

Supplementary Information

Photoactive composite films prepared from mixtures of polystyrene microgel dispersions and poly(3-hexylthiophene) solutions

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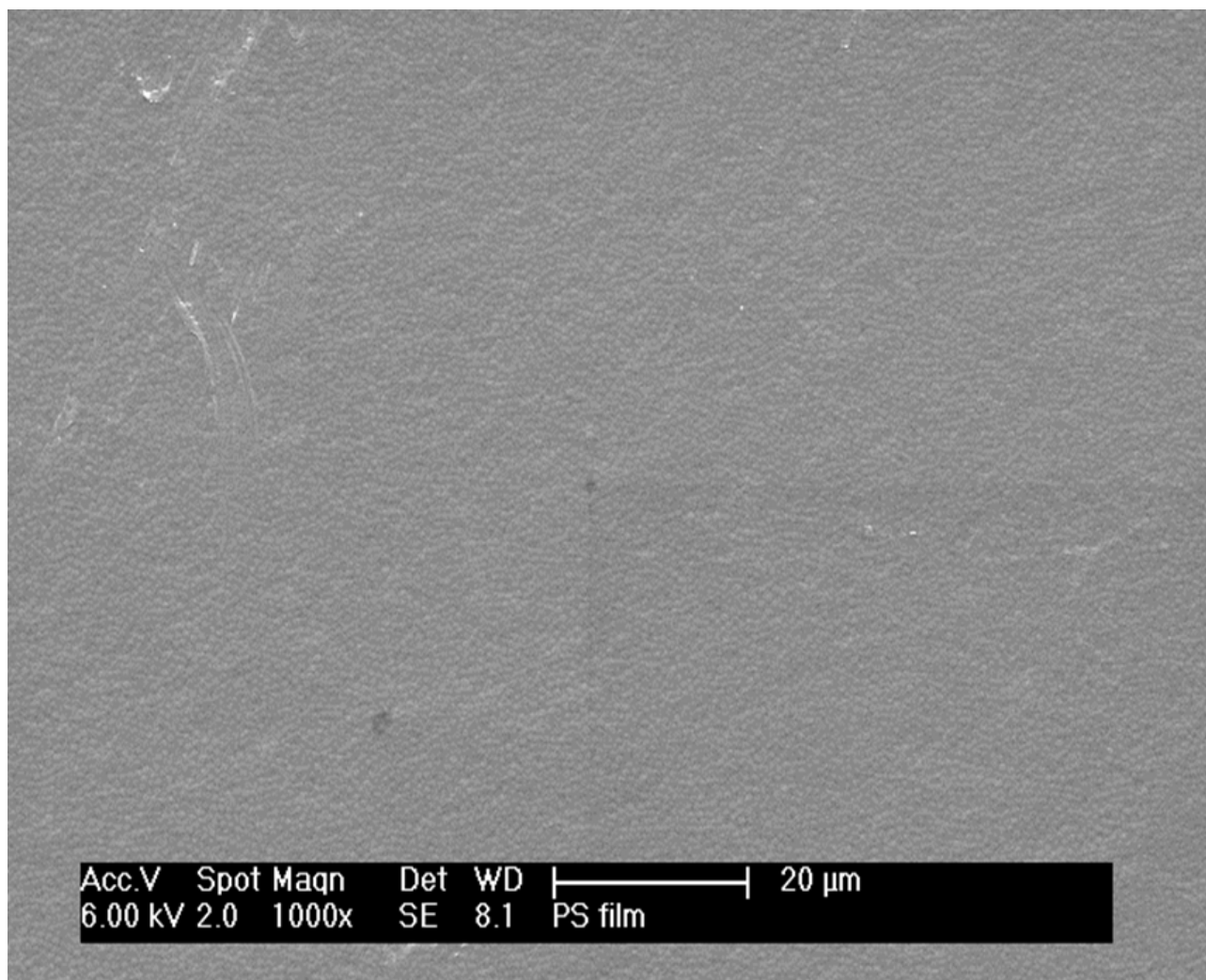


Fig. S1. Large area SEM image for a M3.0 microgel film.

