

# Nanocrystalline Nickel Synthesis by Pulsed Current

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In this work, nickel deposits were produced using continuous and pulsed current processes from watts bath. The optimum conditions of deposition were established and the influence of pulse parameters, namely, pulse on-time, off-time and average current density on the grain size, surface morphology and crystal orientation was determined. The study showed that pulse current results in better properties of deposits and significantly refined the crystal grain. The reduction of grains sizes has been found to offer substantial grains in the properties of the deposited metal such as the hardness and the corrosion resistance. Electrodeposition nickel has been investigated by Scanning electron microscopy and X-ray diffraction