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SEDIMENTATION METHOD TO EVALUATE STABLE CuO BASED NANOFLUID FOR HEAT TRANSFER APPLICATIONS

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Abstract:

Nano fluid is a base fluid in which nanoscale particles are suspended. Nanofluids are tremendous heat transfer applications in the field of thermal engineering such as radiator heat exchanger and solar applications etc. the applications of the CuO-DI water and CuO-EG nanofluids in a area of heat transfer is essential and maintain the stability of CuO-DI water and CuO-EG nanofluids is necessary. In the present study two - step method was used to prepare the CuO-DI water and CuO-EG nanofluids without adding surfactant. The sedimentation method was adopted to check the stability of the nanofluid for the volumetric concentration of 0.2%, 0.4%, and 0.6% of CuO nanoparticles in the DI water and EG. The thermo physical properties such density, specific heat, thermal conductivity, and viscosity of the CuO-DI water and CuO-EG nanofluids were also studied using the appropriate model in the present work.

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