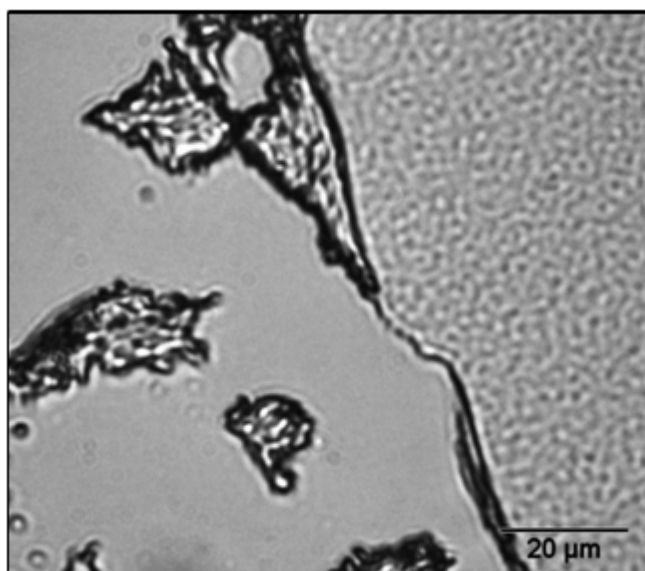


Fig. S2. Optical micrographs of spin-coated M3.0 film. The image shows an optical micrograph of M3.0 film which had been scratched. Film fragments are clearly evident and demonstrate the film forming ability of the deposited particles.

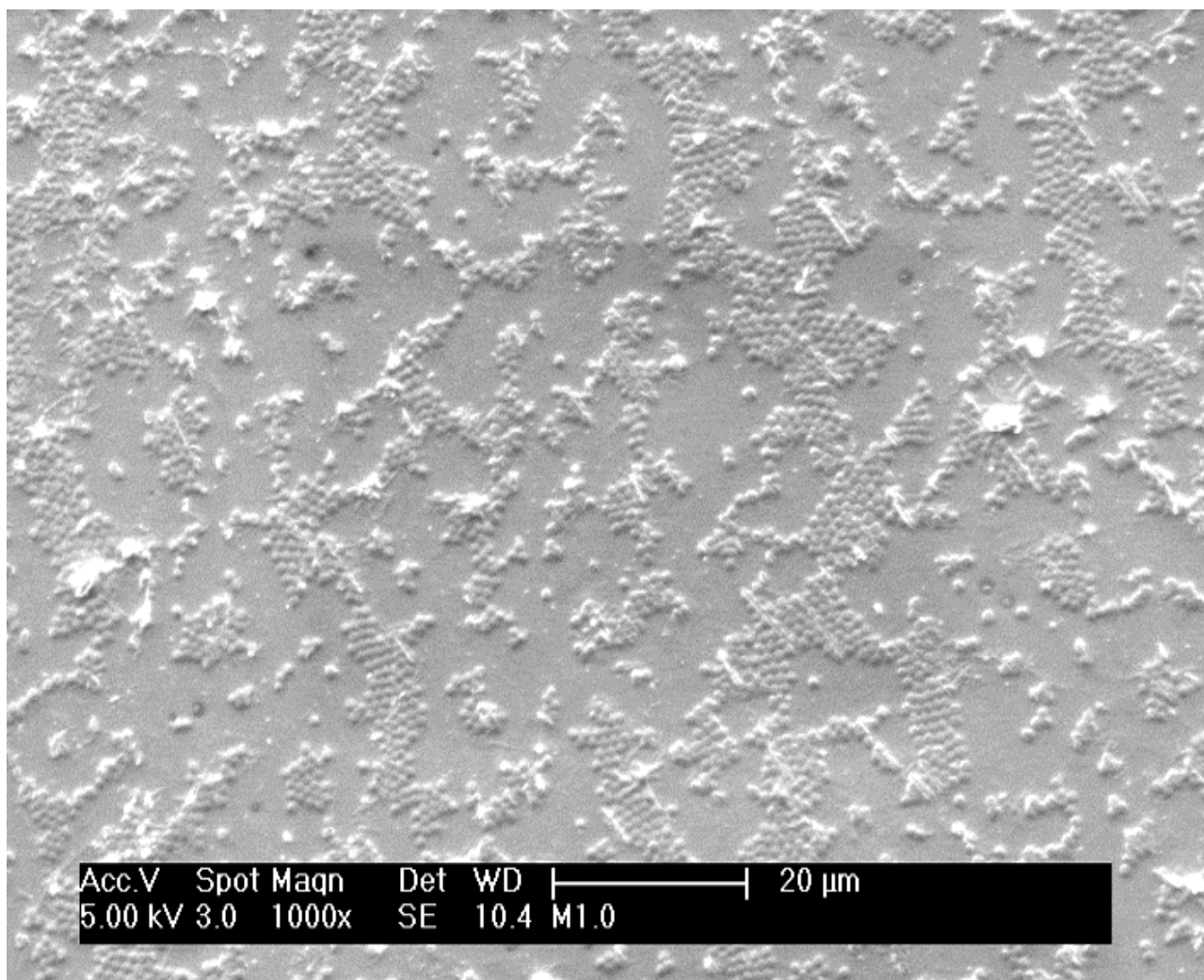


Fig. S3. Large area SEM image for a M1.0 microgel film. Many islands of 2D crystals are evident.

