

April/2009

Research Group of Prof Adachi & Dr Higuchi

Department of Mechanical Engineering, Toyohashi University

Staff:

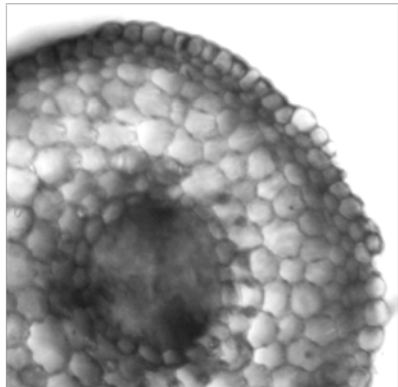
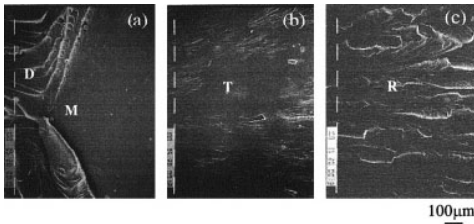
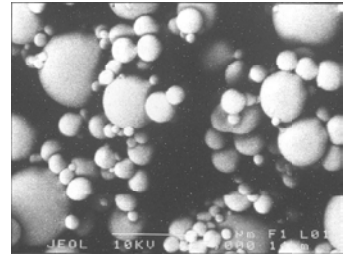
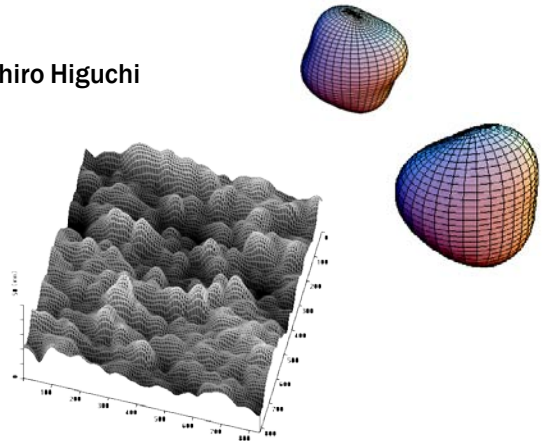
Professor: Tadaharu Adachi, Assistant Professor: Masahiro Higuchi

Purpose:

We are developing and designing functional materials/structures for various purposes of mechanical systems by experimental, theoretical and numerical method. Research objects are extending from nano/micro-scale structures to large-scale structures made of metallic, polymer, ceramic, and their composite materials.

Keywords:

Solid Mechanics, Structural Mechanics, Materials Engineering, Mechanical Properties, Composite Materials, Functional Materials, Impact Engineering, Design of Materials and Structures



Current researches:

- / Mechanical properties of polymers and polymer Composites: nano-composites, material Designs
- / Development and Design of functionally-graded material materials: smart materials
- / Active control of impact energy absorption: vehicle collision, smart structures
- / Development of nondestructive evaluation by ultrasonic: micro defects, residual stress
- / Mechanical properties of light-weight/soft materials: flexible materials, polymer foams, metallic foams
- / Biomechanical effect on growth of trees
- / development of strength and design for mechanical components: impact strength, design of testing machine, structural design, stress analysis