

Electronic Supplementary Information

Amphiphilic cationic cyclodextrin nanovesicles: a versatile cue for guiding cell adhesion

Francesco Valle^{a,b,†*}, Silvia Tortorella^{c,†}, Angela Scala^d, Annalaura Cordaro^{d,e}, Marianna Barbalinardo^a, Fabio Biscarini^f and Antonino Mazzaglia^{e*}

^a*Consiglio Nazionale delle Ricerche, Istituto per lo Studio dei Materiali Nanostrutturati (CNR-ISMN), Via P. Gobetti 101, 40129, Bologna, Italy*

^b*Consorzio Interuniversitario per lo Sviluppo dei Sistemi a Grande Interfase (CSGI), Firenze, Italy*

^c*Dipartimento di Chimica Industriale “Toso Montanari”, Università di Bologna “Alma Mater Studiorum”, Via Zamboni 33, 40126, Bologna, Italy*

^d*Dipartimento di Scienze Chimiche, Biologiche, Farmaceutiche ed Ambientali, Università degli Studi di Messina, Viale F. Stagno D’Alcontres, 31, 98166, Messina, Italy*

^e*Consiglio Nazionale delle Ricerche, Istituto per lo Studio dei Materiali Nanostrutturati (CNR-ISMN) c/o Dipartimento di Scienze Chimiche, Biologiche, Farmaceutiche ed Ambientali, Università degli Studi di Messina, Viale F. Stagno D’Alcontres, 31, 98166, Messina, Italy*

^f*Università di Modena e Reggio Emilia, Dipartimento di Scienze della Vita, Via Campi 103, 41125 Modena, Italy and Istituto Italiano di Tecnologia, Center for Translational Neurophysiology. Via Fossato di Mortara 17-19, 4412, Ferrara, Italy*

[†]*ST and FV equally contributed*

Corresponding Authors:

Email Address: francesco.valle@cnr.it; antonino.mazzaglia@cnr.it

MALDI-TOF analyses were performed on a Perseptive (Framingham, MA) Voyager STR instrument equipped with delayed extraction technology. Ions were formed by a pulsed UV laser beam (nitrogen laser, $\lambda = 337$ nm) and accelerated through 24 kV. Samples were diluted in CHCl_3 and mixed 1:1 v/v with the matrix solution obtained by dissolving 2,5-dihydroxybenzoic acid (DHB) in CH_3OH at a concentration of 30 mg/mL.

