

# The mathematical modeling of grouping the dipole water clusters

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**Abstract:** In the paper, a physical-mathematical model and a computational algorithm implementing the model are proposed to study the behavior of particles having an electric dipole moment in an external electric field. Computational experiments demonstrate the orientation dynamics of water clusters with the increase of the generated field. The dipole properties of some water clusters were previously determined using Hyperchem program.

**Keywords:** electric dipole, water clusters, physical-mathematical model, computational experiment, Runge-Kutta methods

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