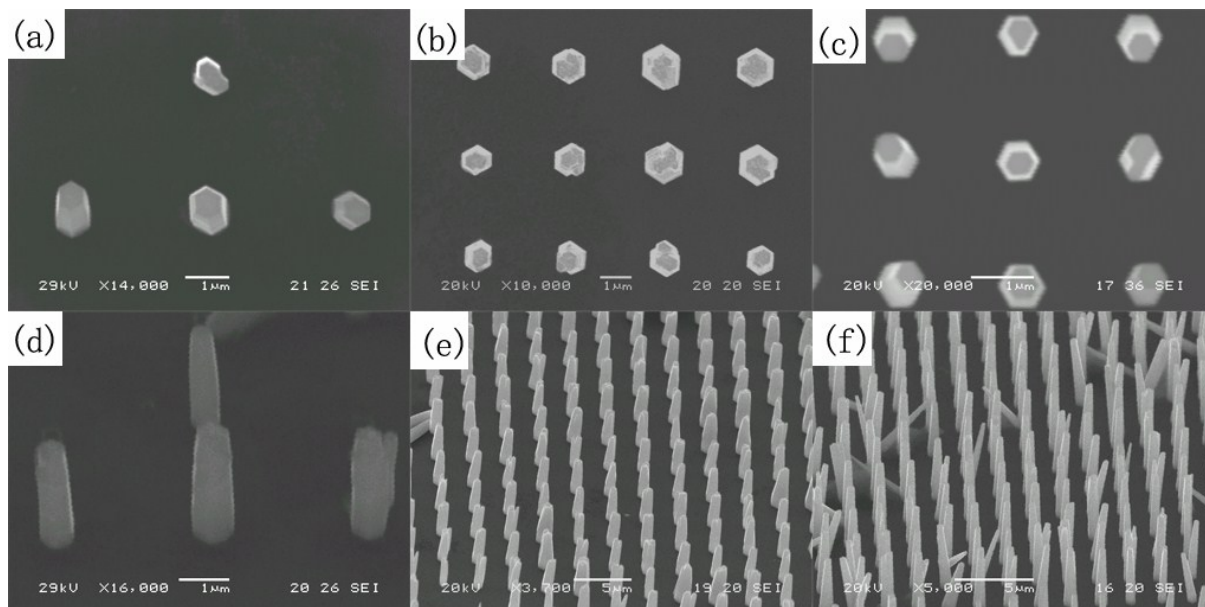
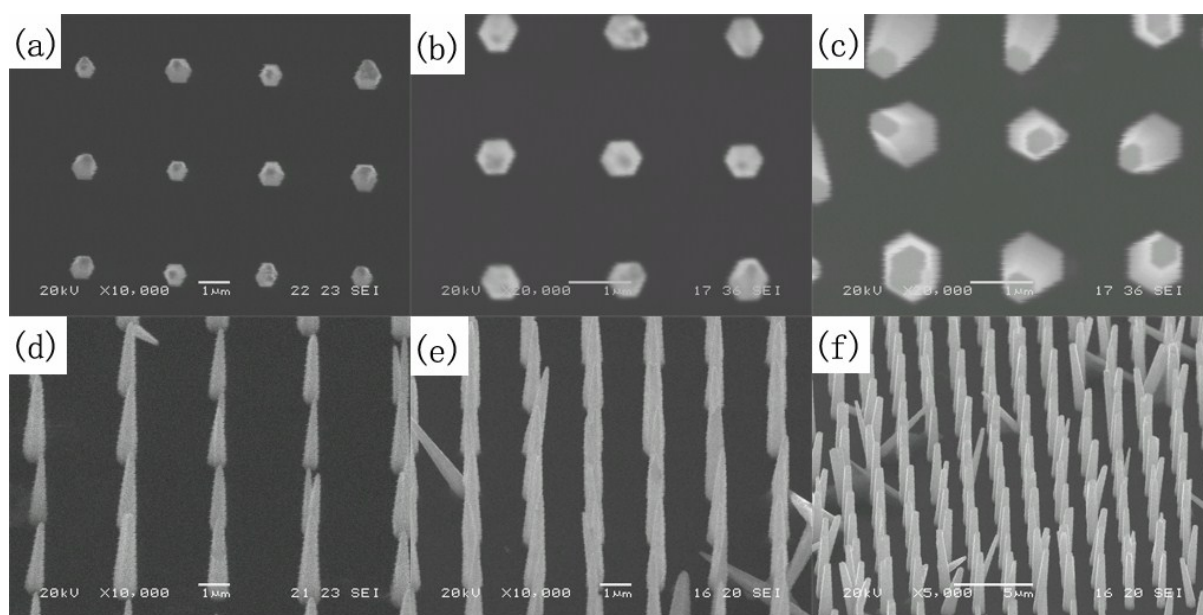


