Special Issue

Wear, Corrosion and Fatigue Behavior of Ni-Based Superalloys Coatings Deposited via Cold Spray

Message from the Guest Editor

Cold spray technology could change the way that we design and make products. As a coating technology, it solves many of the inconveniences of traditional thermal spraying technologies, such as oxidation and phase transformations. As an additive manufacturing technology, it could be able to produce complex shapes that cannot be produced by traditional techniques. In aeronautics, energy, and many other sectors, many parts produced via cold spray are subject to an environment that can progressively wear out, corrode/erode, or strain the materials until fracture. Generally, Ni-based superalloys exhibit very high corrosion resistance and provide high strength and good machinability. For these reasons, they are increasingly used in modern industry. Therefore, the starting point of this Special Issue is the lack of information about the cold spray technology using Ni-based superalloys powders for wear, corrosion, and fatigue applications. Papers in this Special Issue are focused on how cold spray and Ni-based superalloys can be integrated into different industrial sectors and address the key drivers for innovation.

Guest Editor

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Message from the Editorial Board

Metallic materials play a vital role in the economic life of modern societies; contributions are sought on fresh developments that enhance our understanding of the fundamental aspects related to the relationships between processing, properties and microstructure – disciplines in the metallurgical field ranging from processing, mechanical behavior, phase transitions and microstructural evolution, nanostructures, as well as unique metallic properties – inspire general and scholarly interest among the scientific community.

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