Kazushige Yamana, Professor Emeritus

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2019- Present	Professor Emeritus, University of Hyogo
2014-2019	Professor, University of Hyogo
2004-2014	Associate Professor, University of Hyogo
1986-2004	Assistant Professor, Himeji Institute of Technology, University of Hyogo
1984-1986	Postdoctoral Fellow, Northwestern University
1983	PhD, Kyoto University
1979	MS, Kyoto University
1977	BS, Kyoto University

Research Interests:

Design and synthesis of functional nucleic acid derivatives

Selected Publications:

1. Kazushige Yamana, Circularly Polarized Luminescence (CPL) in Helically Assembled Pyrene π-Stacks on RNA Duplex, Chapter 15 in "*Chiral Luminescence: From Molecules to Materials and Devices*", Akagi (*Eds*), ISBN: 978-3-527-35180-0, Wiley **2024**.
2. Tadao Takada, Mitsunobu Nakamura, Kazushige Yamana, DNA-Assisted Multichromophore Assembly, "*Modified Nucleic Acids"*, Nakatani and Tor (*Eds.*), pp.101-121, Springer **2015**.
3. K. Yamana, Gating Electrical Transport in DNA, "*DNA in Supramolecular Chemistry and Nanotechnology"*, Stulz and Clever (*Eds*.), pp.79-93, Wiley **2014**.

Title: DNA Double Helix in Molecular Electronics

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ABSTRACT

Molecular electronics have attracted many research interests because there should be possibility of molecular circuits and electronic products compatible with those developed in semiconductor industry. Advances in this field has been made through understanding electronic properties and functions in molecule-electrode junctions. Double helical DNA has been thought as a candidate molecule for functional electronic devices. While taking advantages of the fabrication technologies in silicon semiconducting materials and the applied orienting technique in making DNA-silicon electrode junctions, we have made attempts to realize DNA molecule transistor.