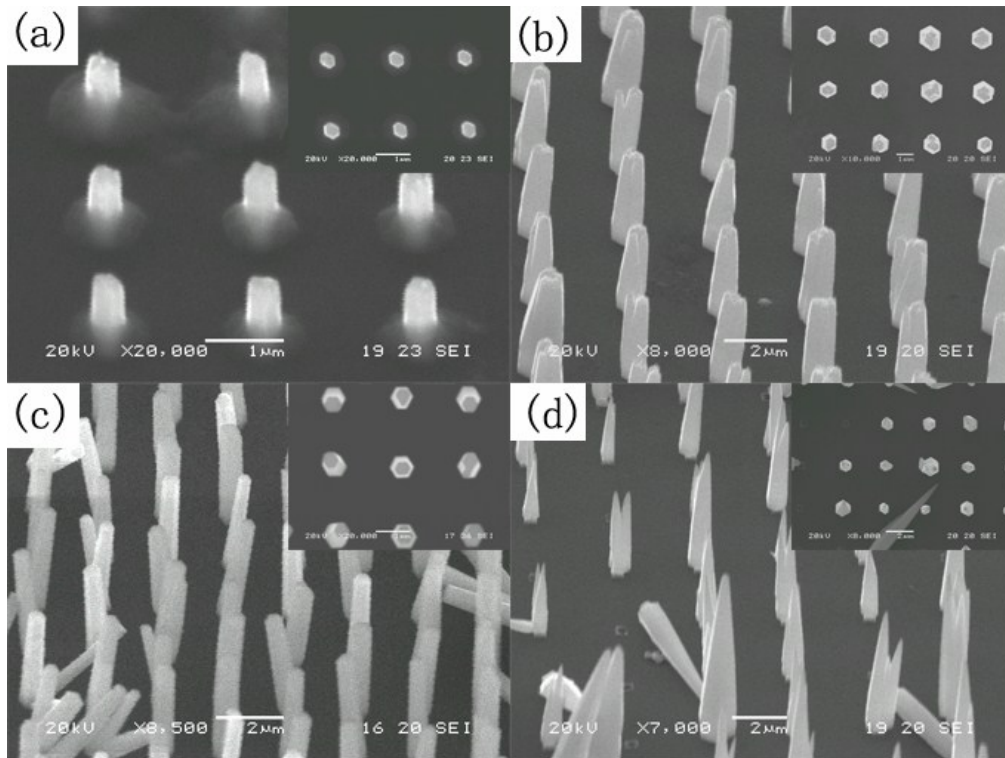
## Electronic Supplementary Information



**S1.** SEM images of ZnO nanorod arrays grown in different precursor concentration: (a) 4mM, (b) 5mM, (c) 10mM. (d) (e) (f) are the corresponding 45° tilt view of ZnO nanorod arrays.



**S2.** SEM images of ZnO nanorod arrays grown in different temperature: (a) 70°C, (b) 80°C, (c) 90°C. (d) (e) (f) are the corresponding 45° tilt view of ZnO nanorod arrays.



**S3.** SEM images of ZnO nanorod arrays obtained at different growth time: (a) 2, (b) 3, (c) 4, and (d) 6h insert is the corresponding 45° tilt view of ZnO nanorod arrays.