

Symposium Origin of Life (SYOL)

jointly organized by
the Biological Physics Division (BP),
the Chemical Physics Division (CPP) and
the Dynamics and Statistical Physics Division (DY)

Karin Jacobs
Karsten Kruse
Albrecht Ott

Saarland University, Saarbrücken

Ulrich Gerland

Ludwig Maximilians University, Munich

How life emerged is poorly understood and this question has remained one of the most challenging problems until today. In spite of huge scientific progress and increased interdisciplinary culture, self-replicating chemical systems remain difficult to grasp. The spontaneous emergence of the biological molecular code remains mysteriously hidden. Physics can contribute to our quest with simple but fundamental approaches, using the universal and precise methods of statistical and non-linear physics. The goal of the symposium is to make clear that there is a serious approach to the physics of the origin of life, which may help in the near future, in collaboration with other disciplines, in order to make substantial contributions and improve our understanding of this thrilling chapter of molecular self-organization. The symposium brings together leading experts in the field, who will explore the non-equilibrium physical-chemistry of molecular autocatalysis, molecular coding and non-linear, spontaneous chemical organization.

Overview of Invited Talks and Sessions

(lecture room H 0105)

Invited Talks

SYOL 1.1	Fri	9:30–10:00	H 0105	From sequence to function: Random polymerization and modular evolution of RNA — •SUSANNA C. MANRUBIA
SYOL 1.2	Fri	10:00–10:30	H 0105	Spontaneous autocatalysis and periodic switching in a prebiotic broth — •EVA WOLLRAB, SABRINA SCHERER, KARSTEN KRUSE, ALBRECHT OTT
SYOL 1.3	Fri	10:30–11:00	H 0105	Thermal solutions for molecular evolution — •DIETER BRAUN
SYOL 1.4	Fri	11:00–11:30	H 0105	Systems chemistry: Self-replication and chiral symmetry breaking — •GUENTER VON KIEDROWSKI

Sessions

SYOL 1.1–1.4	Fri	9:30–11:30	H 0105	Symposium Origin of Life
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