Hyper-functional forming technology aims at both the creation of forms and functions simultaneously. The technology is on a field of interface between manufacturing and material science. In our laboratory, those research below are investigated:

- Computer-aided engineering (CAE) of plastic deformation
- Controlling technology of microstructure using plastic deformation and partial melting
- Forming system with hyper-functional forming
- Suitable structure of Carbon-fiber-reinforced plastic sheet (CFRP) with both high formability and light weight properties

Fig. 1 Experimental setup of bulging test.

Fig. 2 Bulging test of the thermosetting CFRP sheet.