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Sensing Technologies in Additive Manufacturing

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Message from the Guest Editor

Dear Colleagues,

The integration of sensors into additively manufacturing technologies and printed parts has huge potential to address critical aspects, such as monitoring, control, optimization, defect detection, and prevention. This Special Issue explores the cutting-edge applications of sensing technology in various additive manufacturing processes, including Laser Powder Bed Fusion, Directed Energy Deposition, Electron Beam, Binder Jetting, Wire Arc Additive, and Solid-State additive manufacturing.

These are the key topics of this Special Issue:

- Innovative sensor technologies for monitoring, control, and optimizing printing processes and enhancing efficiency.
- Utilizing sensors for real-time defect detection and prevention, guaranteeing the production of high-quality parts.
- The incorporation of artificial intelligence in conjunction with sensors for online monitoring and the adaptive control of manufacturing processes.
- Embedding sensors within manufactured components to create smart parts that can provide real-time data about their performance and health throughout their lifecycle.
- Employing Additive Manufacturing technologies for direct writing on 3D parts.

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Message from the Editor-in-Chief

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