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Investigation on Rheological Properties of Water-Based Novel Ternary Hybrid Nanofluids Using Experimental and Taguchi Method

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Volume: 15 Issue: 1

Article Number: 28

DOI: 10.3390/ma15010028

Published: JAN 2022

Indexed: 2022-02-16

Document Type: Article

Abstract

This study presents the rheological behavior of water-based GO-TiO2-Ag and rGO-TiO2-Ag ternary-hybrid nanofluids. The impact of nanoparticles' volumetric concentration and temperature on the rheological properties were studied. All experiments were performed under temperatures ranging from 25 to 50 degrees C in the solid volume concentration range of 0.5-0.00005%. The data optimization technique was adopted using the Taguchi method. The types of nanomaterials, concentration, temperature, and shear rate were chosen to optimize the viscosity and shear stress. The effect of shear stress, angular sweep, frequency sweep, and damping factor ratio is plotted. The experimental results demonstrated that the rheological properties of the ternary hybrid nanofluid depend on the ternary hybrid nanofluid's

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Categories/Classification

Research Areas: Chemistry; Materials Science; Metallurgy & Metallurgical Engineering; Physics

Funding

Funding agency

Structures and Materials (S&M) Research Lab of Prince Sultan University

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Funding Table

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Language: English

Accession Number: WOS:000752626700001

PubMed ID: 35009170

eISSN: 1996-1944

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IDS Number: YV3JI

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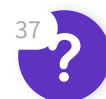
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eISSN: 1996-1944

Current Publisher: MDPI, ST ALBAN-ANLAGE 66, CH-4052 BASEL, SWITZERLAND

Research Areas: Chemistry; Materials Science; Metallurgy & Metallurgical Engineering; Physics

Web of Science Categories: Chemistry, Physical; Materials Science, Multidisciplinary; Metallurgy & Metallurgical Engineering; Physics, Applied; Physics, Condensed Matter

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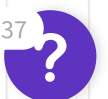
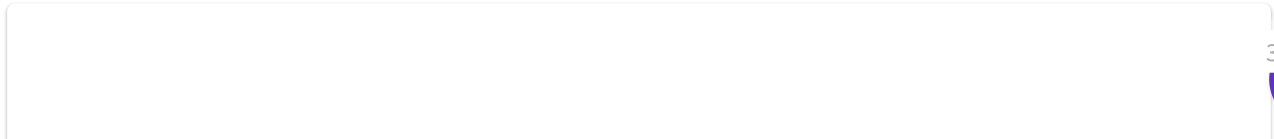
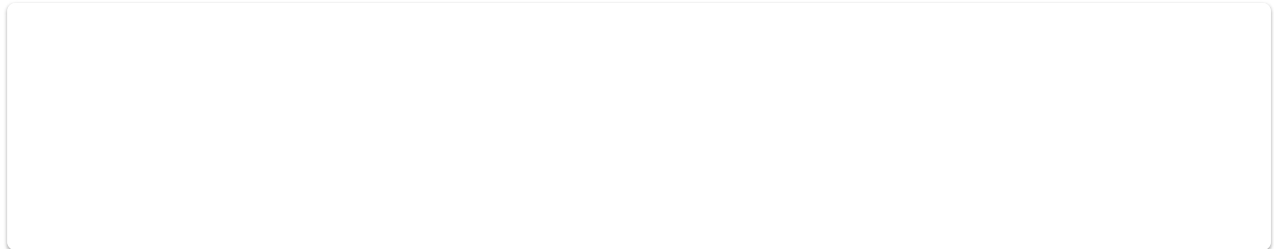
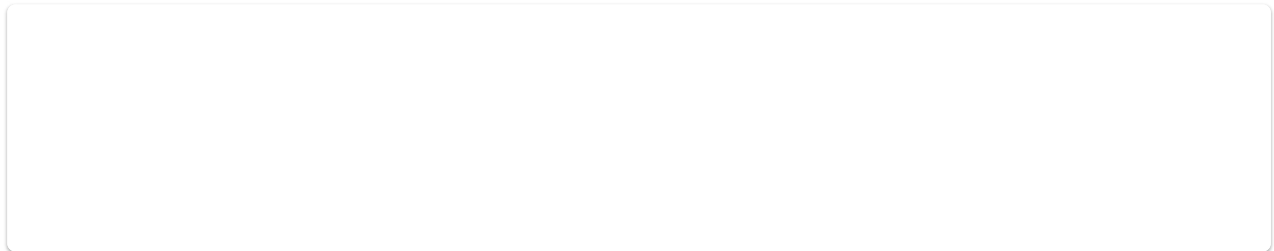
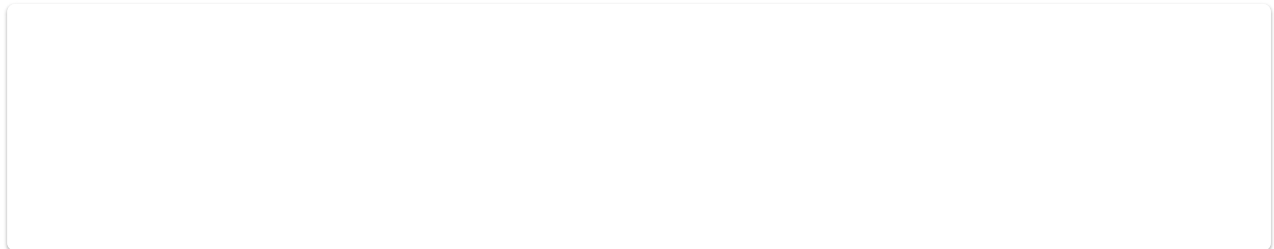
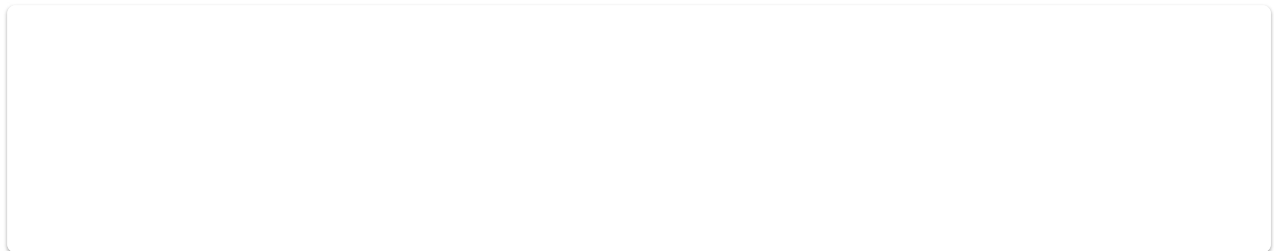
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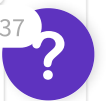
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