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## **Non-toxic Actuator Materials**

Guest Editor:

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## **Message from the Guest Editor**

Dear Colleagues,

There are five key trends in the recent development of actuator materials: "Performance to Reliability", "Hard to Soft", "Macro to Nano", "Homo to Hetero" and "Single to Multi-Functional".

This Special Issue will collect papers on Non-Toxic Actuator Materials. Worldwide toxicity regulation is accelerating the development of Pb-free piezoelectrics as a replacement for conventional PZTs. Piezoelectric polymers and polymer–piezoelectric ceramic composites have been revived and commercialized. "Homo to hetero" structure change is also a recent research trend.

Topics of interest include:

- Advanced Pb-free actuator (piezoelectric/ electrostrictive) ceramic materials;
- Polymer actuator materials (including elastomer actuator materials);
- Non-toxic composite actuator materials;
- Non-toxic flexoelectric actuator/sensor materials;
- Other unique non-toxic actuator materials.

Prof. Dr. Kenji Uchino Guest Editor



