**Sample Abstract Guidelines:**

1. Abstract Content should be in English
2. The maximum word count should be 250-300 words
3. If your title includes scientific notation, Greek letters, bold, italics, or other special characters/symbols, do make sure they appear correctly.
4. Corresponding details of corresponding author should be correct which will be used for further communication.
5. Abstracts should highlight the major points of your research and should not include tables, figures and references.

**Format**

**Presentation title:** Microstructure, texture, and tensile properties of the 50% hot-rolled and subsequent heat treated Ti6Al4V-5Cu alloy.

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**Any alternative number:**

**Other Authors if any:**

**Presentation type:** (Oral presentation/ Poster presentation)

**Abstract (250-300 words):**

In order to investigate the influence of 50% hot-rolling on the microstructure, textural evolution, and tensile properties in Ti6Al4V-5Cu alloy, an electron backscattered diffraction (EBSD) was used. To obtain a reduced textural influence behavior on the alloy, dual heat treatment schedule was specially designed. The results show that hot-rolling at high temperature significantly promote the transformation of phases to a fully α-phase structure and lamellar microstructure with different grains structure starting from elongated to coarsened appearance was produced. Hot-rolling deformation contributed for increasing the alloy texture intensity, whereas the heat treatment is important for weakening textural intensity, however, the coarsening of grains are prominent. Deformation and heat treatment temperature, therefore, an important factor affecting the texture and grain size. Using tensile testing experiment by considering 0.02 strain offset method, the yield strength of the alloy were estimated. During tensile testing process, studying strength of a material is the primary concern. Material strength could be measured in terms of either the stress essential to cause noticeable plastic deformation or the maximum stress that material can withstand. The tensile testing also provides information on the material’s ductility behavior to measure how much the alloy can be deformed before fractured. Using specimen sectioned in rolling direction (90°), the true stress-strain curve revealed that the strength at which the alloy has significant plastic deformation under 0.02 offset yield strength method. The alloy revealed 35 MPa yield strength at 800 °C and its area reduction reached 168.5%, and elongation reached up to 83%.

**Biography (150-200 words):**

Solomon Kerealme Yeshanew, a PhD graduate in Material Science and Engineering (Materials Processing Engineering Specialty) from the School of Materials Science and Engineering of the University of Science and Technology of China (USTC), Institute of Metal Research-Chinese Academy of Science (IMR-CAS), studying under the supervision of Professor Ke Yang and Professor
Chunguang Bai. His PhD thesis was on the study of the deformation processing of copper-bearing titanium alloys. He has published an original research article in a heat-treated Ti6Al4V-5Cu alloy to quantify material damage evolution and microstructure development, phase thicknesses, tensile properties, and processing window. His research activity has mainly focused on titanium alloys for biomedical applications. The previous research experience mainly focused on plastic deformation and mechanical properties (such as fracture toughness, Gleebel-compression testing, tensile testing, hardness, etc.). He also done an investigation to study the influence of hot-rolling deformation on the microstructure, crystalline orientation, and texture development of the TC4-5Cu alloy. Hence, he is interested in research studies on the fabrication, processing, and mechanical properties of metallic materials. He has the experience for Microscopy studies involving XRD, DSC, SEM, EBSD, TEM, etc., and he has committed to pursue study and gain knowledge in the field of advanced materials at the nanoscale.