A Special Issue on

“Flexible Materials and Structures for Bioengineering, Sensing, and Energy Applications”

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Human body with curved and soft interface requests advanced flexible materials and structures for the interaction with organs and signal collection from targets in applications of e.g. bioengineering and diagnostic devices. Among them, it is highly demanded for creative design in flexible materials and structures with great stretchable capability required for applications. To meet such purpose, both inorganic and organic materials could be adopted and designed with assembly and self-assembly methods for flexible electronics and electrodes. Soft or flexible materials and structures inspired by nature can take the advantage of highly conformal contact between devices and the human body. These approaches hold great potential for applications in flexible electronics, medical imaging technology, and portable disease diagnostics. Novel strategy on related sensors/actuator and energy storage/generation devices could overcome certain limitation on flexible materials engineering and thus advance the field as well.

This special issue is aiming at showcasing recent advances in all topics related to bioengineering, sensing, and energy applications with the special focus on flexible materials and their structures. We will accept both experimental and theoretical work. We invite submissions of original research articles/communications and comprehensive reviews to this special issue. Following topics are included to be covered in this special issue, but are not limited to:

- Self-assembly and assembly of flexible materials and structures;

- Flexible materials and interface for new medical imaging technology
- Portable disease diagnostic devices
- Sensor and actuator
- Energy storage and conversion.

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Key timetable dates:
Manuscript due: September 31, 2019
Authors' notification: October 31, 2019
Publication date: November 31, 2019

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