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Biomimetics is the innovative paradigm shift based on biodiversity for sustainability. Biodiversity is not only the result of evolutionary adaptation but also the optimized solution of “an epic combinatorial chemistry” for sustainable adaptation, because the diversity has been acquired by “biological processes and technology” including “production processes”, “operating principles”, and “control systems”, all of which are based on self-organization of life and ecological system. The comprehensive “technology transfer” from “biological diversity” to “human wisdom” is indispensable to open the new paradigm. Recent progress of the information science can transform the knowledge of the natural history into the information of engineering.

**CV**

After graduating from Kyushu University, MS engaged in the field of biomimetic chemistry as an assistant professor of Prof. Toyoki Kunitake's laboratory. He developed the research of polymeric Langmuir-Blodgett films at Tokyo University of Agriculture and Technology as an associate professor, and moved to Hokkaido University for starting a new laboratory of the bottom-up nanotechnology based on self-organization and biomimetics. Self-organized honeycomb-patterned polymer films are newly developed by collaboration with many industrial companies and the RIKEN institute where he held concurrently post of the principle investigator. After moving to Tohoku University he organized a national research project on Engineering Neo-Biomimetics, and started an educational program on biomimetics at Chitose Institute of Science and Technology. He worked with Prof. Helmut Ringsdorf of Mainz University and Prof. Erich Sackmann of TU-Munich, respectively.