



Smart & Self-Healing Coatings in Electrochemical Systems

Guest Editor:

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Deadline for manuscript
submissions:

closed (1 November 2021)

Message from the Guest Editor

In particular, the topics and areas of interest include, but is not limited to self-healing or smart properties in the applications outlined below. This includes synthesis approaches, characterisation and testing methodologies:

Energy storage:

- *Electrode coatings for electrochemical energy storage systems (Li-ion, Na-ion batteries, Supercapacitors)*
- *Redox-responsive systems / shuttles*
- *Flexible, wearable energy storage systems*

Corrosion control:

- *Coatings for corrosion inhibition, barrier function, smart-release*
- *Ion-exchange membranes for flow batteries*
- *Conducting polymers & smart composite coatings*
- *Sustainable materials for smart corrosion control*

Medical applications:

- *Electroactive polymers for anti-bacterial / self-healing dressings*
- *Smart composite hydrogels*
- *Sensors*





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Message from the Editorial Board

Now more than ever, research is asked to deliver knowledge and technologies to solve the major challenges faced by our society. The development of new materials and devices for (without the ambition to be exhaustive) energy, health and food technology, together with the need for establishing processes that reduce the impact on critical resources and the environment, is indeed in the spotlight of most contemporary research. Surface science and engineering play a key role in this regard, with an incredible potential in delivering new and deep scientific understanding and technical solutions essential to solve most of the major societal challenges.

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