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## Abstract

The structure of the electrical double layer (EDL) of a spherical macroion is studied by Monte Carlo simulation. Through the simulation two models have been used: uniform charge distribution (continuous) and discrete model. In the uniform model the total charge of  $-60 e$  is considered to be concentrated in the center of the spherical macroion, in the discrete one, elementary charges were movable and randomly distributed over the surface of the macroion. The radial profiles of local densities and electric potential in EDL, as well as the degree of counterion binding by the macroion, are calculated. It is concluded that the character of charge distribution affects the EDL structure near the macroion, whereas its effect is much weaker at larger distances.

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