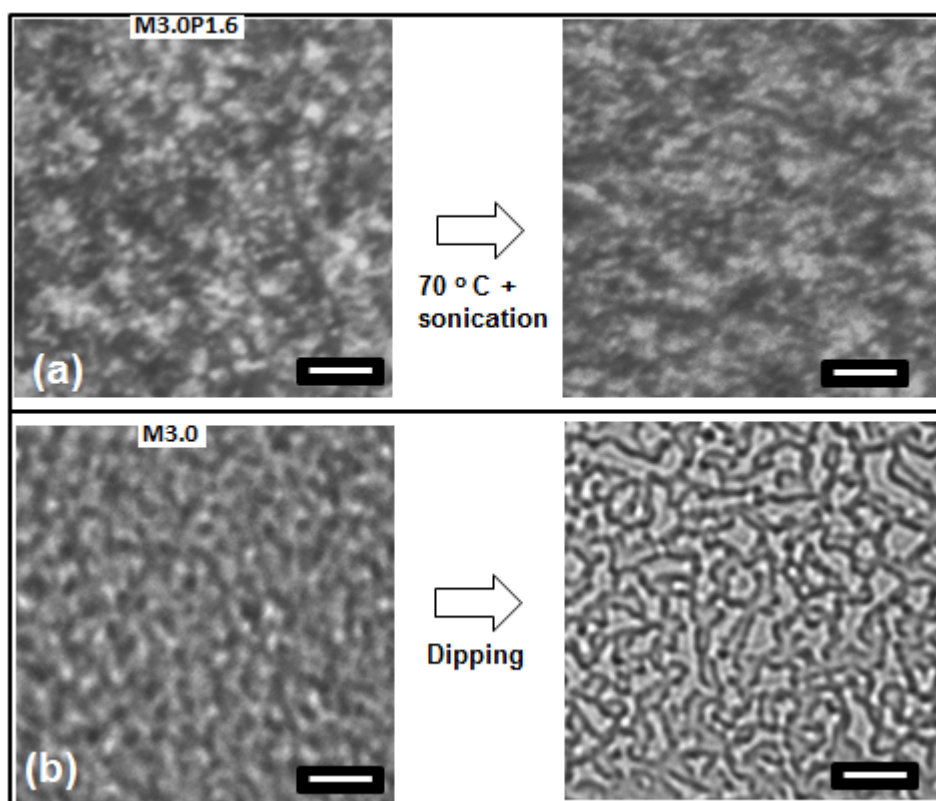


Fig. S4. Effect of washing with ethylbenzene on film morphology. (a) shows optical micrographs of M3.0P1.6 before and after washing and sonication. (b) shows micrographs for a M3.0 film. The film from (a) was placed in ethylbenzene at 70 °C for 2 h with sonication. The film from (b) was dipped in ethylbenzene for 6 h and only briefly sonicated. The scale bars are 10 μm .

