

Design of FGM Bimorph Piezo-Actuators

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Despite large bending displacement, the bimorph piezo-actuator is known to suffer from large induced stress at the interface region. To overcome this, we designed two types of piezo-actuators, one-sided (Rainbow type) actuator with functionally graded microstructure (FGM), where the electroelastic properties are graded smoothly along the thickness direction and FGM bimorph actuator where the top and bottom piezoelectric plates are composed of multilayers where the electroelastic properties are graded smoothly across the plate thickness. In this talk, I will introduce two types of FGM piezo-actuator designs.

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