Supplementary Materials:

Interplay of Interfacial and Rheological Properties on Drainage Reduction in CO_2 Foam Stabilised by Surfactant/Nanoparticle Mixtures in Brine

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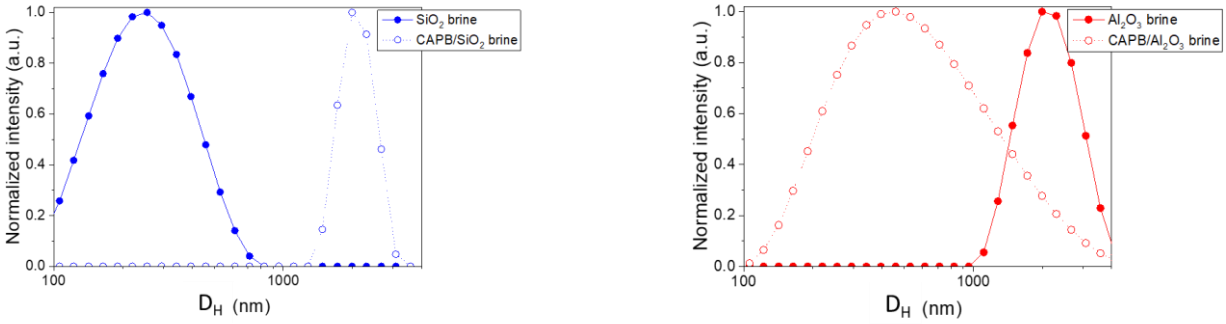
Table S1. pH of the surfactant/NPs combinations after CO_2 saturation

	NP	Without NP	0.5 wt.%	1.0 wt.%
SDS	SiO_2	4.8	4.8	4.9
	Al_2O_3		5.1	5.6
DTAB	SiO_2	5.0	5.0	5.0
	Al_2O_3		5.0	5.0
CAPB	SiO_2	4.7	4.8	4.9
	Al_2O_3		5.0	5.2

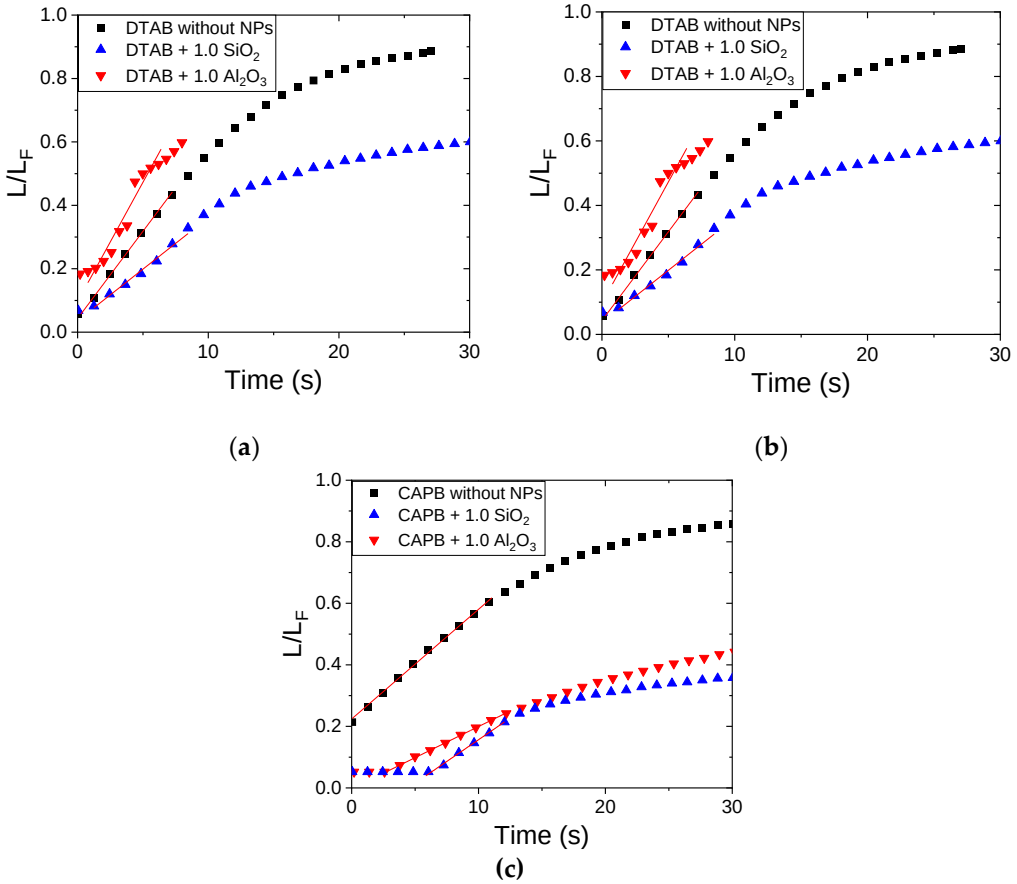
Table S2. ζ-potentials of NPs in brine and surfactant solutions (standard deviation < 2 mV).

NP	ζ (mV)
SiO_2	-10
SiO_2/DTAB	+20
SiO_2/SDS	-14
SiO_2/CAPB	-15
Al_2O_3	+23
Al_2O_3/DTAB	+23
Al_2O_3/SDS	-33
Al_2O_3/CAPB	-15



(**a**) (**b**)

Figure S1. Hydrodynamic diameter (D_H) of (**a**) SiO_2 and (**b**) Al_2O_3 NPs in brine and in CAPB solutions



(**a**) (**b**)

(**c**)

Figure S2. Drainage curves of CO_2-foams formed with (**a**) DTAB, (**b**) SDS, and (**c**) CAPB, in the absence and presence of NPs. Slope of the linear fits (red lines) represents the initial drainage rate (DR_i).