

The 1st International Symposium on “Molecular Engine”

Design of Autonomous Functions through Energy Conversion

Molecular machines, molecules working at the nanoscale have been the ultimate goal of nanotechnology since Richard Feynman advocated the concept in 1960s. The 2016 Nobel Prize in Chemistry has been awarded to “Design and synthesis of molecular machines”, and mechanical motions in synthetic molecular machines have been assured after half a century.

Next stage for the synthetic molecular machines is to realize practical functions. On the other hand, in the field of biology, it has been shown that many kinds of biological molecular machines realize various sophisticated functions via mechanical motions. There must be a common physical principle between synthetic and biological molecular machines.

So far, molecular machines have been studied independently in the fields of chemistry, biology, and physics. In this symposium, we will discuss how we can cooperate and merge these highly relevant fields toward the creation of “Molecular Engines”, which convert energy via mechanical motions to realize autonomous functions.

You can find relevant project supported by the Japanese government (<http://www.molecular-engine.bio.titech.ac.jp/eng/>).

Date: January 8th, 2020

Venue: Chiba University Keyaki Hall

Syposium: 9 :30-(reception starts at 9:00) / Banquet:19:00-

Keynote Speakers:

Prof. Steve Goldup (University of Southampton)

Prof. Nathalie Katsonis (University of Twente)

Prof. Raymond Astumian (The University of Maine)

Prof. Weihong Qiu (Oregon State University)

Prof. Ramin Golestanian (Max Planck Institute for Dynamics and Self-Organization)

Dr. Yuji Sugita (RIKEN)

Invited Speakers:

Prof. Kenji Matsuda (Kyoto University)

Prof. Gwenael Rapenne (Nara Institute of Science and Technology)

Prof. Ryota Iino (Institute for Molecular Science)

Prof. Yuki Sudo (Okayama University)

Prof. Takayuki Ariga (Yamaguchi University)

Prof. Yutaka Sumino (Tokyo University of Science)

Deadline for registration Free Admission

Monday, December 9, 2019

Organizer : Grant-in-Aid for Scientific Research
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Contact : Secretary(secretary@molecular-engine.bio.titech.ac.jp)



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