Special Issue

Emerging Trends in Cold Spray: Process Evolution and Materials Development

Message from the Guest Editor

The continuous evolution of advanced manufacturing has created a growing demand for innovative surface engineering technologies capable of enhancing component performance without compromising material integrity. Among these, cold gas dynamic spray (commonly known as cold spray) has emerged as a versatile solid-state deposition technique, enabling the fabrication of high-quality coatings and repairs while preserving the original microstructure of the feedstock material. This process is particularly well-suited for temperature-sensitive materials and applications requiring high bond strength, wear resistance, or corrosion protection. This Special Issue is dedicated to showcasing recent progress and addressing current challenges in cold spray research and applications. It aims to bring together contributions that advance our understanding of process fundamentals, materials behavior, and performance optimization.

Guest Editor

Dr. Alessia Serena Perna

Department of Chemical, Materials and Production Engineering, University of Naples Federico II, Piazzale V. Tecchio 80, 80125 Napoli, Italy

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Materials
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
materials@mdpi.com

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Editor-in-Chief

Prof. Dr. Maryam Tabrizian
1. Department of Biomedical Engineering, Faculty of Medicine and Health Sciences, McGill University, Montreal, QC H3A 2B6, Canada
2. Faculty of Dentistry and Oral Health Sciences, McGill University, 3640 Rue University, Montreal, QC H3A 0C7, Canada

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