

Supplementary Information

Superhydrophobic Surfaces allow X-ray Scattering Probing of Exosomes self organization

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SEM Images of the Exosomes residuals

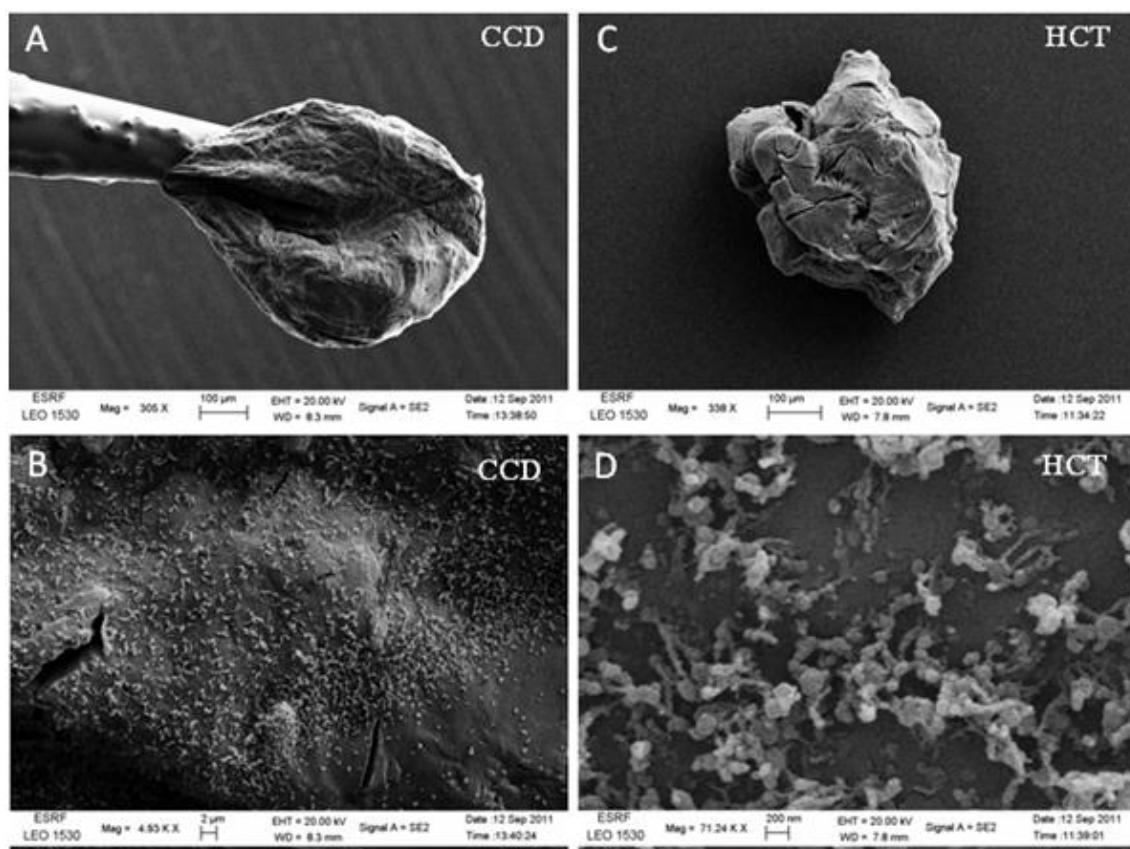


Figure S1 A,B: SEM images of exosome residue from the CCD841-CoN cell line attached to a glass capillary tip; C,D: SEM images of exosome residue from the HCT116 colon cell line

