

The effects of solvent treated PEDOT:PSS buffer layer in organic solar cells

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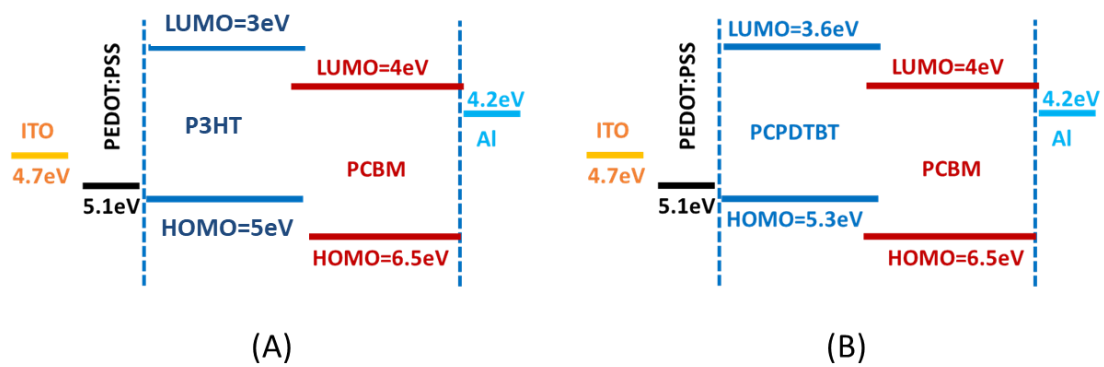


Fig.1; The band diagram of the (A) P3HT:PCBM and (B) PCPDTBT:PCBM based device under study

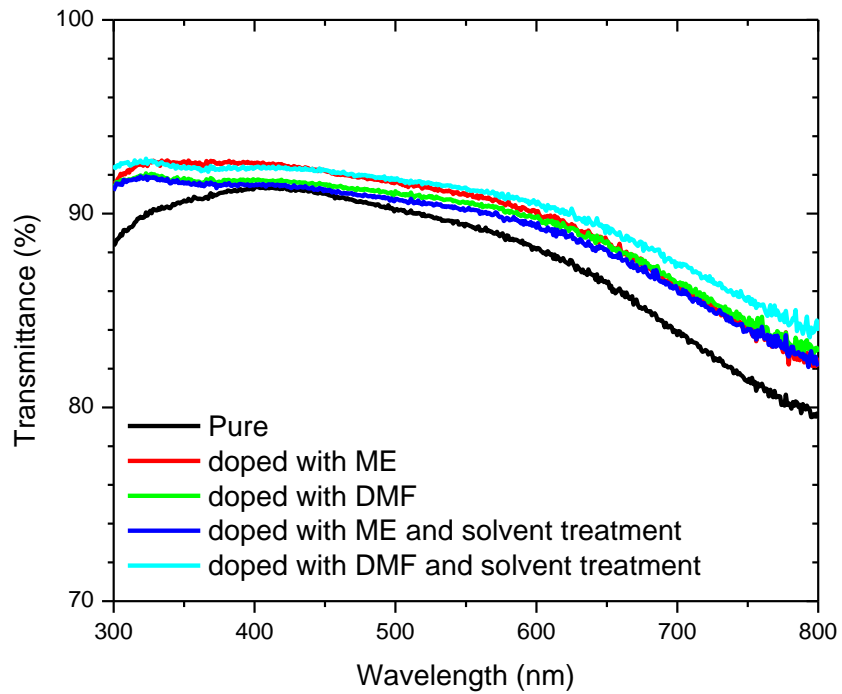


Fig.2; The transmittance spectrum of PEDOT:PSS based films, pure and treated with ME and DMF.

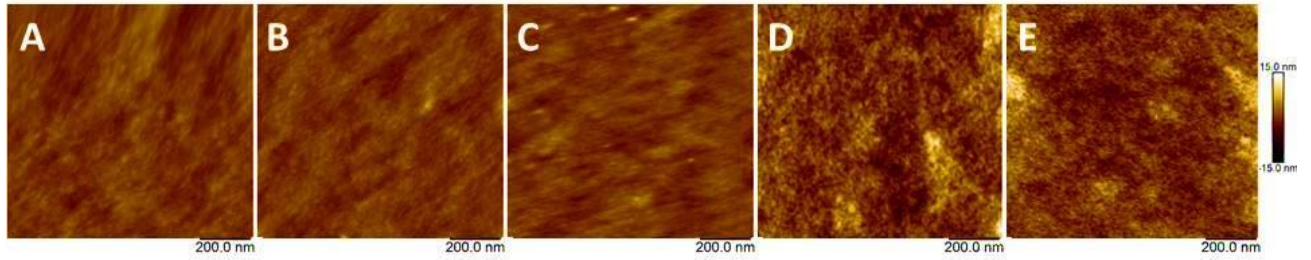


Fig.3; AFM images of (A) Pure PEDOT:PSS, (B) ME doped PEDOT:PSS, (C) DMF doped PEDOT:PSS, (D) ME doped PEDOT:PSS and ME solvent treatment and (E) DMF doped PEDOT:PSS and DMF solvent treatment

