

The synthesis of charged particles for reflective electronic paper

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These days, many people are interested in electronic paper(E-Paper). E-Paper has many advantages, such as the feel like paper and excellent readability with low power consumption. Even though many advantages, E-paper is not suitable for video images because its response time is long. we developed new E-Paper particles which can be modulated fast in the medium.

We used dispersion copolymerization. Highly monodispersed particles of 1~15micrometer were synthesized. We used reagents ethanol and water as solvent, PVP-K30 as stabilizer and CCA(charge control agent). Monomers are styrene and butyl methacrylate(7:3wt%) and initiator is AIBN(2,2-azobis(isobutyronitrile)). We obtained particles of high monodisperse of average 10 μ m with surface electric charge of 20~30 μ C/g.