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BOOK OF ABSTRACTS

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Po-02
ION MOBILITY STUDIES ON SODIUM-BIS (2-ETHYLHEXIL)SULFOSUCCINATE (AOTNa) AGGREGATES

David Bongiorno[1,2], Leopoldo Ceraulo[1,2], Gianluca Giorgi[3],Serena Indelicato[1,2], Sergio Indelicato[4], Simona Scarpella[5], Vincenzo Turco Liveri[6]

[1]Dipartimento di Scienze e Tecnologie Molecolari e Biomolecolari (STEMBIO), Università degli Studi di Palermo, Via Archirafi 32, I-90123, Palermo, (Italy) I. [2]Centro Grandi Apparecchiature - UniNetLab, Università degli Studi di Palermo, via F. Marini 14, I-90128 Palermo, ITALY, [3]Dipartimento di Chimica, Università degli Studi di Siena, Via Aldo Moro, I-53100 Siena (Italy), [4]CQRC Laboratory, A.O.U.P. "P. Giaccone", Via Del Vespro, 129, I-90127, Palermo, (Italy), [6]Dipartimento di Chimica "S. Cannizzaro", Università degli Studi di Palermo, Viale delle Scienze, I-90128, Palermo, ITALY
E-mail: nondelicato@gmail.com

The supramolecular charged aggregates formed during ESI ionization of AOTNa solutions under critical micelle concentration have been studied thorough ion mobility experiments. In particular, positively charged clusters with several charge states, ranging from +1 to +4, have been investigated. It has been found that, despite to previous investigations (Siuzdak et al. 1995, Nohara et al. 1998), specific ionic aggregates with a peculiar cross section are observed. Indeed a single drift time is observed for each charged aggregate.

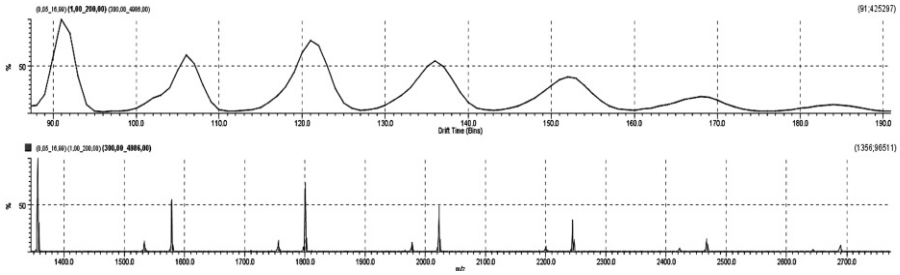

Figure 1: Ion Mobility graph of doubly charged AOTNa clusters

Using both calculated cross section and experimental calibration curves the experimental cross section of the observed cation has been determined. It is worth noting that simulated reversed micelle structure (through mobcal EHSS algorithm) cross section and experimental ones air in fair agreement. This agreement is a further support that reverse micelle is the most likely structure that characterize such aggregates.

References

D. Nohara et al. "The possibility of the direct measurement of micelle weight by electrospray ionization mass spectrometry", Rapid commun. Mass Spectrum. 12: *1933* (1998)
G. Siuzdak, B Bathner, "Gas-Phase Micelles" , Angew. Chem. Int. Ed. 34: *2053* (1995)