

## Supplementary Information

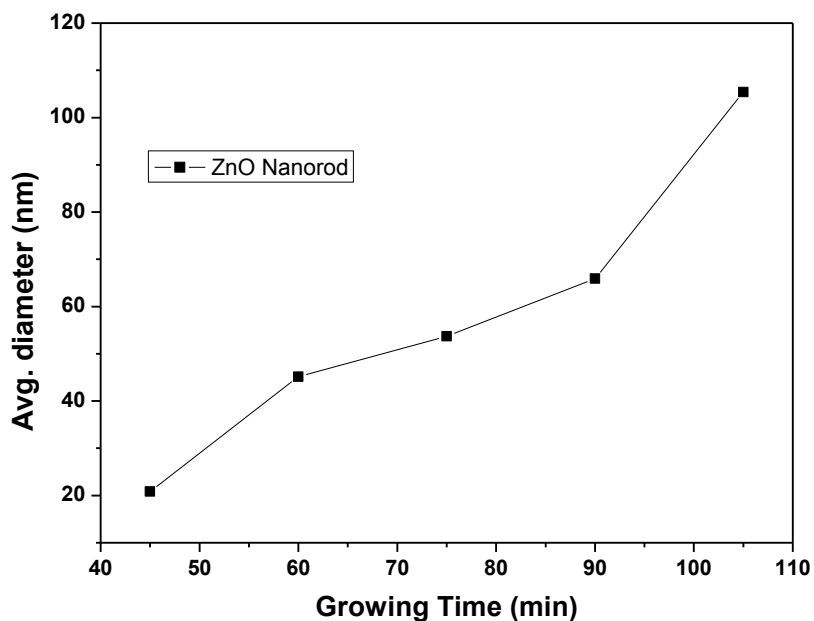
### ZnO Nanorod Arrays for Various Low-bandgap Polymers in Inverted Organic Solar Cells

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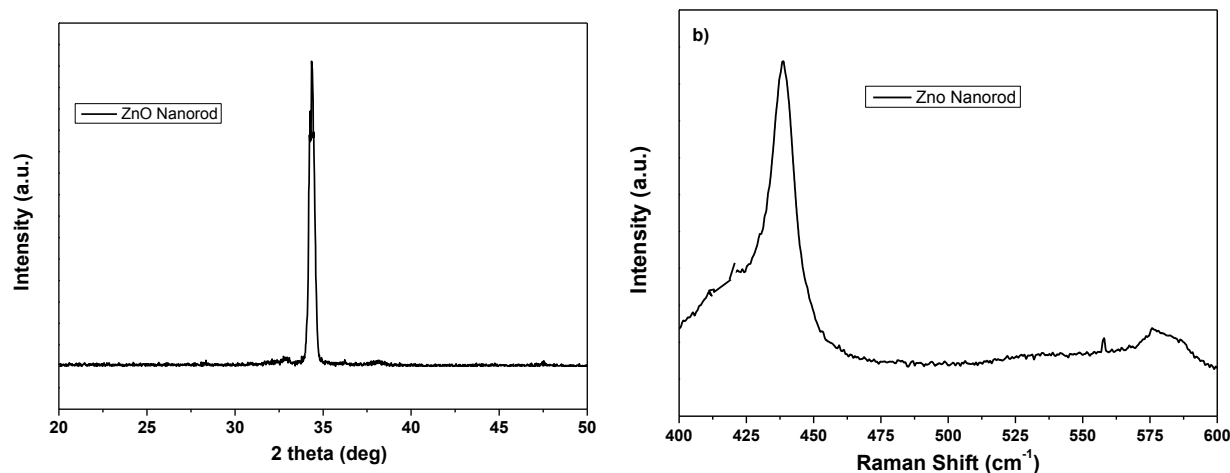
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**Fig. S1.** ZnO Nanorod diameter with respect to growing time

**Table. S1.** ZnO Nanorod diameter and coverage with respect to growing time

ZnO Nanorods growing time	45 min	60 min	75 min	90 min	105 min
Diameter	20.8	45.1	53.6	65.9	105.3
Coverage	67%	76%	81%	87%	94%



**Fig. S2.** (a) XRD intensity of ZnO Nanorod (b) Raman intensity of ZnO Nanorods

Figure S2 showed that XRD pattern and raman scattering spectrum of ZnO nanorods. In Figure S2(a) the only peak appears in about  $34.5^\circ$  and the Full Width of Half Maximum (FWHM) is  $0.309^\circ$ . By the above information, we could discover that the ZnO Nanorods were highly c-oriented. In Figure S2(b) only two peak which appeared in  $438\text{ cm}^{-1}$  and  $575\text{ cm}^{-1}$  were E2(h) and A1(LO) of ZnO Raman Scattering spectrum. For highly c-oriented ZnO systems, these two peaks are the allowed modes in Raman Scattering spectrums. The sharp E2(h) peak with Full Width of Half Maximum (FWHM)  $10\text{ cm}^{-1}$  also showed the satisfactory crystallinity of ZnO Nanorods.