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MODEL STUDY OF PHOTODAPTATION AND PHOTO-INHIBITION PROCESSES IN PHOTOSYNTHESIS

The article proposes a dynamic model that characterizes the total absorptive capacity of phytoplankton. We considered the change in the number of reaction centers and the size of the absorption cross section at different levels and illumination modes. The model is based on the similarity of some photosynthetic mechanisms with the processes described in population biology. The mechanisms of photodaptation and photoinhibition are taken into account.

Keywords: mathematical model, photosynthesis, chlorophyll, reaction center, absorption cross section, illumination.

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