

Special Issue

Non-toxic Actuator Materials

Message from the Guest Editor

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.

Guest Editor

Prof. Dr. Kenji Uchino

Director, International Center for Actuators and Transducers Professor, Electrical Engineering The Pennsylvania State University, 135 Energy and The Environment Laboratory, University Park, PA 16802, USA

Deadline for manuscript submissions

closed (31 December 2021)



Actuators

an Open Access Journal
by MDPI

Impact Factor 2.3
CiteScore 4.3



mdpi.com/si/85308

Actuators
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
actuators@mdpi.com

[mdpi.com/journal/
actuators](https://mdpi.com/journal/actuators)





Actuators

an Open Access Journal
by MDPI

Impact Factor 2.3
CiteScore 4.3



[mdpi.com/journal/
actuators](https://mdpi.com/journal/actuators)



About the Journal

Message from the Editorial Board

We are just entering the Next Wave of Technology (NWT) where actuators will play the same role as the computer chip did for computers/social media approximately four decades ago. Just in the U.S., production of \$1 trillion year of electromechanical systems (vehicles, orthotics, manufacturing cells, freight trains, aircraft, etc.) will be impacted by the NWT, all driven by actuators. Five key trends can be found for the future perspectives: “Performance to Reliability”, “Hard to Soft”, “Macro to Nano”, “Homo to Hetero” and “Single to Multi functional”. We invite papers that primarily impact these economic sectors; those illustrating basic scientific principles are also welcome.

Editors-in-Chief

Prof. Dr. Kenji Uchino

Emeritus Academy Institute, The Pennsylvania State University,
University Park, PA 16802, USA

Prof. Dr. Norman M. Wereley

Department of Aerospace Engineering, University of Maryland, 3179J
Martin Hall, College Park, MD 20742, USA

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within SCIE (Web of Science), Scopus, Inspec, and other databases.

Journal Rank:

JCR - Q2 (Engineering, Mechanical) / CiteScore - Q1
(Control and Optimization)