

Synthesis of high performance polymeric-sulfonated mesoporous silica nanocomposites application for substrate of OLEDs with high mechanical and intergrated barrier properties

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Very small mesoporous silica nanoparticles with sulfonation group inside the pores and PES oligomer coated on the surface of the particles were synthesized. The small size of mesoporous silica nanoparticles prevent scattering of the light, and mesopores with sulfonate groups will keep water to decrease WVTR of the film. With PES oligomer coated on the surface of the particles, the nanocomposites film with mono dispersion of mesoporous silica nanoparticles were achieved. The characteristics of mesoporous silica nanoparticles and the nanocomposites will be measured.