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Theory of turbid microalgae cultures.

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Highlights

- Average growth rate is determined by the maximum and minimum light intensities in the PBR.
- There exists an optical depth maximizing the average growth rate.
- There is an optimal incident light intensity depending on the turbidity of the culture.
- Incident light can inhibit the growth rate even in dense cultures.
- Conditions for the occurrence of Allee effect are determined.

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