

"It is ten years since Professor Luisi's classic book *The Emergence of Life* appeared. It is highly welcome therefore that this second edition will explain many of the important advances that have occurred in the last decade. With his profound systems approach, Professor Luisi is better placed than anyone to do this."

Denis Noble, University of Oxford, UK

"In the theory of evolution, the spontaneous increase in complexity from inorganic matter to the emergence of life has been a mystery ever since Darwin first speculated about it. During recent decades, however, a new systemic approach to this puzzle emerged and led to a series of remarkable discoveries and experimental achievements. Pier Luigi Luisi has been at the very center of this exciting new field of research for over thirty years, and in this book he distills his experience into a coherent and fascinating narrative — essential reading for anyone interested in the science of the origin of life on Earth."

Fritjof Capra, author of *The Web of Life* and co-author with Pier Luigi Luisi of *The Systems View of Life*

Addressing the emergence of life from a systems biology perspective, this new edition has undergone extensive revision, reflecting changes in scientific understanding and evolution of thought on the question "what is life?" With an emphasis on the philosophical aspects of science, including the epistemic features of modern synthetic biology, as well as providing an updated view of the autopoiesis/cognition theory, the book gives an exhaustive treatment of the biophysical properties of vesicles, seen as the beginning of the "road map" to the minimal cell — a road map, which will develop into the question of whether and to what extent synthetic biology will be capable of making minimal life in the laboratory. Fully illustrated and accessibly written, *The Emergence of Life* challenges the reader directly with provocative questions, while also offering suggestions for research proposals taken directly from the author's bench experience. Dialogues with contentions from Francisco J. Varela, Humberto Maturana, Albert Eschenmoser, and Harold Moravcsik are included. Essential reading for researchers and students across fields including systems biology, molecular biology, chemistry, and chemical physics.

9781107092396

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Cover illustration created by Angelo Merante.
Cover design: Andrew Ward.

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UNIVERSITY PRESS

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ISBN 978-1-107-09239-6



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