



Adhesive bonding technology, for next generation

Laboratory for Future Interdisciplinary Research
of Science and Technology (FIRST)

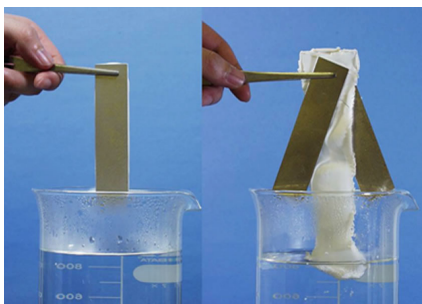


<https://www.adhesion.first.iir.titech.ac.jp/>

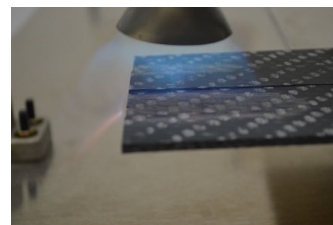
- Strength evaluation of adhesively bonded joints
- Dismantlable adhesive for recycles
- Surface treatment for hard-to-bond-materials
- Biomimetic reversible adhesion

Joining technology is necessary for manufacturing processes. Development of fundamental technology of adhesive bonding and establishment of evaluation methods have been investigated.

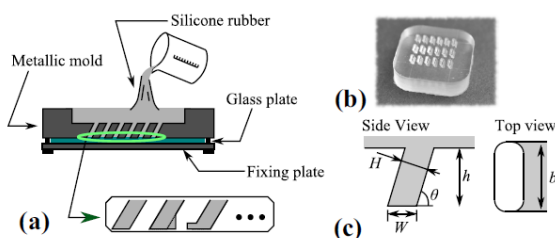
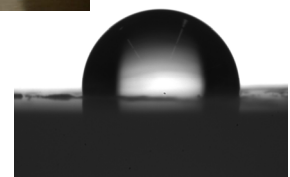
Visualization of stress distribution at adhesively bonded joints using stress light-emitting materials



Development of dismantlable adhesives using thermally expandable particles



Development of surface treatment methods for low surface-energy surfaces to improve adhesive strength



Development of reversible adhesive devices mimicking gecko