

Special Issue

Recent Progress on Powder Materials for Additive Manufacturing

Message from the Guest Editor

Additive manufacturing (AM) has rapidly emerged, offering unique opportunities for producing complex, lightweight, and high-performance components across aerospace, automotive, biomedical, and energy sectors. Central to the success of AM processes is the development and utilization of powder materials, as powder properties directly influence processability, microstructure evolution, and final part quality. Recent advances in powder production techniques have enabled the design of powders with tailored particle size distributions, surface chemistry, and flow characteristics. These innovations are further supported by computational modeling and in situ monitoring, which link powder characteristics to defect formation, mechanical properties, and performance reliability of AM-fabricated parts. This proposed Special Issue will highlight cutting-edge research on powder synthesis, surface engineering, recyclability, powder–process interactions, and structure–property relationships. This Special Issue aims to advance powder science and accelerate the translation of novel powder technologies into reliable, scalable, and sustainable AM solutions.

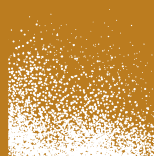
Guest Editor

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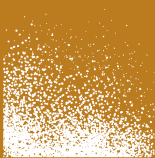
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