

## **Manufacturing Method and Characterization of mechanical properties of laminated metal nanocomposites with graded layer thickness**

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### **Abstract**

In practical engineering applications, failure starts frequently from free surface of materials because of defects produced by: wear, fatigue, corrosion, erosion and so on. Therefore, durability against such damages could be improved by strengthening of near surface region. Many applications require a multi-layered structure. The tribological properties of these layered solids directly depend on the layer properties, e.g., the layer thickness, surface roughness, coefficient of friction, stiffness and hardness ratios of the layers to the substrate.

Hence, the aim of this presentation is to show the results of production and investigation of innovative metal composites structures with graded layer thickness. It focuses mainly on different aspects of the mechanical and tribological properties of such metallic composites. Namely, the influence of the sublayer thickness on strength and wear resistance of laminate composite made of copper and nickel.