The Japan Society of Mechanical Engineers

Thermal Engineering Division

熱工学部門

Outline of the Thermal Engineering Division

In the fields related to thermal engineering, the various phenomena are of consideration represented by mega-scale heat and mass transfer found in space and earth scale; photonic, thermal and mass transfer in biological cells; electrochemical transport of mass and energy in microscopic scale; and chemical reaction and its measurement in nano/molecular scales.

Sectional meetings are established for specially-interesting subjects

- Exergy evaluation of energy systems
- Heat and mass transfer in nano/bio technologies

Thermal control in critical environment such as space, super high / low temperature conditions , etc.

Development of environmental friendly energy conversion systems and analysis of heat and mass transfer which have decisive impact on the global environment

<u>Presentation and discussion on the latest research works</u>

- JSME annual conference (summer)
- Thermal engineering conference (annually, autumn)
- Seminars, workshops and training sessions are organized accordingly.

Cryogenics and mass transfer in biological cells
Compact power supply systems based on micro gas turbine

<u>Joint conferences and meetings of Japan-U.S. and Japan-Korea</u>

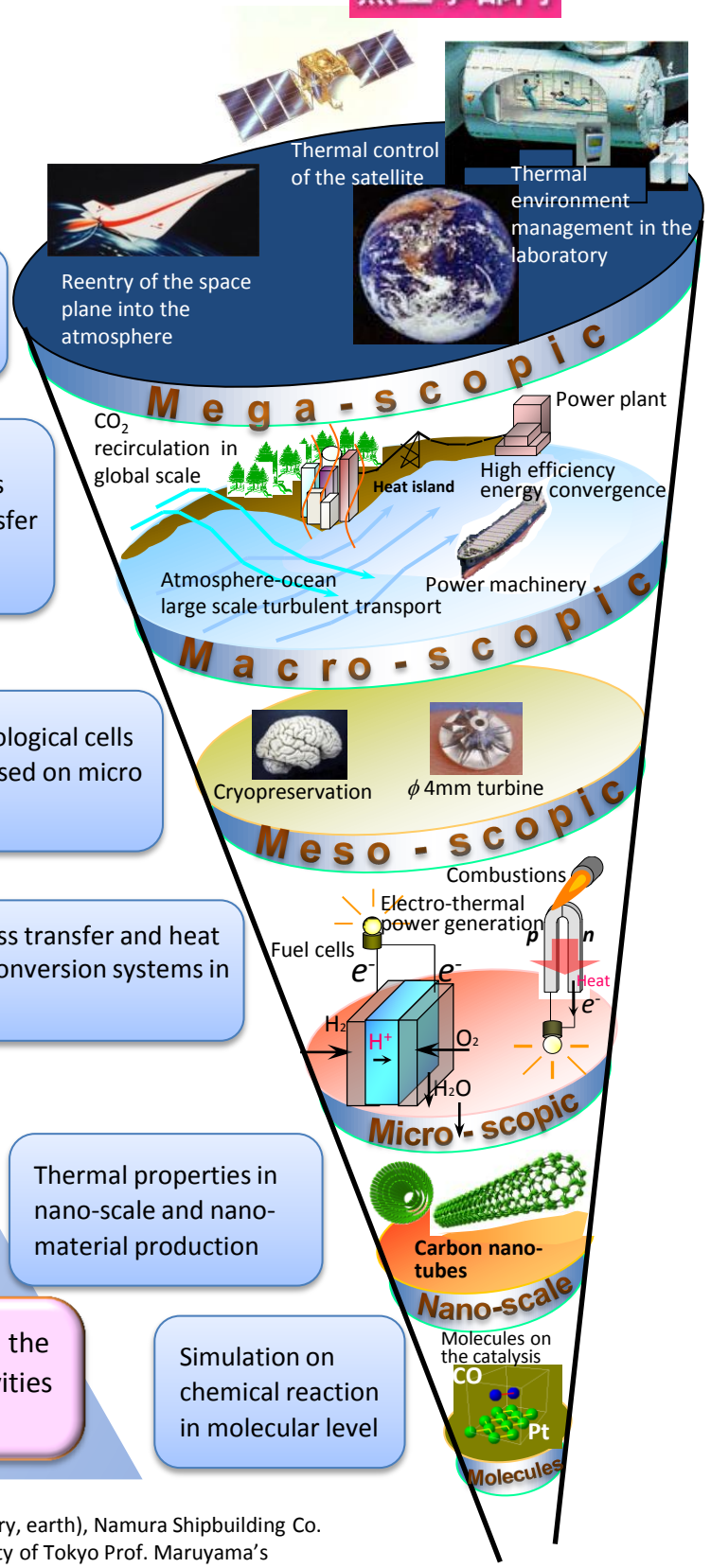
- ASME/JSME Thermal Engineering Joint Conference
  The latest issues on thermal engineering are presented with fruitful discussions (organized every four years).
- KSME-JSME Thermal Engineering Conference
  Provides trends of the research activities in Asia (organized every four years).

Electrochemical mass transfer and heat transfer in energy conversion systems in micro-scale

Thermal properties in nano-scale and nano-material production

The thermal engineering division offers various opportunities to present and discuss the latest research progress at symposium, conference, seminars and lectures. The activities of the division is also widely announced through this webpage.

Simulation on chemical reaction in molecular level



The pictures are brought by the following companies and organizations. JAXA (Space plane, satellite space laboratory, earth), Namura Shipbuilding Co. Ltd. (cargo ship), Kobe university (brain), University of Tokyo, Prof. Kasagi's laboratory (micro gas turbine), University of Tokyo Prof. Maruyama's laboratory (carbon nanotubes), Tokyo institute of technology, Prof. Inoue's laboratory (CO molecules on platinum).