Rationally Controlled Synthesis of $CdSe_xTe_{1-x}$ Alloy Nanocrystals and Their Application in Efficient Graded Bandgap Solar Cells

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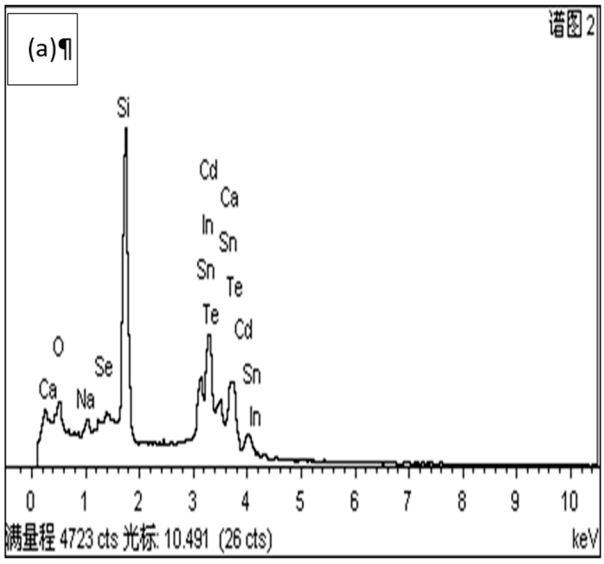
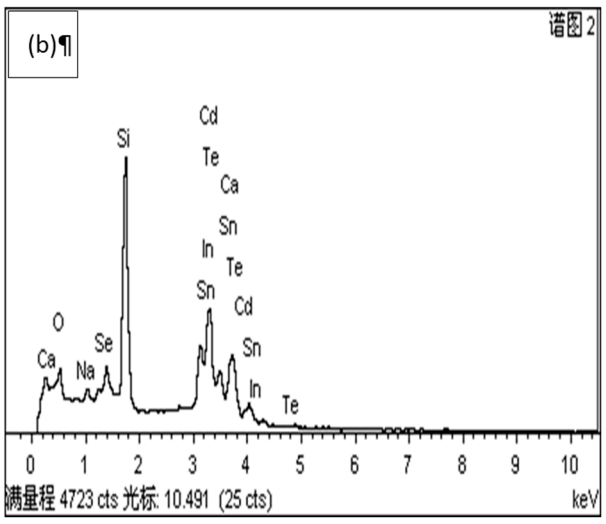
Electronic Supplementary Material



element¤	Weight¶ percentage¤	Atomic· percentage¤
O·K¤	15.48¤	38.15¤
Na·K¤	2.60¤	4.46¤
Si·K¤	24.34¤	34.17¤
Ca·K¤	5.53¤	5.44¤
Se·L¤	1.58¤	0.79¤
Cd·L¤	12.60¤	4.42¤
In·L¤	22.92¤	7.87¤
Sn·L¤	4.01¤	1.33¤
Te·L¤	10.93¤	3.38¤
Total¤	100.00¤	100¤

Se·/·(Se+·Te)=0.19¤



element¤	Weight¶ percentage¤	Atomic· percentage¤
O·K¤	15.96¤	40.35¤
Na·K¤	2.28¤	4.02¤
Si·K¤	21.31¤	30.68¤
Ca·K¤	4.94¤	4.99¤
Se·L¤	4.62¤	2.36¤
Cd·L¤	13.87¤	4.99¤
In·L¤	22.16¤	7.81¤
Sn·L¤	4.48¤	1.53¤
Te·L¤	10.37¤	3.29¤
Total¤	100.00¤	100¤

Se·/·(Se+·Te)=0.42¤

Figure S1. EDS of alloy NC (**a**) $CdSe_{0.2}Te_{0.8}$ NC and (**b**) $CdSe_{0.4}Te_{0.6}$ NC

