

Raz Jelinek

Biomimetics

A Molecular Perspective

Biological systems have always inspired mankind in the creation of new systems and technologies. In recent years the interface between the biological and non-biological world appears increasingly blurred due to significant advances both in our understanding of biological phenomena, as well as the development of sophisticated means to manipulate molecular systems for varied applications. Biomimetics as a distinct discipline shows how biology and biological processes are manifested in diverse aspects of chemistry, physics and engineering. This book aims to methodically describe artificial and synthetic assemblies mimicking biological and living systems - from biomaterials to drug discovery to microelectronics and computer sciences.

- Truly "connecting the dots" between biology and biological processes and chemistry, physics and engineering.
- Biomimetics - an exciting and rapidly expanding interdisciplinary field – yet no comprehensive textbook on the market.
- Starts from the basic principles of the field and introduces promising applications in a methodological and instructive manner.
- Offering numerous examples, the book describes artificial and synthetic assemblies mimicking biological and living systems.

Insights:

- Bio-inspired and bio-hybrid materials
- Biomimetic Surfaces
- Artificial Organs and Tissue Engineering
- Biomineralization
- Artificial cells
- Drug delivery
- DNA and RNA nanotechnology
- Mimicking biological phenomena and concepts

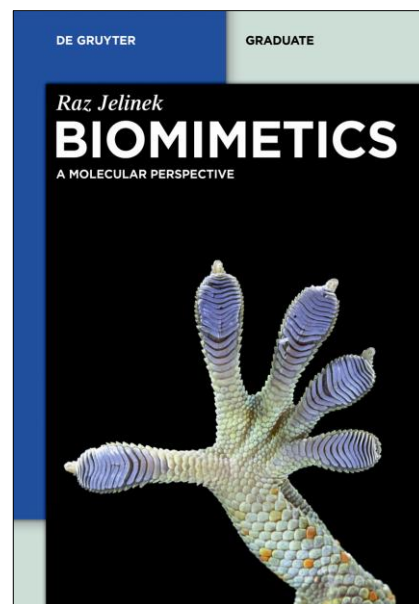


Prof. Dr. Raz Jelinek

Is at the Department of Chemistry at Ben Gurion University, Israel. His research is focused on the interface between biology, chemistry, and nanotechnology, resulting in more than 100 scientific articles and several patents.

For more information please visit:

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DE GRUYTER

Genthiner Straße 13 · 10785 Berlin, Germany
T +49 (0)30.260 05-0 · F +49 (0)30.260 05-251
info@degruyter.com www.degruyter.com

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