Electronic supplementary information

Wrinkle structure with broadband and omnidirectional light-trapping capabilities for improving performance of organic solar cell with low defect density

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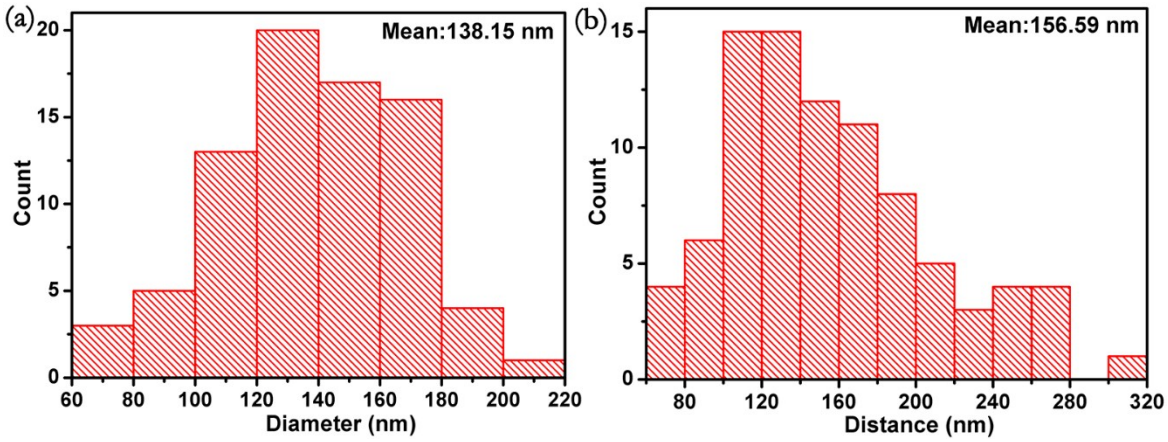

Fig. S1 (a) Diameter and (b) edge distance distributions of AgNPs array.

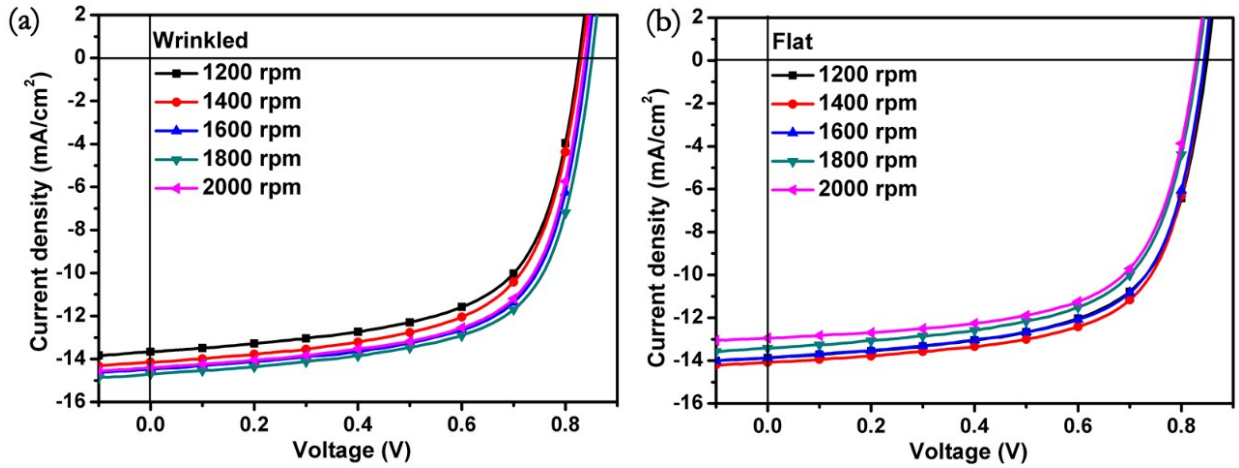

Fig. S2 *J-V* characteristics of (a) wrinkled, (b) flat solar cells fabricated using different active layer spin-coating speed.

