LIST OF ABBREVIATIONS

Abbreviations	Full name
D	translational diffusion coefficient
I_1	first emission vibronic peak
I_3	third emission vibronic peak
Γ_{max}	surface excess
Δx	interval of the independent variable
X_1^{ideal}	micellar mole fraction at the ideal state of $(C_{12}AAS)Na_2$
X_1^{σ}	mole fraction of $(C_{12}AAS)Na_2$ at the micellar interface
f_i^{σ}	activity coefficient of i^{th} component
C_s	film compressibility
ϵ_r	relative permittivity of the fluid
A_0	lift-off area
A_{12}	experimental area per molecule
A_{ex}	excess area per molecule
a_f	final asymptotes
a_i	initial asymptotes of the sigmoid
A_{id}	ideal value of molecular area
A_{min}	minimum molecular area
BAM	brewster angle microscopy
C	molar concentration
C_0	spontaneous curvature
C_1	molar concentrations of $(C_{12}AAS)Na_2$
$(C_{12}AAS)Na_2$	Sodium salt of dicarboxylic amino acid based surfactant
$C_{12}AspNa_2$	disodium salt of *N*-dodecyl aminoaspartate
$C_{12}GluNa_2$	disodium salt of *N*-dodecyl amino glutamate
$C_{12}MalNa_2$	disodium salt of *N*-dodecyl aminomalonate
C_2	molar concentrations of HTAB
CMC	critical micelle concentration
CMC_{av}	average *CMC*
CMC_{cal}	theoretically calculated *CMC*
CMC_i	*CMC* of i^{th} component
C_{mix}	molar concentrations of surfactant mixtures
d_h	hydrodynamic diameter and
DLS	dynamic light scattering
DSC	differential scanning calorimetry
E	surface elasticity
f	activity coefficient,
f_1	activity coefficient of $(C_{12}AAS)Na_2$
f_2	activity coefficient of HTAB
FBS	fetal bovine serum
FESEM	field emission scanning electron microscopy
f_i,	surface activity of i^{th} component
G^{Ex}	excess free energy of micellization
HE	hematoxylin-eosinY
H^{Ex}	excess enthalpy
HPC	hexadecylpyridinium chloride
HTAB	hexadecyltrimethylammonium bromide

Abbreviations	Full name
I.P	interaction parameter
IPA	ion pair amphiphile
K	Boltzmann constant
LB	Luria Bertani
MTT	3-(4,5-dimethylthiazol-2-yl)-2,5-diphenyl tetrazolium bromide
n	aggregation number
NaDC	sodium deoxycholate
PBS	phosphate buffered saline
PDI	polydispersity index
QB64	Q-basic 64-data base
RST	regular solution theory
SDS	sodiumdodecyl sulphate
SPB	sarmoria-puvvada-blankschtein
SPC	soy phosphatidylcholine
T	temperature
TEM	transmission electron microscopy
TGA	thermogravimetric analysis
T_m	chain melting temperature
X	mole fraction
x_0	center of a sigmoid
X_1	mole fraction of $(C_{12}AAS)Na_2$
X_1^{σ}	mole fraction of $(C_{12}AAS)Na_2$ at the interface
X_2	mole fraction of HTAB
X_{AAS}	micellar composition of $(C_{12}AAS)Na_2$
X_{HTAB}	micellar composition of HTAB
X^{σ},	mole fraction of surfactant at the micellar interface
Z.P.	zeta potential
α^*	predicted optimal micellar composition
$\alpha_{(C_{12}AAS)_2Na_2}$	mole fraction of $(C_{12}AAS)Na_2$
α_i	stoichiometric mole fraction
β	synergistic interaction
β_{12}	specific interaction between $(C_{12}AAS)Na_2$ and HTAB
β^R	interaction parameters at the bulk phase
β^{σ}	interaction parameters at the interface
γ	interfacial tension
$\Delta 2\theta$	Bragg's angle
ΔC_p	change in heat capacity
ΔG_m	changes in the Gibbs free energy of micellization
ΔH	enthalpy change
ΔH_m	changes in enthalpy of micellization
ΔS_m	changes in entropy of micellization
$\Delta T_{1/2}$	width at half peak height
ζ	zeta potential
η	viscosity
η_0	zero shear viscosity
π	surface pressure
π_c	collapse pressure and

Abbreviations	Full name
π_{CMC}	surface pressure at the *CMC*
μ	mobility of the bulk fluid
$\alpha_{(C_{12}AAS)_2M_2}$	mole fraction of metallosurfactant
$\Delta G^0_{\mathrm{ads}}$	Gibbs free energy of interfacial adsorption
ΔG^0_{ex}	Gibbs excess free energy
$\Delta G^0_{\mathrm{ideal}}$	Gibbs free energy of ideal mixing
$\Delta G^0_{\mathrm{mic}}$	change in the standard Gibbs free energy of micellization
$\Delta G^0_{\mathrm{mix}}$	Gibbs free energy of mixing
ϵ_0	vacuum permittivity
C_s^{-1}	compression modullous