Electronic Supplementary Material (ESI) for Physical Chemistry Chemical Physics.

Supplementary Material for "CO_2 condensation onto alkanes: Unconventional cases of heterogeneous nucleation"

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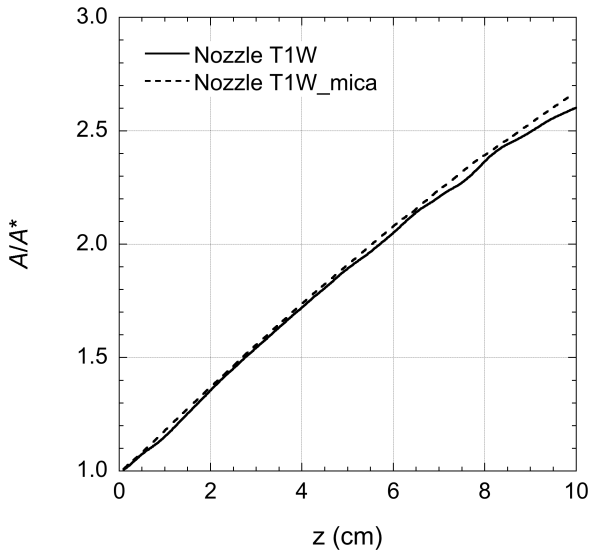

Figure S1. Effective area ratio (A/A^*) of the nozzle T1 with CaF_2 windows for PTM and FTIR measurements, and with mica windows for SAXS measurements.

