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Supplemental information of

Estuary on a chip: unexpected results for nanoparticles fate and transport

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\begin{figure}[h]
\centering
\includegraphics[width=0.5\textwidth]{fig1}
\caption{Size distribution of nC\textsubscript{60} obtained by DLS using Cumulants (grey) and SBL (yellow) algorithms as described in the experimental and method sections in the main text.}
\end{figure}

Figure S2: (top) Measured salinity gradient across the width of the microfluidic device. (middle) Absorbance spectrum of the 30 g L$^{-1}$ NaCl stock solution doped with the patent blue, used to calibrate the final average NaCl concentration at the two MD outlets ($A_{out}$ and $B_{out}$). (bottom) Absorbance Pic at 638 nm for various salt concentration.
Figure S3: Size distribution and the autocorrelation function (ACF) of the nC60 characterized by DLS in the collection vials localized at the outlets A_out and B_out in red and blue, respectively. The dashed-line and the solid-line correspond to the size distributions obtained by the Cumulants and SBL algorithm, respectively.
Figure S4: Principle of the in-situ DLS measurement.