



# Continual Model of Medium III: Calculation of analytical gradients of parameters of surface meshes on the molecular surfaces over atomic coordinates

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The problem of finding of analytical gradients (derivatives over atoms coordinates) of solvation energies can be decomposed on two subtasks: at the first stage we search for parameters of the superficial devices (three coordinates, three components of normal vector and square) and their derivatives; at the second stage we differentiate energy and we express it through derivative of the matrixes featuring a problem. But these derivatives of matrix elements can be expressed through derivatives of parameters of surface meshes of SES (solvent excluded surface) or SAS (solvent accessible surface). The purpose of the given paper is finding of these analytical gradients of the parameters of the surface meshes.

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