

Special Issue

Applications of Microelectromechanical Systems (MEMS)

Message from the Guest Editor

Microelectromechanical systems continue to play an extremely significant role in relation to thin films, microfabrication, and unique functionality. There are many exciting challenges to overcome to meet the needs of current and future micro sensor–actuator systems.

For a long time, MEMS actuators have been driven by piezoelectric thin films, in particular lead zirconate titanate (PZT), which enables useful actuation at low voltages, especially if the films consist of bilayers and are operated at resonance. How can this simple structure be improved? The focus of actuation has been the functional film, but what about the electrodes? Actuation is pivotal. So, what other material options could be explored?

The challenge here is to develop devices incorporating such materials in novel MEMS applications, where device functionality is enhanced.

- lead free
- piezoelectric
- shape memory alloys
- transparent conducting oxides
- magnetostriction
- two-dimensional materials

Guest Editor

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Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal *Applied Sciences* has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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