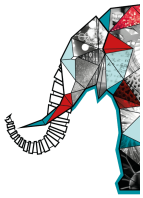
25e Congrès Général de la Société Française de Physique



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The role of transient compartmentalization for origin of life scenarios

Thursday, 11 July 2019 10:15 (15 minutes)

In the fifties, Oparin imagined liquidlike compartments called coacervates, which could have played a central role in the origin of life [1]. Although the experimental verification of this idea remained scarce for many years, the idea resurfaced recently in various systems of biological interest in which liquid non-membrane compartments were found. An important aspect not tested in the Oparin scenario is the role of the transient nature of compartmentalization. Here, we discuss a general class of multilevel selection with transient compartmentalization [2], and its robustness against noise and mutations [3].

[1] Origin of life, A. I. Oparin (1952).
[2] Selection dynamics in transient compartmentalization, A. Blokhuis, D. L., P. Nghe, L. Peliti, Phys. Rev. Lett. 120, 158101 (2018).
[3] Transient compartmentalization dynamics in the presence of mutations and noise, A. Blokhuis, P. Nghe, L. Peliti and D. L., https://arxiv.org/abs/1901.04753

Choix de session parallèle

5.4 Physique et origines de la vie

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