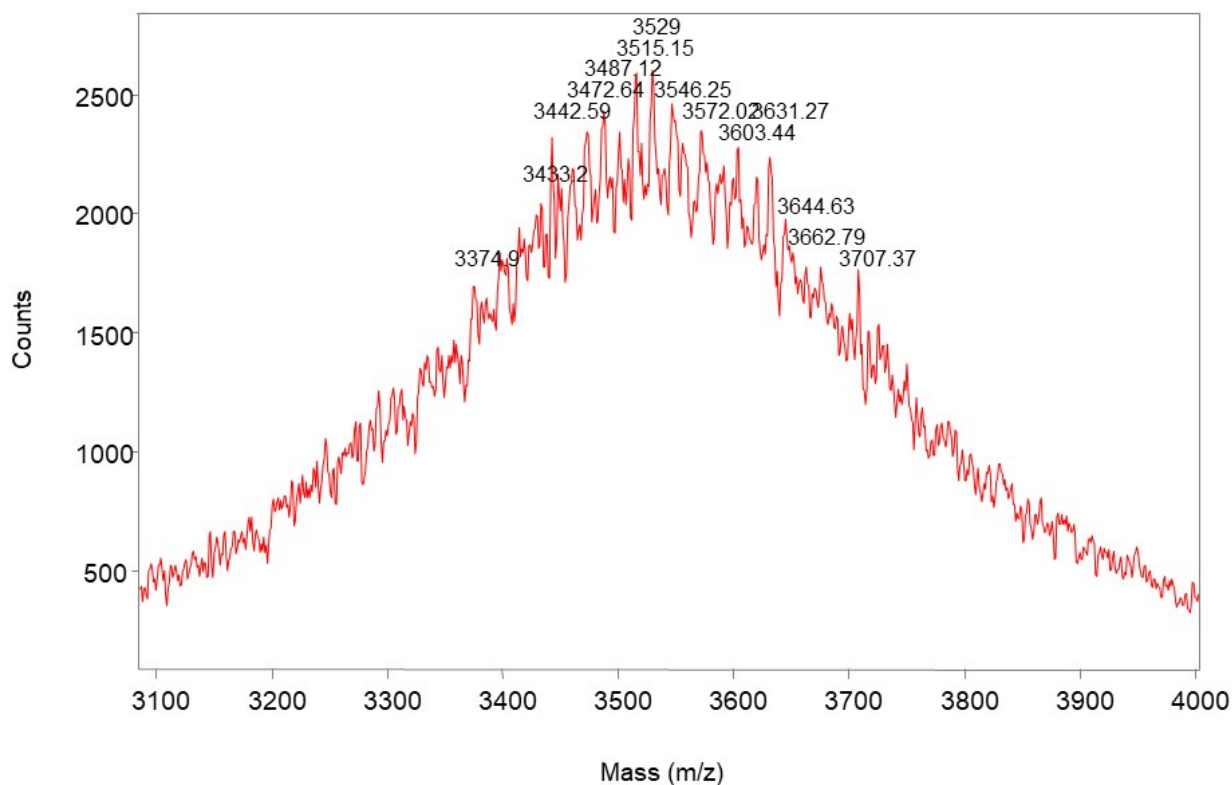
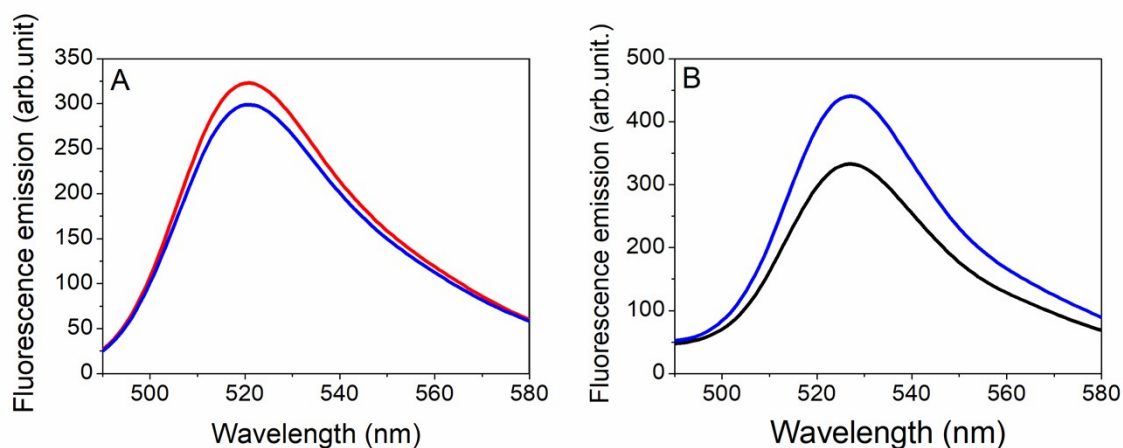


Figure S1 MALDI-TOF spectrum of cationic aCD (SC16NH₂), m/z (main peaks only): 3487.12 [M9EO] Na⁺; 3529 [M10EO] Na⁺; 3546.25 [M11EO]; 3572.02 [M11EO] Na⁺



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figure S2: Fluorescence emission spectra of a) FITC (red line, $\lambda_{exc}=400$ nm) and b) aCD/FITC (black line, $\lambda_{exc}=400$ nm,) in ultrapure water, free and in the presence of Triton X (2 μ L 0.1 % v/v, blue line). aCD/FITC were prepared at 20:1 molar ratio ([aCD]= 120 μ M, [FITC]= 6 μ M). Spectra were acquired at r.t.

Table S1 : Size distribution, PDI and ζ -potential of aCD and aCD/FITC in physiological aqueous dispersion (NaCl 0.9% w/w) at pH \approx 6.3.