SR microWAXS experiments

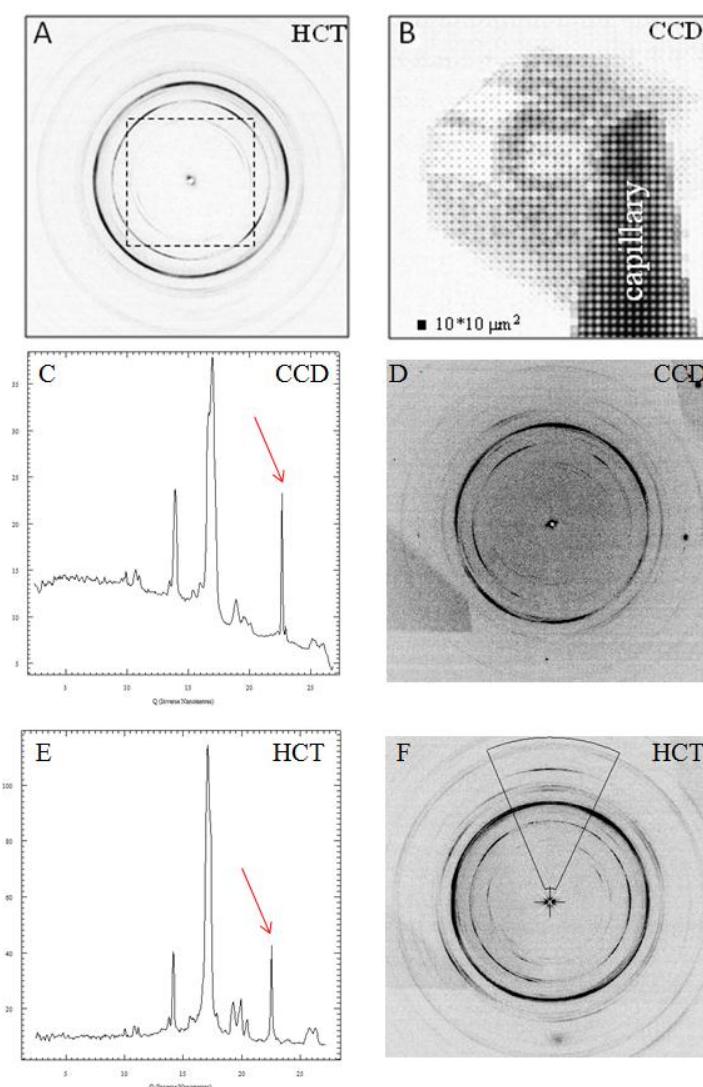


Figure S2 A: HCT microWAXS pattern; B: Composite Diffraction Image for CCD residue. Each pixel contains the area defined by a square in Fig.S2A; C-F: azimuthally averaged plots and related selected microWAXS patterns of CCD and HCT exosomes showing the peak at 22.5 nm^{-1} detected at the XMI Lab.

A composite diffraction image¹ based on a raster-diffraction scan with $10 \mu\text{m}$ step increment across the CCD-residue is shown in Figure S2B. The individual pixels correspond to diffraction patterns which are limited to the area defined by the square in Figure S2A. The raster-diffraction image allows discerning the shape of the glass capillary from the residue (Figure S2B). The residue shows inhomogeneities due to different thicknesses which the X-ray microbeam probes.

Figures S2C-F show the presence of the peak at 22.5 nm^{-1} in selected HCT and CCD patterns collected at the ID13 beamline with the $1 \mu\text{m}$ beam. The same peak was detected by the analysis of the same residuals at the XMI Lab with the $200 \mu\text{m}$ beam.

Synchrotron Radiation Experiments

The distances were calibrated by diffraction patterns from corundum and Ag behenate powder speckles.²

References

- (1) Riekel, C.; Burghammer, M.; Davies, R.; Gebhardt, R.; Popov, D. In *Applications of Synchrotron Light to Scattering and Diffraction in Materials*; Ezquerra, T. A., Garcia-Gutierrez, M., Nogales, A., Gomez, M., Eds.; Springer: Heidelberg, 2009; Vol. 776, p 91.
- (2) Blanton, T. N.; Huang, T. C.; Toraya, H.; Hubbard, C. R.; Robie, S. B.; Louer, D.; Goebel, H. E.; Will, G.; Gilles, R.; Raftery, T. *Power Diffraction* **1995**, *10*, 91.