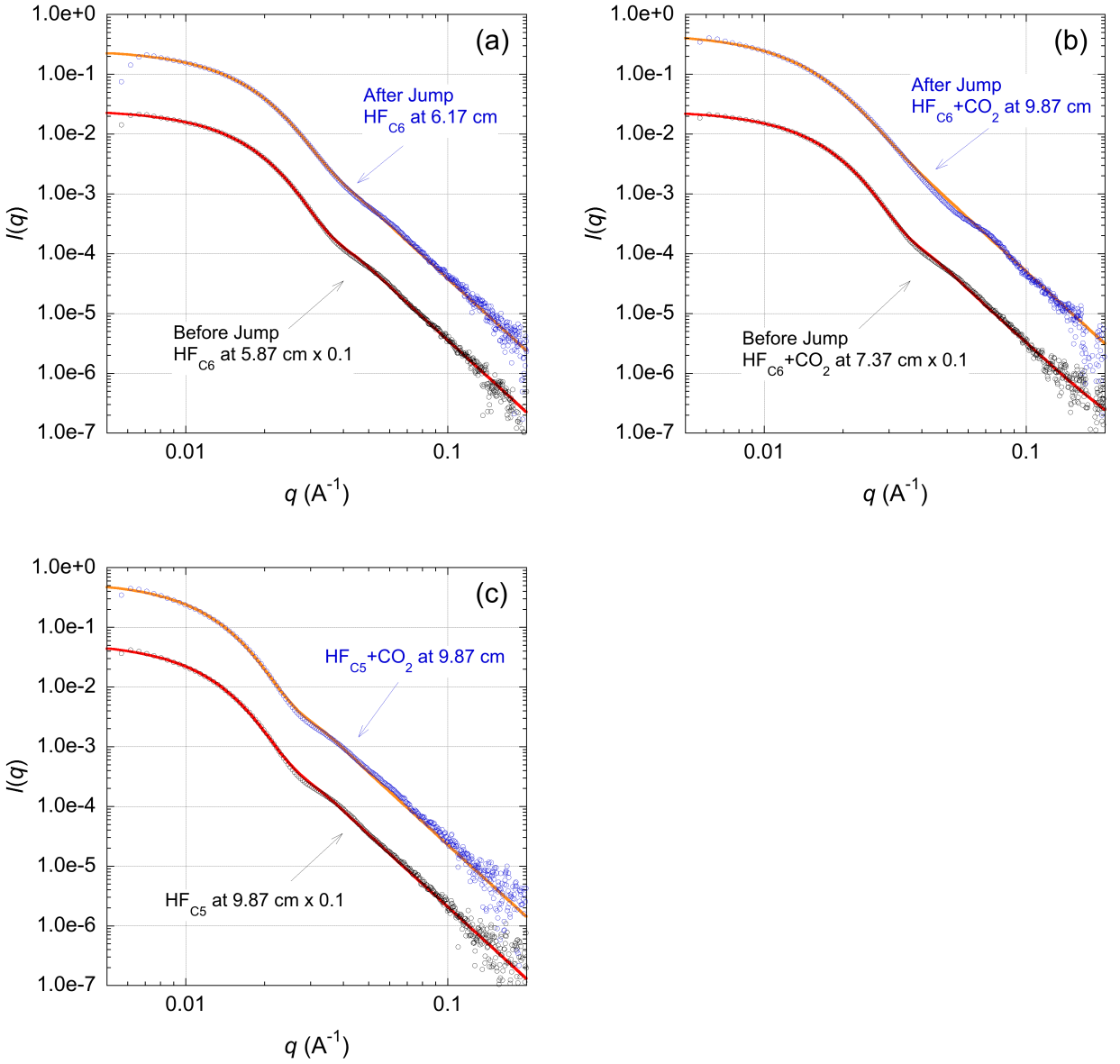

Figure S2. Typical SAXS experimental curves and the best fits to them under the assumption that scattering is from a polydisperse collection of spheres. Comparison between before and after the particle size "jump" occurs (a) in HF_{C6} and (b) in HF_{C6}+CO_2 conditions. (c) Experimental results from SAXS measurements near the exit of the nozzle and their fits in HF_{C5} and HF_{C5}+CO_2 conditions.

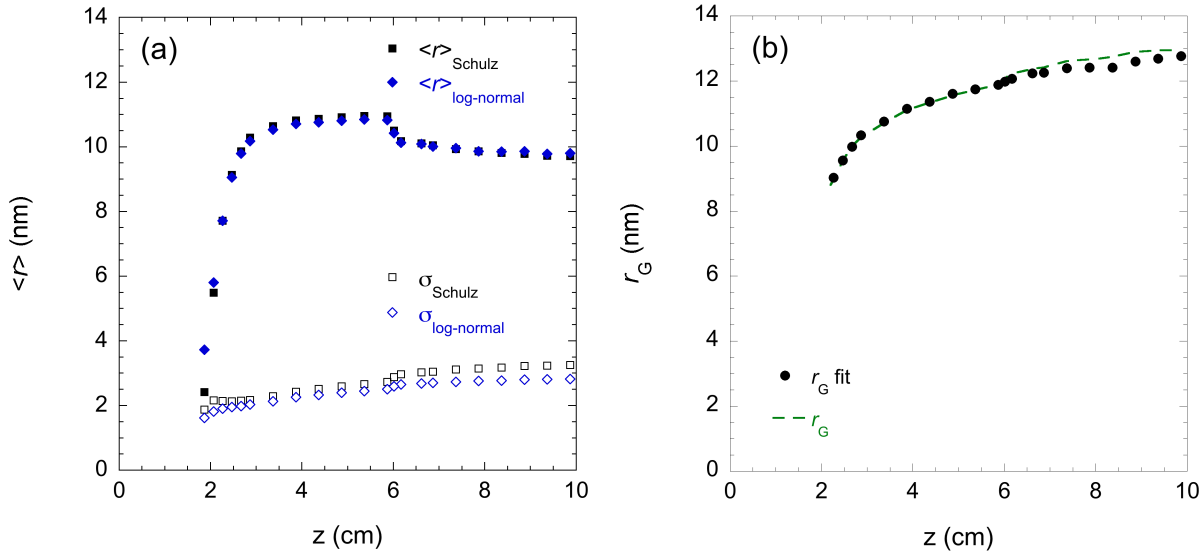

Figure S3. (a) Average particle size $\langle r \rangle$ and the distribution width (σ) determined for the HF_{C6} experiment. The results are not particularly sensitive to the choice of underlying size distribution function, i.e. Schulz versus log-normal. (b) The radius of gyration (r_G) from the Guinier fit at low q region (black circles) and r_G determined from the fit parameters (dashed line) show very close results.

