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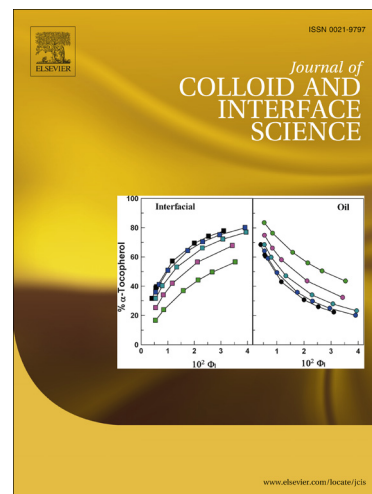
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A simple and accurate method for calculation of the structure factor of interacting charged spheres

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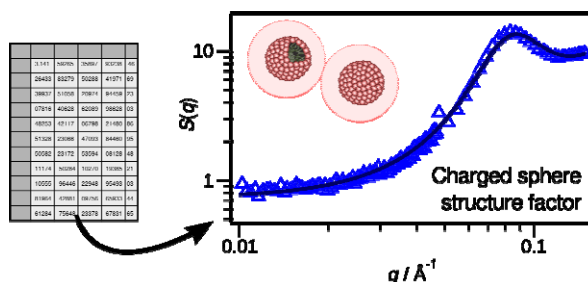
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Calculation of the structure factor of a system of interacting charged spheres based on the Ginoza solution of the Ornstein-Zernike equation has been developed and implemented on a stand-alone spreadsheet. This facilitates direct interactive numerical and graphical comparisons between experimental structure factors with the pioneering theoretical model of Hayter-Penfold that uses the Hansen-Hayter renormalisation correction. The method is used to fit example experimental structure factors obtained from the small-angle neutron scattering of a well-characterised charged micelle system, demonstrating that this implementation, available in the Supplementary Information, gives identical results to the Hayter-Penfold-Hansen approach for the structure factor, $S(q)$ and provides direct access to the pair correlation function, $g(r)$. Additionally, the intermediate calculations and outputs can be readily accessed and modified within the familiar spreadsheet environment, along with information on the normalisation procedure.



Graphical abstract

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