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# MHD Nanofluid Flow and Heat Transfer through Porous Media

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**Abstract:** A brief study on “MHD Nanofluid Flow and Heat Transfer through Porous Media” has been done. The study is divided into 6 sections, namely, (1) Nano-fluids, (2) Heat Transfer, (3) Magneto-hydrodynamics (MHD), (4) Porous Media, (5) Literature Review, and (6) Conclusion and Future Scope of Research. First four sections provide the brief idea about the section/topic along with their basic features and possible applications. Fifth section is dedicated to a brief literature review of the relevant studies carried out by different investigators. Conclusion and future scope of research has been discussed in section 6. At the end of the study references have been provided. Such a compact study may help readers to understand the basics of “MHD Nanofluid Flow and Heat Transfer” and develop interest in this area of research.

**Keywords:** MHD, Nano-fluid, Heat Transfer, Porous Media

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## 1. Nano-fluids

Nano-fluids are basically fluids with suspended nano-particles. When nano-particles like metallic oxides, nitrides, carbides and semi-conductors dissolve in base fluids like water, oil, ethylene glycol etc. with proper ratio nano-fluids are formed. Now-a-days nano-fluids have great utility in every field. Due to high heat transfer rate it is used in electronic devices, nuclear reactors and industries. Recently nano-fluid attracts the attention of researchers. So more and more advancements have been done in this regard.

### *1.1 Method of preparation*

Nano-fluids are prepared by suspending nano-meter sized particles in the base fluids. While mixing the solid and liquid some conditions are to be needed. The