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Material properies of 3D-printed copper for rf-cavities

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This study investigates the material properties of 3D-printed copper for use in radio frequency (RF) cavities, with a focus on its suitability for high-performance accelerator applications. Key aspects include an analysis of the corrosion and erosion resistance of the printed copper, as well as its electrical and thermal conductivity. Results demonstrate the potential of additive manufacturing for producing RF components while addressing challenges related to material performance under operational conditions. The findings contribute to the development of advanced manufacturing techniques for efficient and durable RF cavity fabrication.

Footnotes

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