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Polymer Actuators: From Fabrication to Application

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Deadline for manuscript submissions:
closed (5 June 2022)

Message from the Guest Editors

This *Special Issue* will report on advances in the design and utilization of polymer actuators for practical application, such as sensors, robotics, motors, and three-dimensional (3D) frameworks. The scope includes, but is not restricted to, responsive polymers, the novel design of actuators, smart sensors, the novel design of robots, as well as other complex systems with actuators as elements, which will facilitate the development of polymer actuators for special applications.

In particular, this *Special Issue* will welcome manuscripts that cover topics including, but not limited to, the following:

1. The design and fabrication of responsive polymers;
2. Polymer actuators with novel structures;
3. The mechanisms of natural actuators;
4. Polymer actuators for soft robotics;
5. Polymer actuators for smart sensors;
6. Polymer actuators for 3D frameworks;
7. Polymer actuators for motors;

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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.

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