Strategic Knowledge Creation for Supramolecular Biomaterials Trans disciplinary Project

Leader: Nobuhiko YUI (Professor, School of Materials Science)

Research Outline

By way of Knowledge creating research and aiming at the construction of a globally strategic stronghold of biomaterials research, we are carrying out the following activities:

- 1. Cooperation in scientific strategy decision: Scientific exploration Essence investigation in scientific research (from the point of science, education and society)
- 2. Cooperation in technology application: Management of Technology Management of organization reform in creation research
- 3. Cooperation in cultivation of personality and philosophy: Humanity building Examination of graduate education guided with the philosophy of scientific research

These topics are being carried out based on discussion of researchers and coordinators in each field, and organized examinations of research education on graduate students. Aiming at the improvement of ability to contribute to the society, nurturing students appropriate research philosophy and personality. Finally, build up at JAIST the education environment and education system for nurture of students, who could creatively research, with understanding of the philosophy of scientific research.

Strategic Knowledge Creation for Supramolecular Biomaterials

(Tran disciplinary Project)

The 21st Century COE Program Technology Creation Based on knowledge Science

Cooperation for the decision on scientific strategies(Scientific explore)

Decision of strategies, Reinforcement of Tactics, Secure Logistics, Specialization/unification of researches, Self-reformation of research activities, Cope with accidental discoveries

Training for inductive/deductive logical thinking

Fostering the research Ground to create Science based on Philosophy

Cooperation for technical operation (Technical Management)

New project, Basis Technologies, technical transfer, secure logistics

Cooperation for shaping character and for developing philosophy (character building)

Forstering internationalist, Philosophical cultivation, Reforming of social responsibility, Strength of will, Produce self-supportable disciples

Members

T.Honda (Professor, Knowledge Science), G.MIzutani(Professor, Material Science), T.Otani (Associate, Material Science), A.Inami (Coordinator, Center for Research and Investigation of Advanced Science and Technology), T.Kobayashi (Assistant professor, Strategic Center) T.Tastuse (Fellow, Strategic Center), Hak Soo Choi (PD,Strategic Center), Locharoenrat Kitsakoron (School of Knowledge Science), H.Utsunomiya (School of Material Science)

Publications

- H. S. Choi, S. C. Lee, T. Ooya, S. Sasaki, M. Kurisawa, H. Uyama, N. Yui, pH-Dependence of polypseudorotaxane formation between cationic linear polyethyleneimine, Macromolecules, 37, 6705-6710 (2004).
- S. C. Lee, H. S. Choi, T. Ooya, N. Yui, Block-selective polypseudorotaxane formation via pH variation, Macromolecules, 37, 7464-7468 (2004).
- 3H. S. Choi, T. Ooya, S. Sasaki, N. Yui, M. Kurisawa, H. Uyama, S. Kobayashi, Spontaneous change of physical state from hydrogels to crystalline precipitates during polypseudorotaxane formation, ChemPhysChem, 5, 1431-1434 (2004).