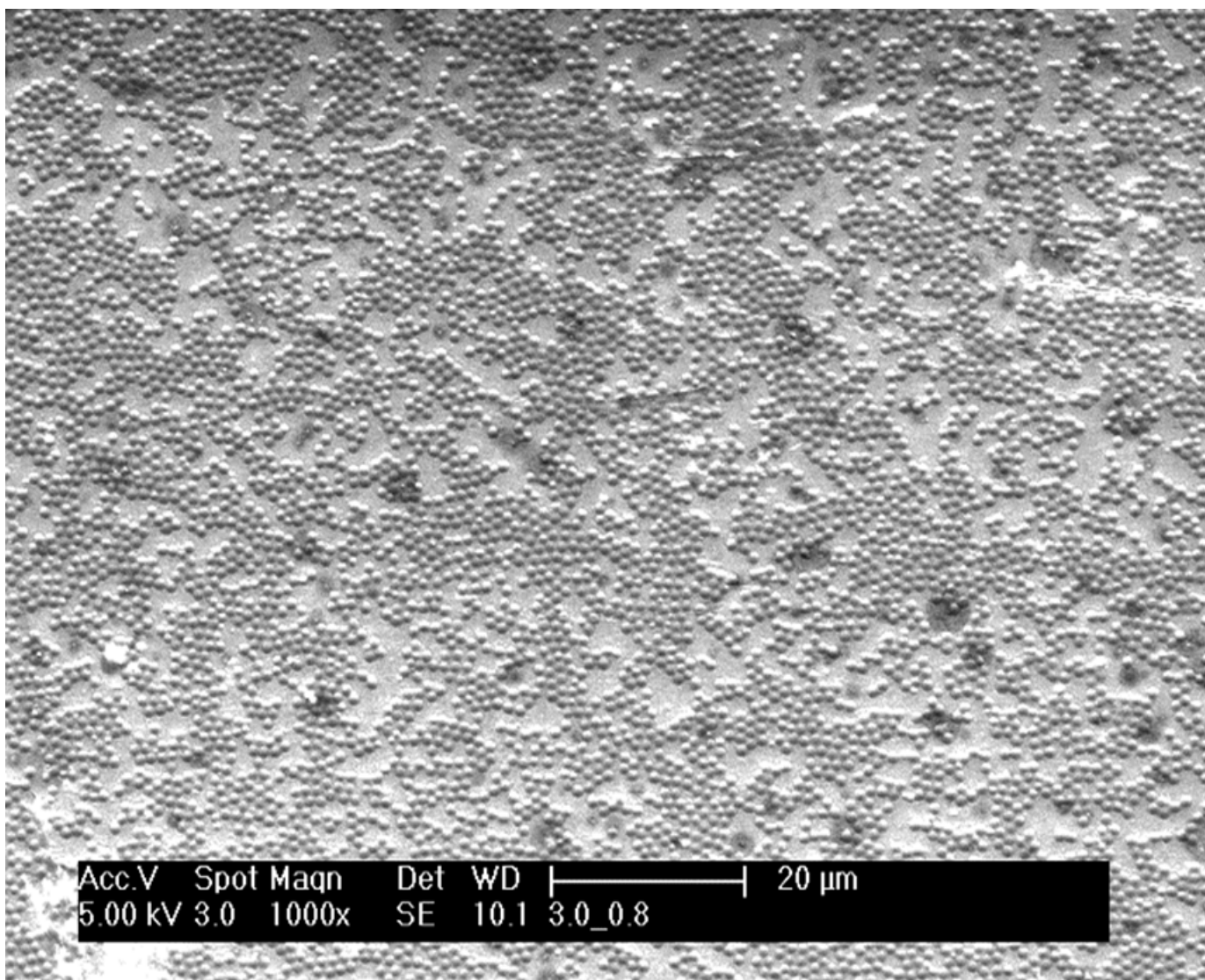


Fig. S5. Large area SEM image for M3.0P0.8 film.

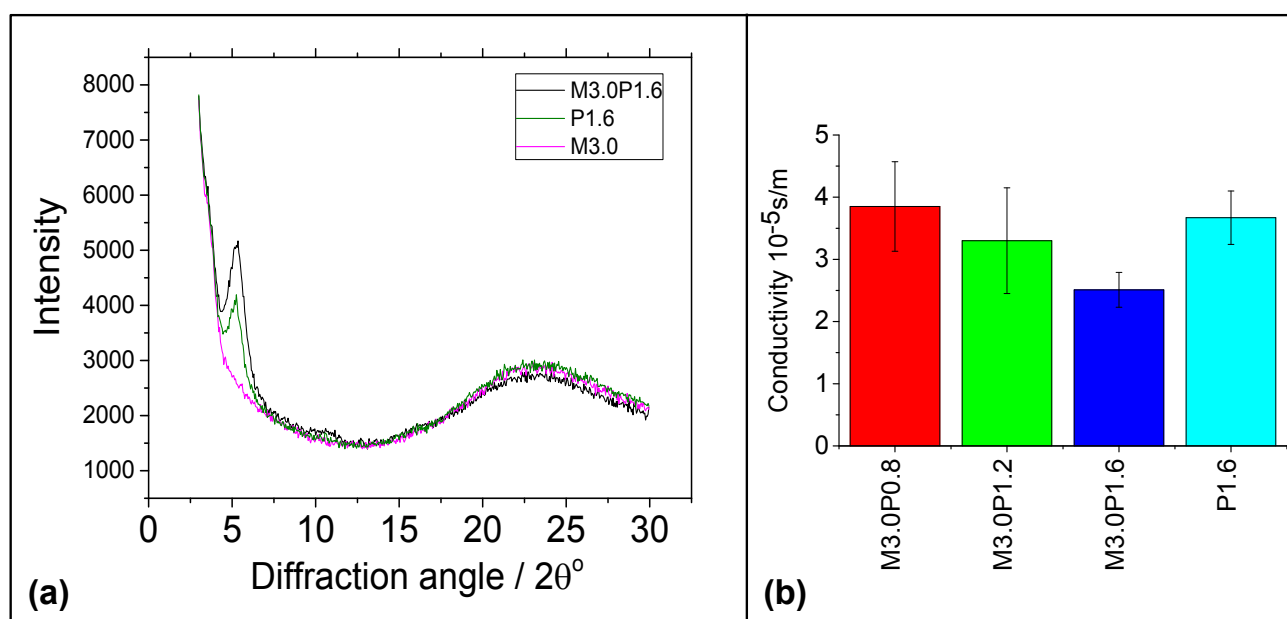


Fig. S6. Probing structural order and charge transport within P3HT/polystyrene composite films (a) WAXD profiles and (b) Electrical conductivity data.