Supplement information

p-type Mesoscopic Nickel Oxide/Organometallic Perovskite Heterojunction Solar Cells

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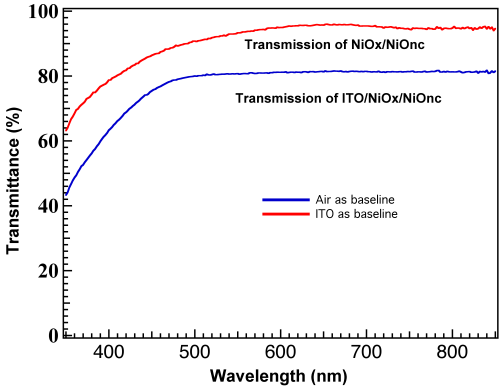


Figure S1. The transmittance of NiO_x/NiO_{nc} (with ITO as baseline) and ITO/ NiO_x/NiO_{nc} (with air as baseline).

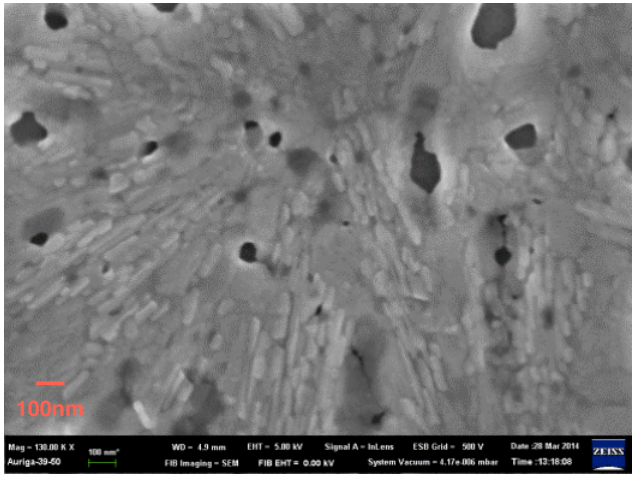
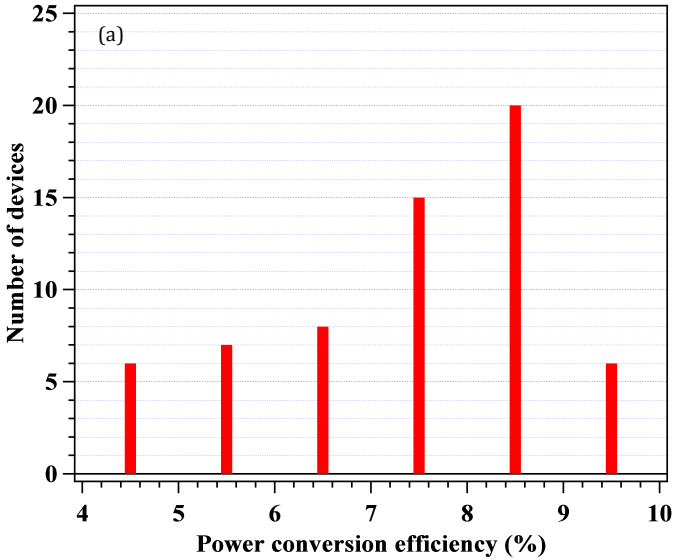
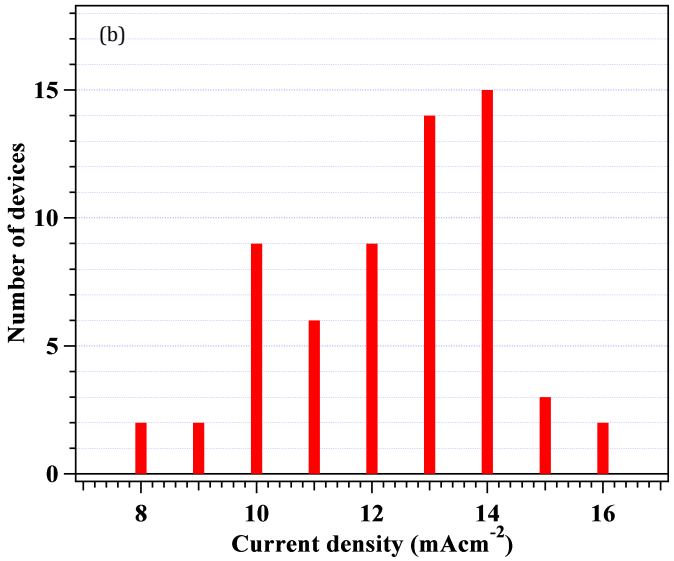
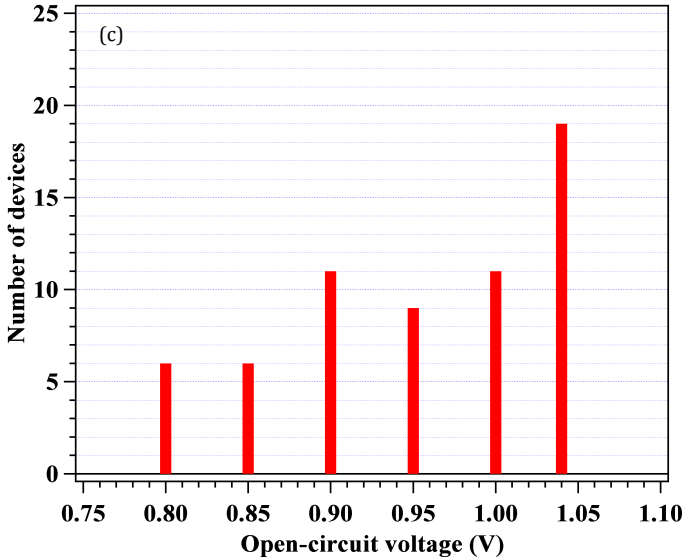


