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Opportunities and Challenges in Nanoparticles Formation by Electrical Discharge Machining

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Abstract

Nanoparticles (NPs) have drawn immense attention due to the full range of new applications in various fields of industries such as electronics, optical, biomedical, pharmaceutical and cosmetics. NPs gained importance due to their exceptional properties like antibacterial activity, high resistance to oxidation, exceptional adhesive properties, better thermal conductivity and many more. Various interdisciplinary researches have been done in the field and still going on. The aim of this paper is to briefly describe the details of NPs processing methods, their benefits and limitations and the need of new

process in the field. In this paper, electrical discharge machining (EDM) has been presented as possible new process for the synthesis of NPs. The challenges in the development of EDM as a NPs synthesis process have also been discussed in this paper.

Keywords

Nanoparticles **EDM** **Physical** **Chemical** **Mechanical**

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