# Ultraviolet resistance and other physical properties of softwood polymer nanocomposites reinforced with ZnO nanoparticles and nanoclay

**Main Objective:** Study the dispersion of silicate layers and presence of ZnO nanoparticles.

**UV resistance property.**

*Transmission electron microscopy showed the presence of nanoparticles and nanoclay in the cell wall of wood.*

**Specimen preparation:** 100 nm thick. The samples were embedded with epoxy resin for the preparations of (ultra) thin as well as polished sections. The sections were stained with 1% (wt%) uranyl acetate for sufficient contrast.

**Instrumentation:** The sections were then mounted on grids and examined with a JEOL JEM-2100 TEM at an accelerating voltage of 80 kV.

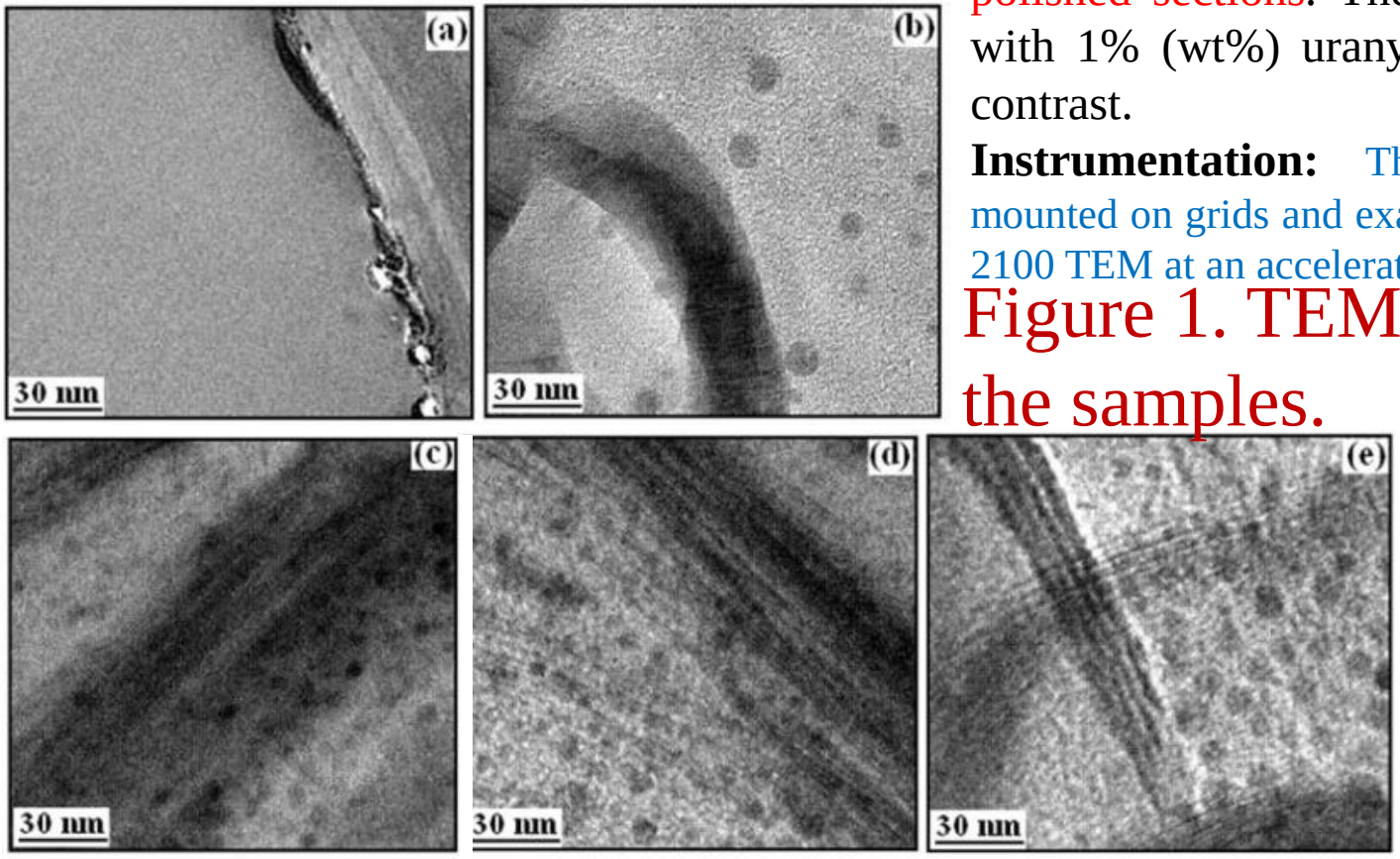


Figure 1. TEM micrographs of the samples.

**Conclusion:** A uniform distribution of the nanoparticles was observed from TEM analysis.

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Reference: Ankita Hazarika & Tarun K. Maji, Tezpur University, India, (2015)