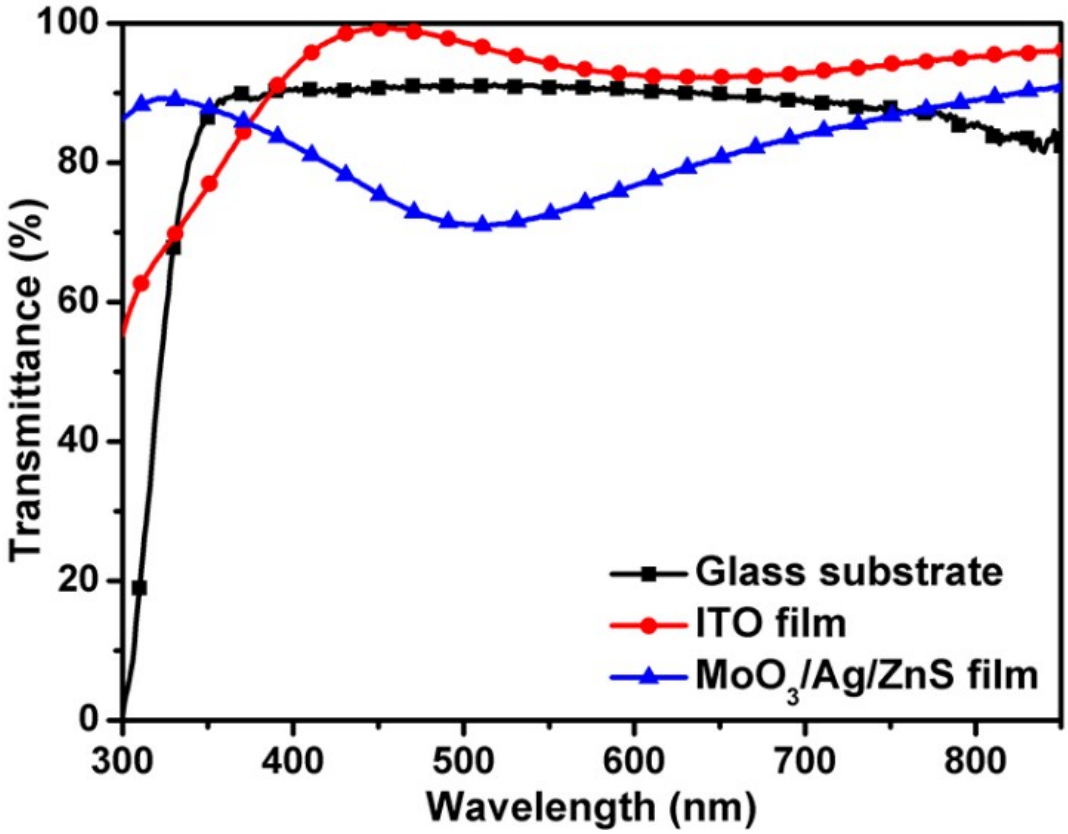

Fig. S3 Transmittance spectra of glass substrate, ITO film and MoO_3/Ag/ZnS transparent electrode.

