

# Table of Contents

**Volume 8    Number 8**

**August 2020**

**Efficiency and Effectiveness Concepts Applied in Shell and Tube Heat Exchanger  
Using Ethylene Glycol-Water Based Fluid in the Shell with  
Nanoparticles of Copper Oxide (CuO)**

É. Nogueira.....1

**Single Step Microwave Assisted Synthesis and Antimicrobial Activity of Silver,  
Copper and Silver-Copper Nanoparticles**

M. Reyes-Blas, N. M. Maldonado-Luna, C. M. Rivera-Quiñones, A. L. Vega-Avila,  
F. R. Roman-Velázquez, O. J. Perales-Perez.....13

**Green Degumming of Silk by Enzyme Extracted from Natural Sources**

M. Rahman, A. Bhowmik, S. Das, K. Chowhan, T. Biswas.....30

**Surface Modifications of Cellulose Acetate Film for the Application of Face Shield**

S. E. Lee.....41

**pH Controlled Synthesis of Tetragonal Cu<sub>2</sub>O Particles**

Q. L. Su, L. Zhang, Y. Liang, Y. Liu, P. Liu, J. D. Zhang.....46

**Activated Carbons Based on Shea Nut Shells (*Vitellaria paradoxa*): Optimization of  
Preparation by Chemical Means Using Response Surface Methodology and  
Physicochemical Characterization**

L. A. Amola, T. Kamgaing, D. R. T. Tchuifon, C. D. Atemkeng, S. G. Anagho.....53