



Effects of Laser Treatment on Surface Characterization and Mechanical Properties of Alloys

Guest Editor:

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Message from the Guest Editor

Dear Colleagues,

Laser-based material processing and surface engineering techniques are useful to enhance material properties and surface characteristics of metals and alloys. Laser processing is an active area of research to prepare surfaces for various applications. Laser processing can enhance surface wetting characteristics, activate a surface for multifunctionality, improve residual stress behavior, corrosion resistance, tribological characteristics, etc.

This Special Issue is devoted to advances in laser-based material processing with an emphasis on surface characterization and enhancement of mechanical properties. Research areas may include the following:

- Recent developments in laser processing related to surface engineering;
- Effect of laser processing on surface roughness, and others;
- Effect of laser processing on strength and ductility of metal alloys;
- Nanosecond, picosecond, and femtosecond pulsed laser processing of metal alloys;
- Laser surface engineering for tribology;
- Theoretical research, processing mechanism, and new ideas in laser treatment.

We look forward to receiving your contributions.

Dr. Avik Samanta

Special *Issue*





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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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