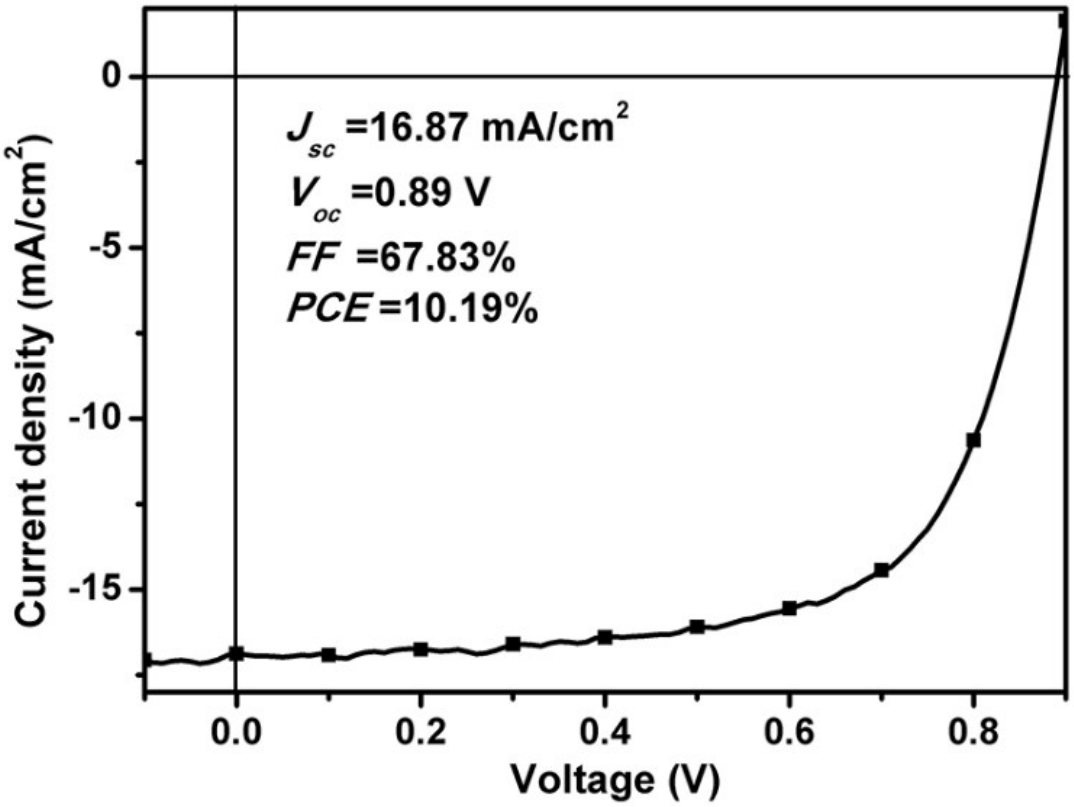

Fig. S4 *J-V* characteristics of solar cell based on flat ITO/glass substrate.

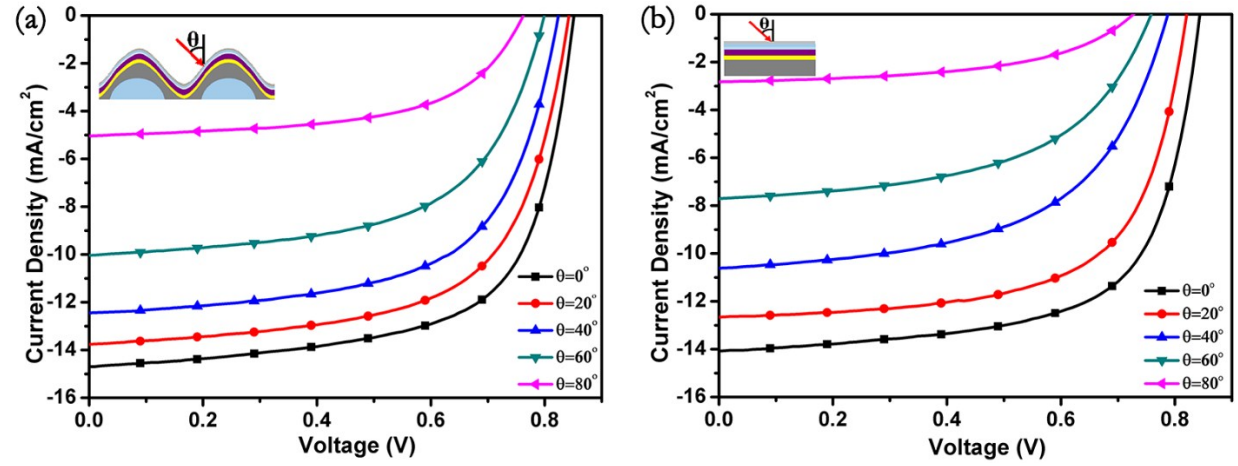

Fig. S5 *J-V* characteristics of (a) wrinkled and (b) flat solar cells under different incident angle.

