Special Issue

Nanomaterials for Self-Healing Coatings

Message from the Guest Editor

Nanomaterials are widely used in the development of self-healing coatings. Once the coating is damaged, the nanomaterials added to the coatings can realize the controlled release of healing agents (corrosion inhibitor, hydrophobic agent and anti-fouling agent) to effectively repair the damaged area, which is the main strategy of constructing self-healing coatings at present. Furthermore, nanomaterials prepared by precise design also show great potential in improving the dispersion of fillers in self-healing coatings, enhancing the barrier properties of self-healing coatings, realizing the versatility of self-healing coatings and promoting the intellectualization of self-healing coatings. This Special Issue aims to introduce the theoretical developments and practical applications of nanomaterials in selfhealing coatings. We are pleased to invite authors to contribute their recent findings in relevant fields and submit original research articles and reviews. Best regards.

Guest Editor

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Deadline for manuscript submissions

closed (31 October 2023)



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Nanoscience and nanotechnology are exciting fields of research and development, with wide applications to electronic, optical, and magnetic devices, biology, medicine, energy, and defense. At the heart of these fields are the synthesis, characterization, modeling, and applications of new materials with lower nanometerscale dimensions, which we call "nanomaterials". These materials can exhibit unusual mesoscopic properties and include nanoparticles, coatings and thin films, metal-organic frameworks, membranes, nano-alloys, quantum dots, self-assemblies, 2D materials such as graphene, and nanotubes. Our journal, Nanomaterials, has the goal of publishing the highest quality papers on all aspects of nanomaterial science to an interdisciplinary scientific audience. All of our articles are published with rigorous refereeing and open access. We are proud of our increasing impact factor and ability to provide rapid decisions to authors.

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