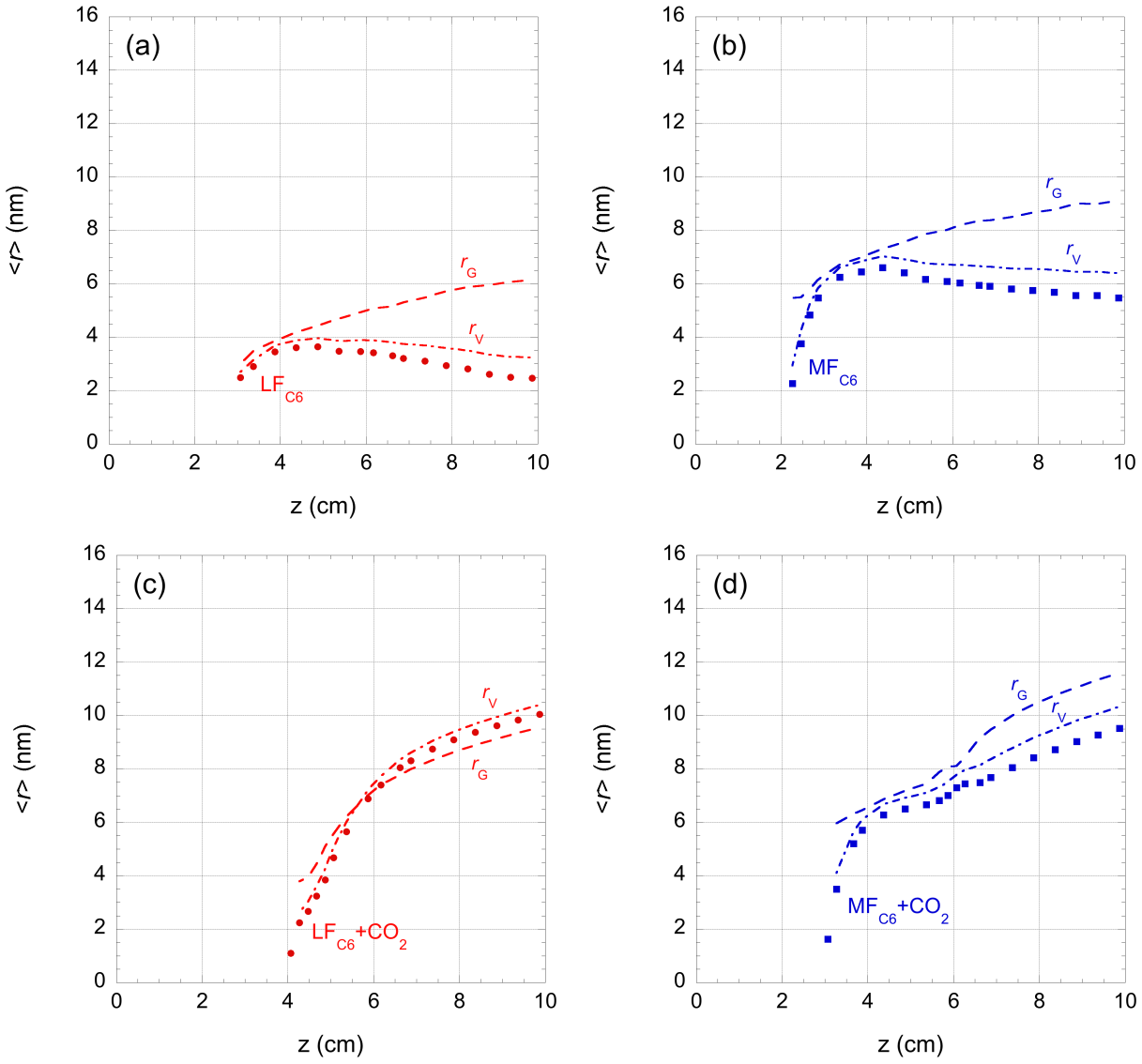

Figure S4. The number average particle radii $\langle r \rangle$ determined from SAXS measurements for (a) LF_{C6}, (b) MF_{C6}, (c) LF_{C6}+CO_2, and (d) MF_{C6}+CO_2 are comparted to the volume average radius r_V (dash-dot line) and the radius of gyration r_G (dashed line). The latter two values are derived from the fit parameters.

