

Documents

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On the nanofluids applications in microchannels: A comprehensive review

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Abstract

Nanofluids have attracted tremendous attention during the last two decades. The researchers all over the world investigate the feasibility of the nanofluids use in different phenomena and equipment. The ever-increased importance of nanofluids shows the urgent need to have a comprehensive review of nanofluids utilization in diverse areas. This paper presents a comprehensive assessment of nanofluids' applications in various microchannel geometries. All studies have been categorized into three main classes: experimental, analytical and numerical studies. Critical information has been presented in a comprehensive table in each section. Also, statistical considerations such as bibliographic analysis have been performed. The results show ever-increasing importance of nanofluids applications in microchannels. The bibliographic analysis shows the changing in the research concerns in the last decade. Almost all studies have demonstrated the preferred nanofluids thermal behavior in microchannels, compared to the base fluids. © 2017

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