The Study on Dispersion Properties of ITO Nano-Particles and Conductive Polymer by Zeta-Potential Theory

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Indium tin oxide (ITO) particles have been attracted much attention over the years owing to their unique characteristics providing a high optical transparency in visible wavelength region, a high reflectance in infrared region, and a nearly metallic electrical conductivity. Zeta potential is as a magnitude of repulsive or attractive energy between particles when a particle is moved as long as its diameter. Zeta potential is a major parameter to evaluate the dispersion property of solutions containing nano-particles. This paper shows that particle size distribution has a relation with zeta potential of ITO suspension from pH 3 to pH 8.