Ola A Mohamed et al., J Nanomater Mol Nanotechnol 2017, 6:6
DOI: 10.4172/2324-8777-C1-014

19th Nano Congress for Next Generation

August 31- September 01, 2017 Brussels, Belgium

Preparation of acrylic silicon oxide nanoparticles as a binder in leather finishing

Ola A Mohamed, Hamed S Mohamady and **Rasha Z Attia**
National Research Center, Egypt

Leather industry is one of the most pollutant industries in the world. It produces all types of environmental pollution especially in finishing step which uses organic hazards solvents. In order to minimize the environmental impact in leather industry, water-based recipes are proposed in leather finishing. The application of an acrylic emulsion as a top coat system provides an excellent balance of safety, performance and commerciality in comparison with other coats. Acrylic resin nanosize latex whose colloidal particle size is about 23 nm with solids content of about 25% was prepared by copolymerization of MMA and 2-EHA at different monomer ratios via micro emulsion polymerization technique. The best prepared copolymer so, it was modified with different ratios of silicon dioxide nanoparticles (1-5%), then studied the properties of the modified acrylic films and applied onto leather. The physical, chemical, mechanical and thermal properties of coated leather before and after silicon dioxide nanoparticles application were evaluated and discussed.

Biography

Ola Mohamed get PhD in Ain shamas university 2000, Associate Prof. in 2006 , Full Prof. in 2011. Her fields of Interest; Leather technology, Leather coating to improve its mechanical and physical properties. Using Nano technology in leather finishing, Recycling leather solid wastes and Recovery of chrome from tannery waste water using different nano- materials and techniques. Participate in many national and international conferences. PI for many international projects through scientific cooperation as France and China. Get and give many Training course and scientific Presentations.

olaashraf2000@yahoo.com

Notes: