NIINO LAB.

[Manufacturing Science on Functional Form Materialization]

Department of Precision Engineering, School of Engineering, The University of Tokyo

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Applicative Electromechanical Systems

Department of Precision Engineering

Additive Manufacturing and MID*

* Molded Interconnect Devices

We are carrying out research activities on new fabrication technologies such as additive manufacturing (which is formerly known as rapid prototyping) and MID (Molded Interconnect Devices) and their applications. We are aiming at manufacturing of new functional parts and mechatronic devices/systems by multifunctional free-form fabrication technologies. We are also developing new mechatronic devices which is fully compatible to extreme conditions such as ultrahigh vacuum.

Research Subjects

Selective laser sintering process of plastic powder

Preheat free plastic laser sintering

Improvement in precision of laser sintering process

Powder compaction in selective laser sintering process

Additive manufacturing of tissue engineering scaffold

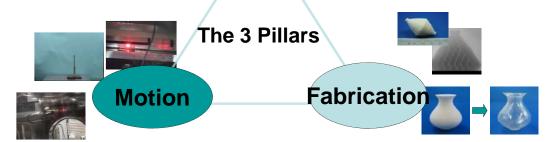
MID application to mechatronic devices

MID fabrication process using sacrificial material

Fabrication of functional flow channel by injection molding

Fusion of a novel mechanism and its fabrication process MID (Molded Interconnect Device)





Novel mechatronic device, mechatronic, devices for ultra vacuum environment

Novel solid free-form fabrication method Additive Manufacturing (Rapid Prototyping)