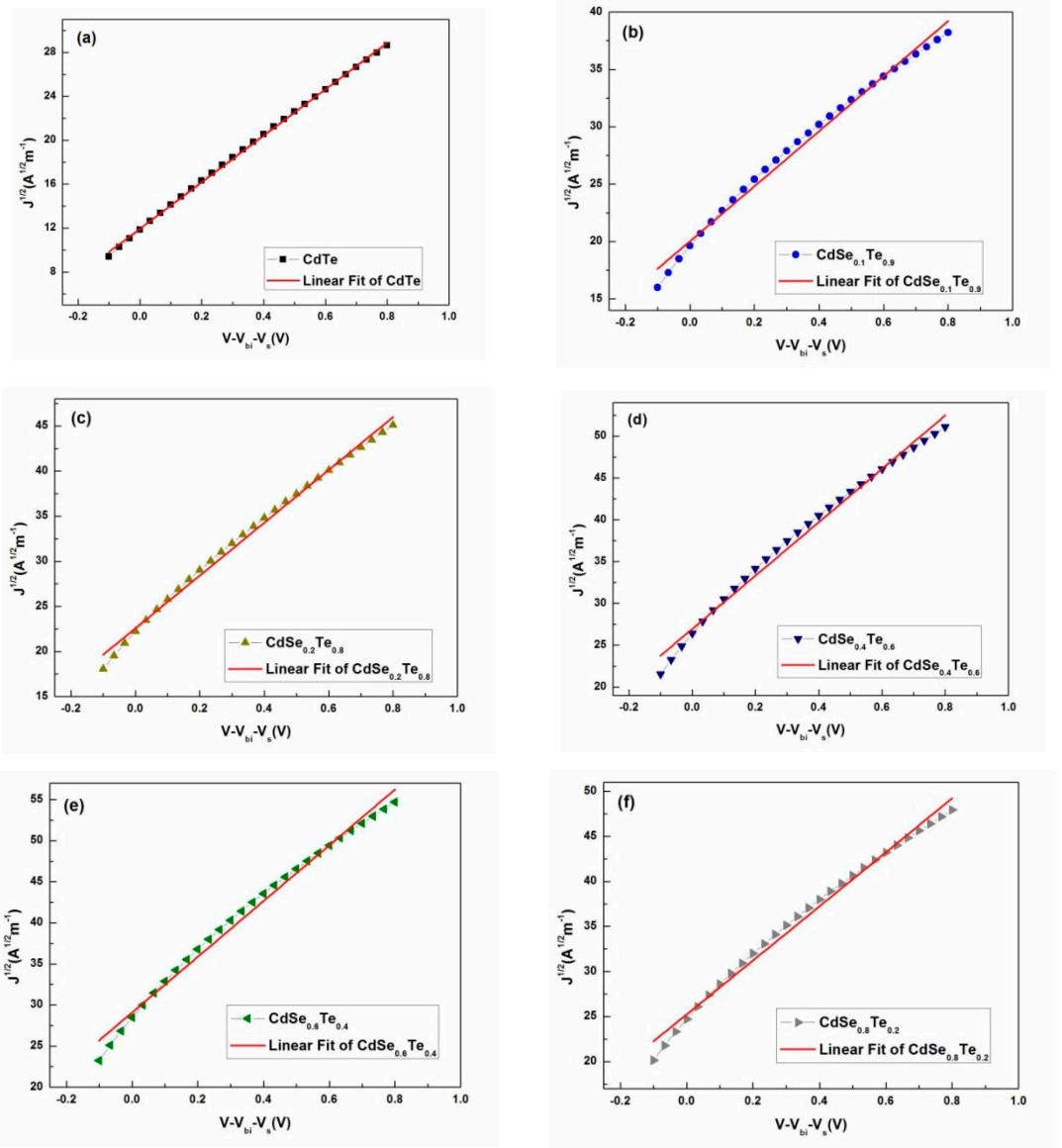


Figure S2. Linearly fitting SCLC measurements of $CdSe_xTe_{1-x}$ alloy NC thin films with composition (x) (**a**) 0, (**b**)0.1, (**c**) 0.2, (**d**) 0.4, (**e**) 0.6, (**f**) 0.8, where $\varepsilon_0 = 8.85\times10^{-12}$, $\varepsilon_r = 10$, L = 160 nm, $V_{bi} + V_s = 0.3$ V.