

# **Out-of-equilibrium self-assembly for the formation of biological and soft-matter structures**

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Self-assembly is the process for which a disordered set of building blocks interact with one another to form organized structures. In many cases, the process takes place in the presence of forces and gradients which give rise to stationary and kinetical trapped structures commonly found in biological and soft-matter systems. We present a general model of the process applicable for example to non-equilibrium supramolecular and reaction-diffusion systems and analyze the role that dissipation plays in the process. We analyze in particular the formation of a gel and of Liesegang patterns [1], [2].

[1] A. Arango-Restrepo, J. M. Rubi and D. Barragán, *J. Phys. Chem. B*, 2018, **122**, 4937.

[2] A. Arango-Restrepo, D. Barragán and J. M. Rubi, *Phys. Chem. Chem. Phys.*, 2018, **20**, 4699.