indicates third value very low when compared to other 2 peak values. Then XRD peaks 30hrs value is 0.2478avg and nano size 100nm, 45hr value is 0.2459avg and nano size 100nm and 75hr value is 0.2457 avg and nano value 100nm, finally peaks have been decreases so 75hr is the better nano material stage based on the above results.

In future to develop a novel copper alloy metal matrix composite alloy through mechanical alloying by high energy ball milling route.

This results show that Scherrer equation is an easy way to evaluate the mean diameter in nano-sized copper particle cases. In some particular cases copper material this relation must be completed with other theory that take in account lattice site of crystalline structure. Otherwise, this equation can be the first evaluation of mean diameter distribution. Then conclude directly XRD pattern, if large rings appear than samples in study has a low values for mean diameter than in case if thick rings appear.

## References

[1] Brouisol. British Patent No. 392556, 1931.
[2] Canano Technologies, 230 Metcalf Street, P.O. Box 911, Tweed, Ontario, K0K 3J0.
[3] Dresher, W. H., “Speeding up your computer in the 21st Century using Copper ICs," Innovations, Copper Development Association Inc., January 2000.
[4] Farzana Hussain,Mehdi Hojjati,Masami Okamoto, Russell e. gorga"Review article: Polymer-matrix Nanocomposites, Processing, Manufacturing, and Application: An Overview" Journal of Composite Materials2006; 40; 1511 DOI: 10.1177/0021998306067321
[5] J.T. LinD. Bhattacharyya, C. Lane" Machinability of a silicon carbide reinforced aluminium metal matrix composite" Wear 181-183 (1995) 883-888
[6] N.Muthukrishnan & M. Murugan & K. Prahlada Rao "Machinability issues in turning of Al-SiC (10p) metal matrix composites" Int J Adv Manuf Technol (2008) 39:211
[7] Mahamani.A "Machinability Study of Al-5Cu-TiB2 In-situ Metal Matrix Composites Fabricated by Flux-assisted Synthesis"Journal of Minerals & Materials Characterization &Engineering jmmce.org, Vol. 10, No.13, pp.1243-1254, 2011
[8] N. Muthukrishnan & M. Murugan & K. Prahlada Rao "An investigation on the machinability of Al-SiC metal matrix composites using PCD inserts" Int J Adv Manuf Technol (2008) 38:447–454 DOI 10.1007/s00170-007-1111-z.
[9] Sujit Das, R. Behera,G. Majumdar,B. Oraon,G. Sutradhar " An experimental investigation on the machinability of powder formed silicon carbide particle reinforced aluminium metal matrix composites" International Journal of Scientific & Engineering Research Volume 2, Issue 7, July-2011 1 ISSN 2229-5518
[10] R.Venkatesh, A.M.Hariharan, N.Muthukrishnan "Machinability Studies of Al/SiC/ (20p) MMC by Using PCD Insert (1300 grade)" Proceedings of the World Congress on Engineering 2009 Vol II WCE 2009, July 1 - 3, 2009, London, U.K