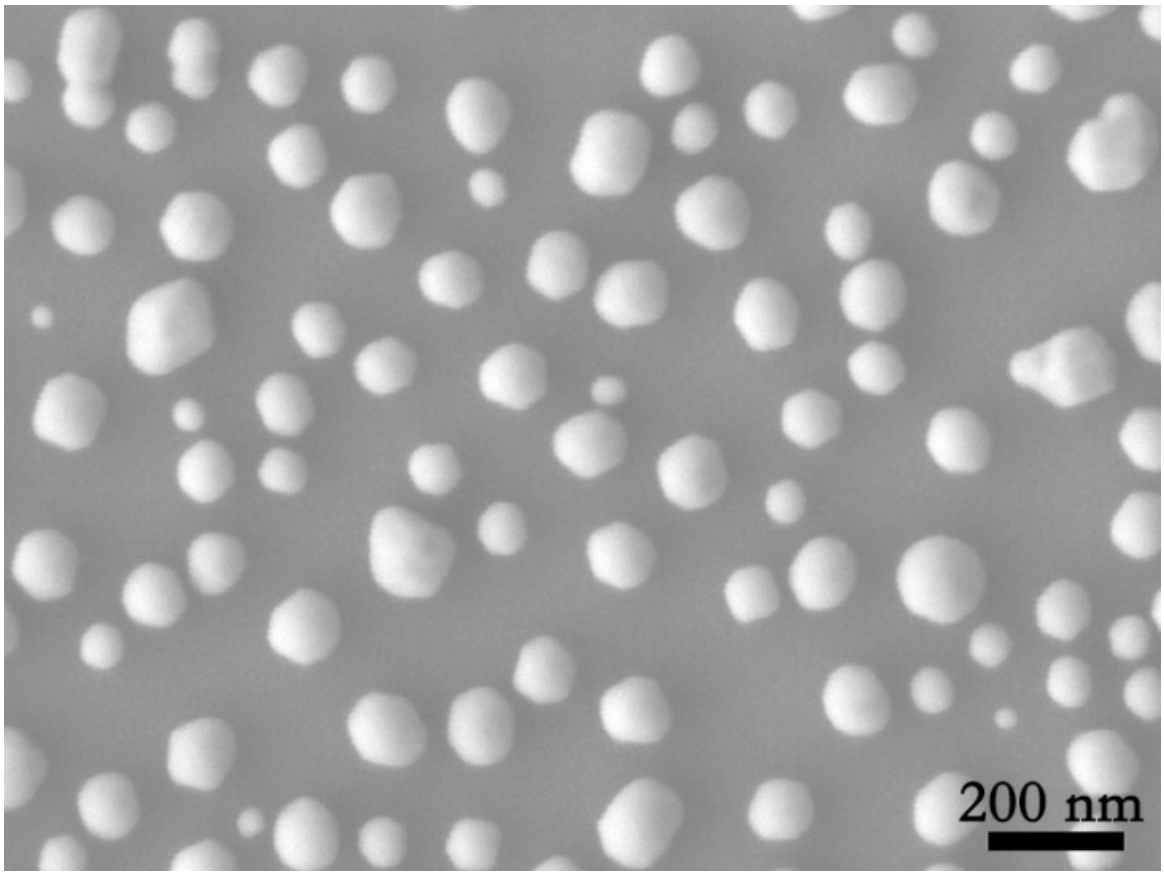

Fig. S6 Surface SEM image of non-spherical AgNPs with sharp edge.

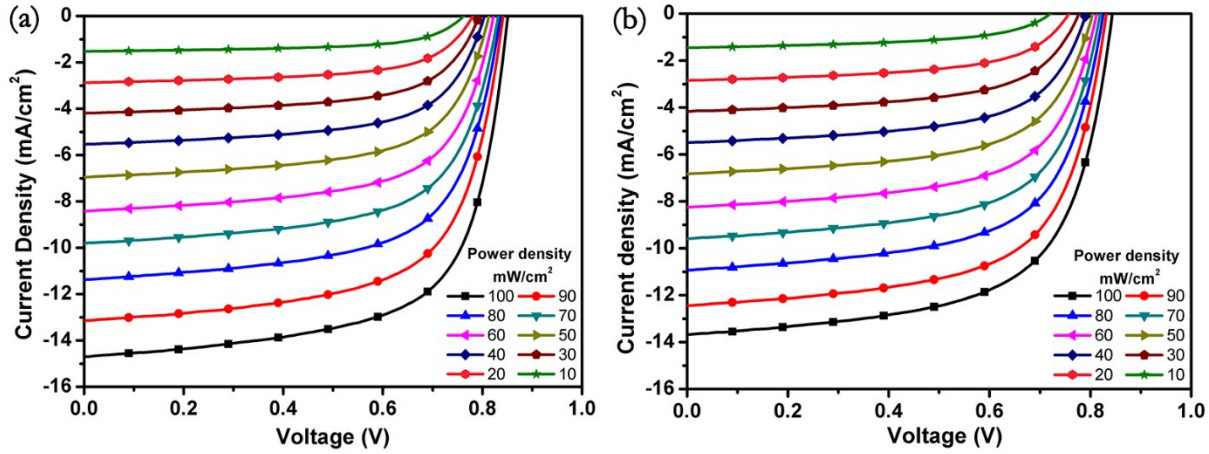

Fig. S7 *J-V* characteristics of solar cells based on (a) spherical and (b) non-spherical AgNPs array under various light intensities ranging from 100 mW cm^{-2} to 10 mW cm^{-2}.