Surface coating properties on Cu/CNTs composite using different grinding media by a traditional ball mill with DEM simulation

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This work investigated the fabrication of CNTs coatings on the Cu particles using different grinding media. Grinding experiments were carried out by a TBM with various experimental conditions. We explored the effect of the experimental conditions, such as rotation speed, ball diameter and grinding time. The results were characterized using SEM for particle morphology and FESEM for surface coating of CNT. Furthermore, the force applied to the balls in TBM were simulated by DEM. The result showed the impact energy and power of three kinds of ball material has a noticeable difference. Nevertheless, coating properties on Cu/CNTs composite were slightly depended on differen grinding media. FESEM results revealed that the CNTs were attached the surface of Cu powder at low rotation speed and long time in the TBM.