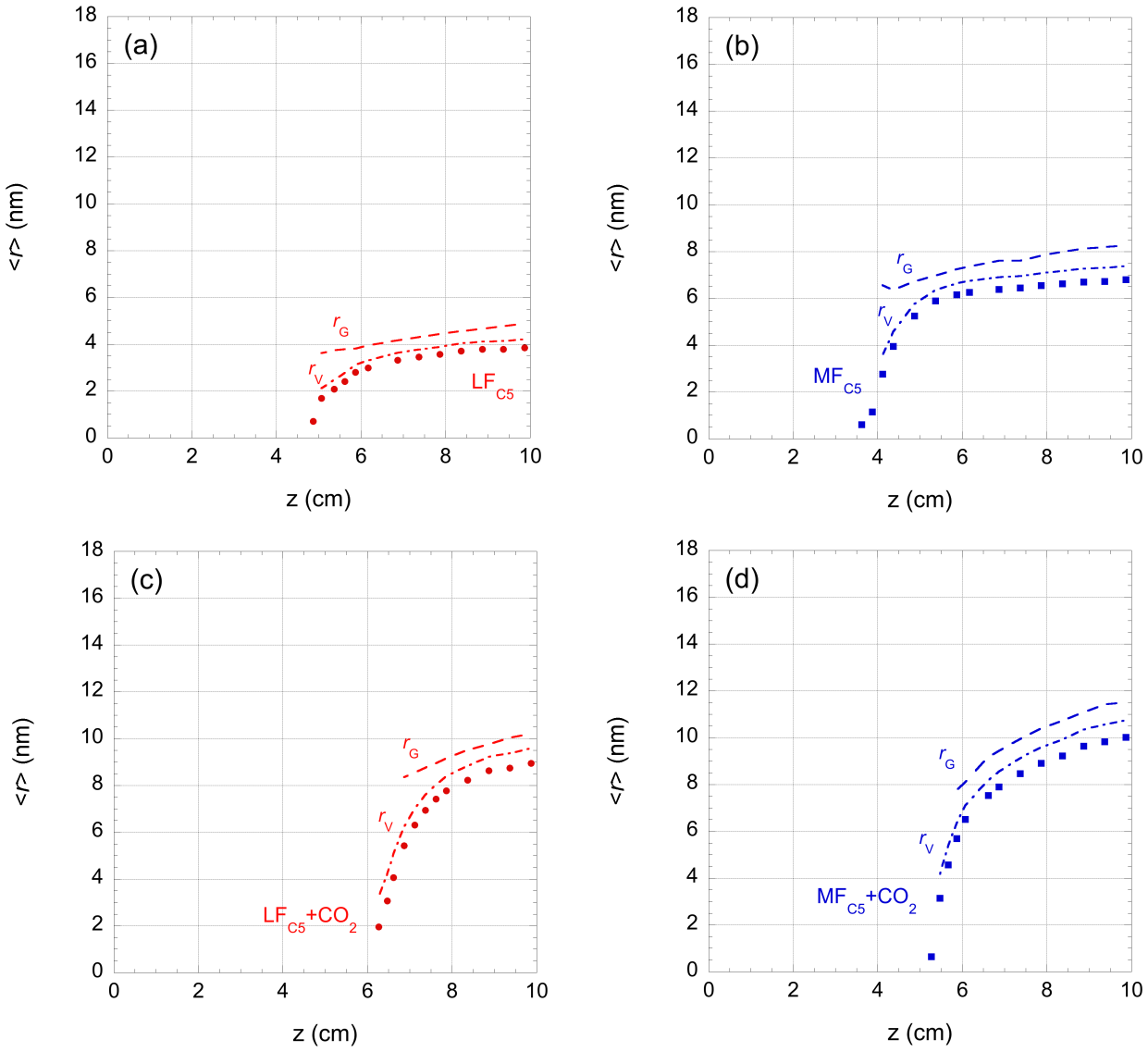

Figure S5. The number average particle radii $\langle r \rangle$ determined from SAXS measurements for (a) LF_{C5}, (b) MF_{C5}, (c) LF_{C5}+CO_2, and (d) MF_{C5}+CO_2 are comparted to the volume average radius r_V (dash-dot line) and the radius of gyration r_G (dashed line). The latter two values are derived from the fit parameters.

