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ABBREVIATIONS AND SYMBOLS



δ	film thickness
$\delta_{_{geom}}$	film thickness from geometrical consideration
\vec{J}	current density
$ec{E}$	electrical field strength
Ω	ohm
t	bubble age
μ	micro
CD	cyclodextrin
-So -CT	polyurethane coiled tubing
CFLME	continuous-flow liquid membrane extraction
CE	capillary electrophoresis
DS	diffusion scrubber
IC	ion chromatograph
FID	frame ionization detector
GC	gas chromatograph
LCW	liquid core waveguide
LED	light emitting diode
MFC	mass flow controller
MMLLE	micro porous membrane liquid-liquid extraction
min	minute f s reserved
NF	nanofiltration
PEEK	polyether ether ketone
PES	porous hydrophilic polyethersulfone

ppbv	volume by volume part per billion	
PTFE	poly tetrafluoroethylene	
sccm	standard cubic centimeters per minute	
SDS	sodium dodecyl sulfate	
SLM	supported liquid membrane	
SPME	solid phase micro extraction	
SPME-GC	solid phase micro extraction couple with ga	as chromatograph
SV	solenoid valve	
SVP	solenoid valve pump	
TX-100	triton X-100	
tr	retention time	

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