	500.255720	-1.3	-1.7	22.5	20.5	even	ok
	2	C33H32N4O	84.09	500.257063	-1.4	1.1	28.8	20.0	odd	ok





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d4

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