

# Annotated Bibliography

This week I read some books about innovative design in the context of environmental protection, including biological design, innovative materials, urban design and picture book.

-Myers, W. and Antonelli, P. (2014) Bio design: Nature, science, creativity. London: Thames and Hudson.

This book reveals that humans and nature have always had a symbiotic relationship, but with the development of technology, the symbiotic relationship has become increasingly unbalanced. Biodesign is the intersection of life science fields (such as biology, anatomy, bioengineering, neurology) and art and design is an organic design.

As an interdisciplinary subject, biodesign has always paid attention to and discussed important issues such as the harmonious coexistence of human and nature as well as the sustainable development.

This book contains some very interesting bio-design cases, such as tree house manufacturing (CNC scaffolding), streets with genetically modified glowing trees and semi-living lights (luminous jellyfish and other luminous organisms), future Venice (metabolism of primitive cells, using light energy fixes carbon and constructs a structure similar to a coral reef), bio-concrete (bacteria repair cracks), bio-encryption (bacterial DNA stores data), blood lamp (creative design).

I also learned about some biological materials such as fungi, yeast, algae, bacterial culture genes which have renewable properties.

In the future, our designers may be able to draw on life science research and use organisms or ecosystems as basic components to apply them to the design of structures, objects, and processes.

-Books, C. (2022) 'Plump and pliant':, Living Matter: The Preservation of Biological Materials in Contemporary Art, pp.

64–73. doi:10.2307/jj.5274094.10.

This book presents a proposal for using cellular cellulose to achieve longer functionality as wearable, performance-ready textiles. This technology could be used for future collaborations in the development of biomaterials as well as clothing design and experimental art. This new biomaterial is affordable, non-hazardous and non-toxic, making it wearable and functional as a textile.

-Noronha, P. (2011) 'Yeast biopaintings: Biofilms as an artistic instrument', *Leonardo*, 44(1), pp. 38–42. doi:10.1162/leon\_a\_00091.

The author creates yeast biopaintings by controlling the growth of yeast cells on paper, using microorganisms that produce colorful natural pigments. By controlling the growth of yeast cells and the formation of biofilms, artists can observe and experiment with the evolving yeast biofilm patterns for artistic creation. This work provides a new methods for artists.

-Lee, M. (2020) *Plastic Island*. Seoul: Lee Myung-ae.

This is a picture book suitable for both adults and children. It is a work that can make people think about ecology, animals and plastic waste.

It tells the story of a plastic island formed by circulation in the sea through the perspective of a seagull. The cover and lining of this book are mainly black and white, and then gradually begin to appear more and more colorful plastic products as the story develops. People come and clean up the island, but it quickly filled up again.

The outer cover of this picture book is also made of recycled paper, echoing the environmental theme of the entire book. As an illustration major student, I can also consider to bring more environmentally friendly options in book materials, binding, and craftsmanship.