Figure S2. Top view SEM images of the perovskite deposited (spin with 9500 rpm) on NiO_x thin film.







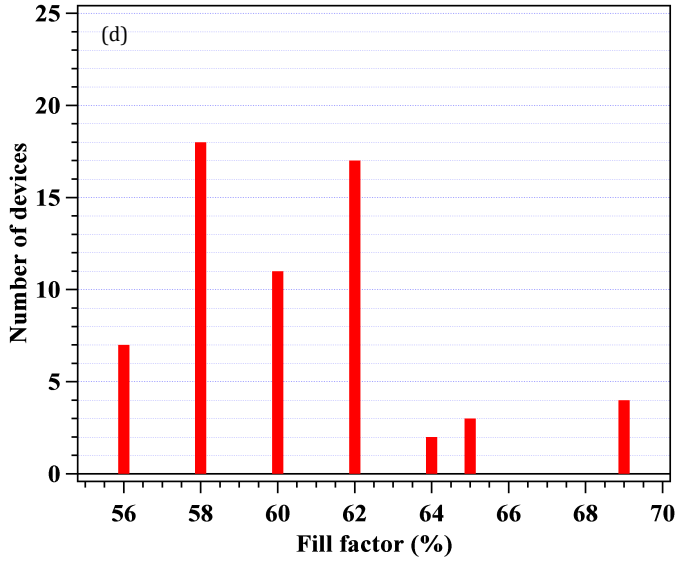


Figure S3. The statistics histogram on the photovoltaic parameters (a) efficiency (b) J_{sc} (c) V_{oc} (d) FF for the 62 mesoscopic NiOnc/perovskite deivces. In the efficiency plot, the statistic summarized the number of devices between the interval of n and n+1. (For example, number of devices with efficiency between 9 and 10 is 6 and between 8 and 9 is 20). For the other parameters such as Jsc, Voc, and FF, the statistic summarized the number of devices between the intervals labeled on x-axis.