

## 《Synthetic Biology》 Glossary

iGEM (international Genetically Engineered Machine competition): [アイジェム : 合成生物学の国際学生コンテスト]

a kind of synthetic biology "robot competition" in which teams of undergraduates participate. Student teams conduct an experiment, in each university, based on their own concepts of a new combination of genes. In the 2010 competition, over 1,200 individuals comprising 128 participating teams gathered in Boston to present their results.

Expansion/Simplification of a genetic code: [遺伝暗号の拡張/単純化]

Change the number of the amino acids from the universal genetic code. For instance, UAG codon was reassigned to Iodotyrosine in an expansion. In a simplification, UGG codon was reassigned to Alanine.

MEMS, MicroTAS: [微小電気機械システム, 集積化マイクロ分析システム]

MEMS stands for Micro Electro Mechanical Systems that is fabricated based-on the semiconductor process. MicroTAS stands for micro total analysis systems that deal with the handling of extremely small fluid volumes down to less than pico liters; the devices are often used for chemical and biological experiments. MicroTAS devices are generally a subset of MEMS devices and often indicated by "Lab on a chip" as well. The lab-on-a-chip (LOC) technology integrates one or several sequences of lab processes on a single chip of millimeters to a few square centimeters in size.