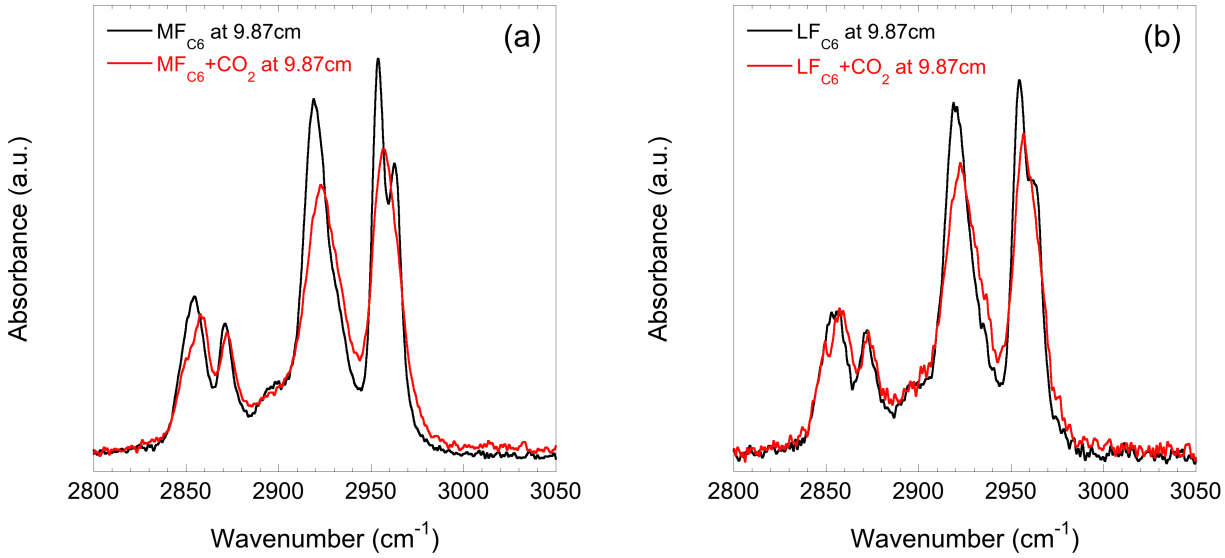

Figure S6. Spectra were baseline corrected and adjusted for the density of the flow but not scaled otherwise. Total absorbance of (a) MF_{C6} (black) and MF_{C6}+CO_2 (red) and (b) LF_{C6} (black) and LF_{C6}+CO_2 (red) between 2800 cm^{-1} and 3050 cm^{-1} near the exit of the nozzle. In both cases n-hexane does not freeze in the presence of CO_2.