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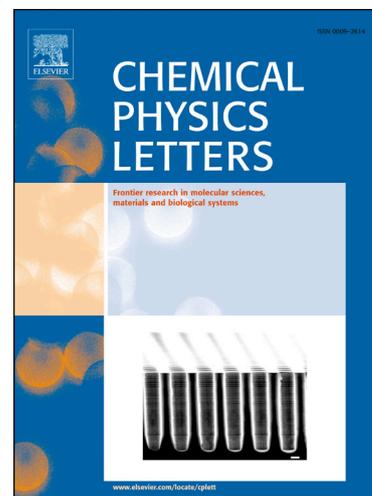
PII: S0009-2614(17)30771-6  
DOI: <http://dx.doi.org/10.1016/j.cplett.2017.08.010>  
Reference: CPLETT 35020

To appear in: *Chemical Physics Letters*

Received Date: 3 June 2017  
Accepted Date: 7 August 2017

Please cite this article as: C.N. Patra, Spherical electric double layers containing mixed electrolytes: A case study for multivalent counterions, *Chemical Physics Letters* (2017), doi: <http://dx.doi.org/10.1016/j.cplett.2017.08.010>

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# Spherical electric double layers containing mixed electrolytes: A case study for multivalent counterions

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## Abstract

Spherical electric double layers containing mixed electrolytes with multivalent counterions, is studied using density functional theory and Monte Carlo simulation. The macroion and small ions are represented as uniformly charged hard spheres within a continuum solvent. The theory involves an weighted density approximation for the hard-sphere contribution, whereas the electrical part is evaluated through a functional expansion around the uniform fluid. The system includes a number of parameters, viz. ionic concentrations, macroion charge density, and the valence of the counterion. This study points towards the distinctive evidence of size and charge correlations manifested through layering and charge reversal phenomena.

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