System	D_H (nm \pm SD)(%) ^a	PDI	ζ (mV \pm SD)
aCD	56 \pm 34 (87)	≥ 0.4	32 \pm 3
	558 + 691 (13)		
aCD/FITC	98 \pm 59 (96) ^b	≥ 0.4	38 + 3

^a Size with corresponding intensity % distribution. ^b Microaggregates (≥ 1 μ m) are present (\approx 4%).

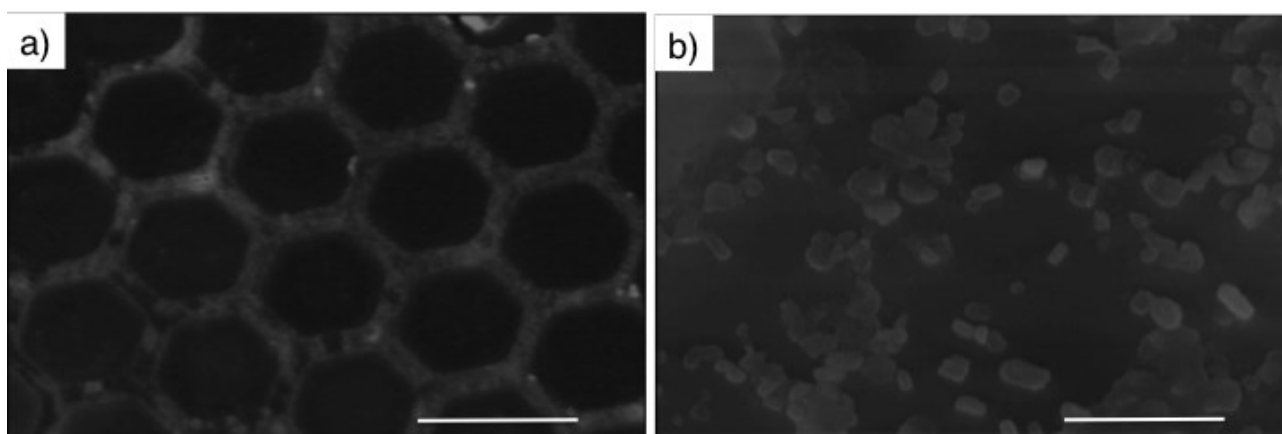


Figure S3: Scanning electron micrographs of the patterned aCD/FITC. In (a) and (b) are reported two different magnifications showing both the whole hexagonal pattern and the details of the aCD/FITC within the pattern features. The scale bars are respectively 75 μ m in (a) and 2.3 μ m in (b).

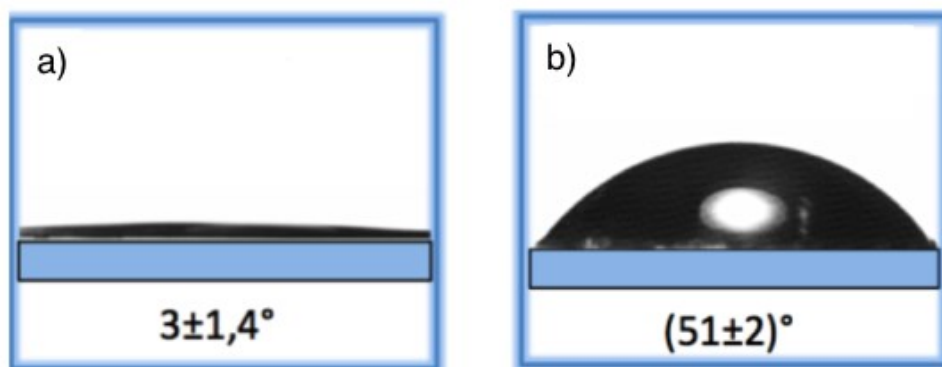


Figure S4: Contact angle of the glass coverslips prior (a) and after the exposition for one minute at O₂ plasma (b) . It is evident how the O₂ plasma treated glass (a) is more hydrophilic than the bare one (b)