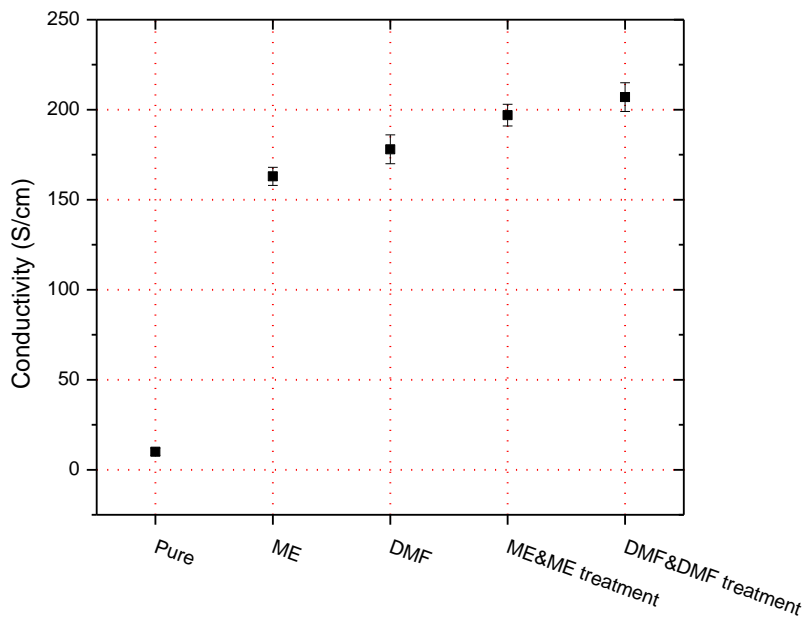


Fig.4; the electrical conductivity for the PEDOT:PSS layer with and without treatment

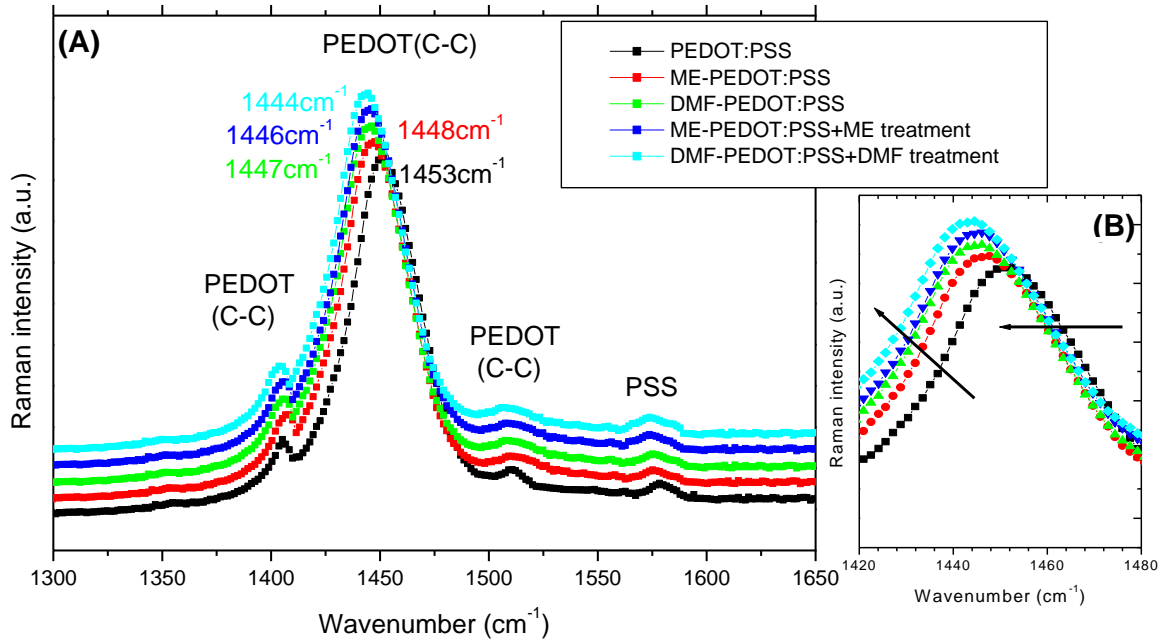


Fig.5; (A) Raman spectra for the studied PEDOT:PSS with and without treatment and (B) the maximum peak around 1450cm^{-1}

