

Synthesis of twenty novel 5-arylidene-2-ferrocenyl-1,3-thiazolidin-4-ones has been achieved in good to excellent yields by the Knoevenagel condensation of 2-ferrocenyl-1,3-thiazolidin-4-ones with aromatic aldehydes. The reaction was performed by refluxing the mixture of reactants and potassium tert-butoxide in dioxane overnight. All new compounds were characterized by the IR and NMR spectral data, and their electrochemical properties were investigated using the cyclic voltammetry. The X-ray crystal structure of one of the representative thiazolidin-4(1*H*)-ones is also presented. All obtained products were evaluated for their *in vitro* antioxidant, antibacterial and antifungal activity.