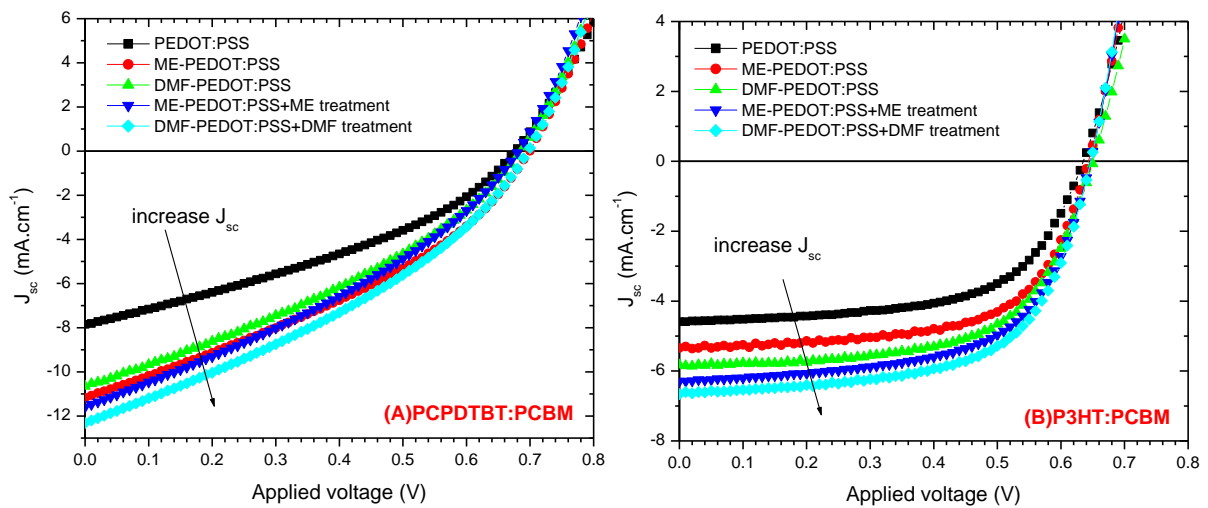


Fig.6; J-V characteristics of the (A) PCPDTBT:PCBM and (B) P3HT:PCBM based solar cells

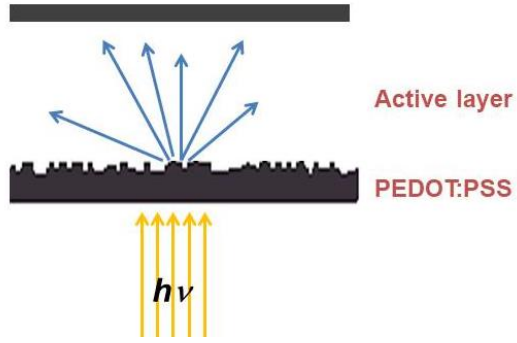


Fig.7; the assumption of light scattering from the rough PEDOT:PSS layer

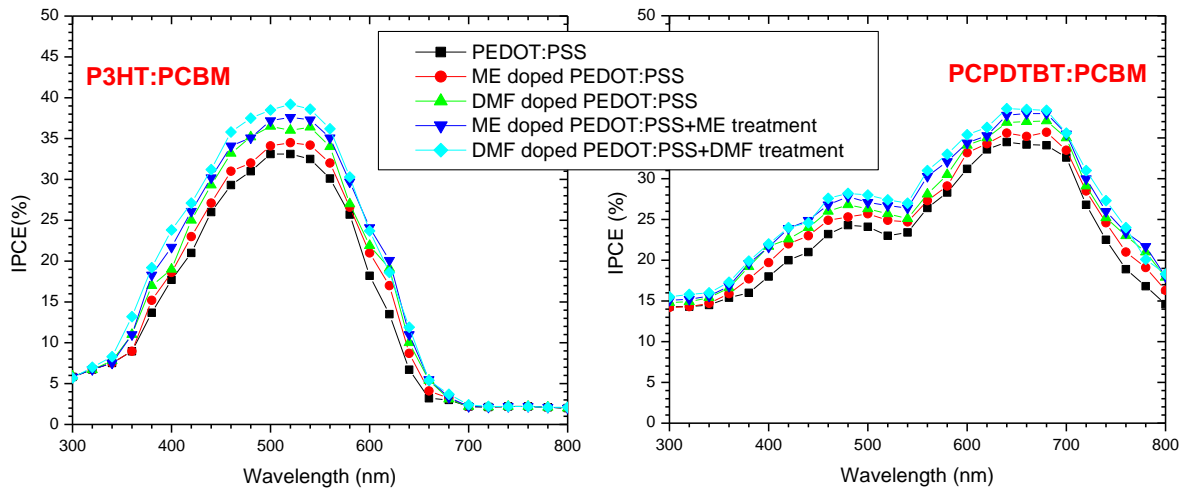


Fig.8: IPCE spectra for the PCPDTBT:PCBM and P3HT:PCBM based devices