

3. Results and discussion

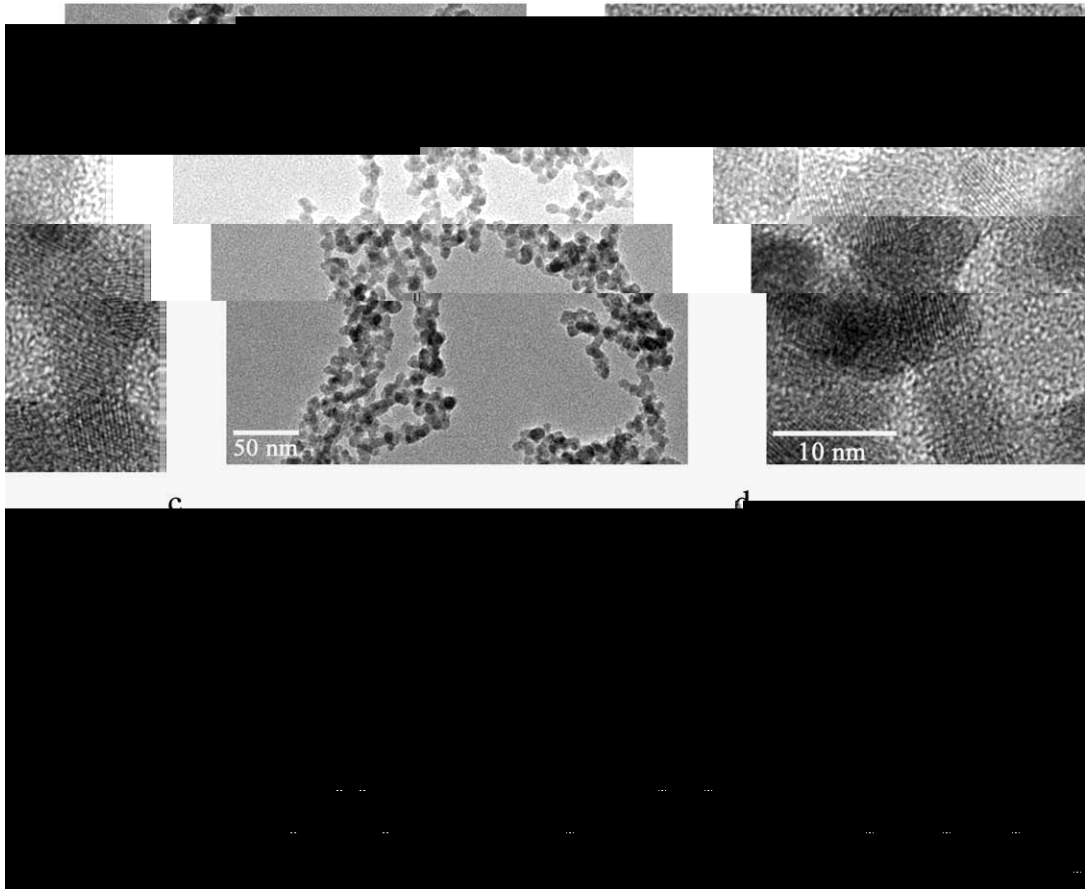
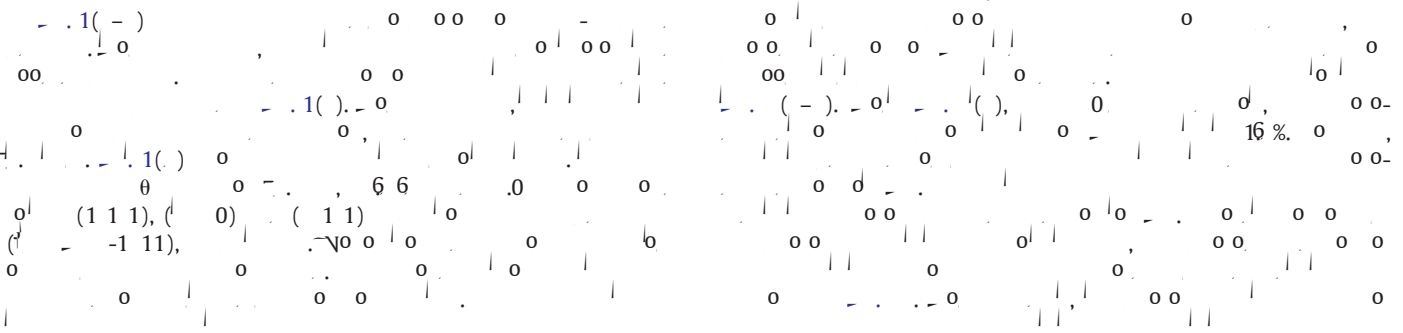


Fig. 1. (a) SAED pattern of the sample. (b) SAED pattern of the sample. (c) TEM image of the sample. (d) TEM image of the sample.

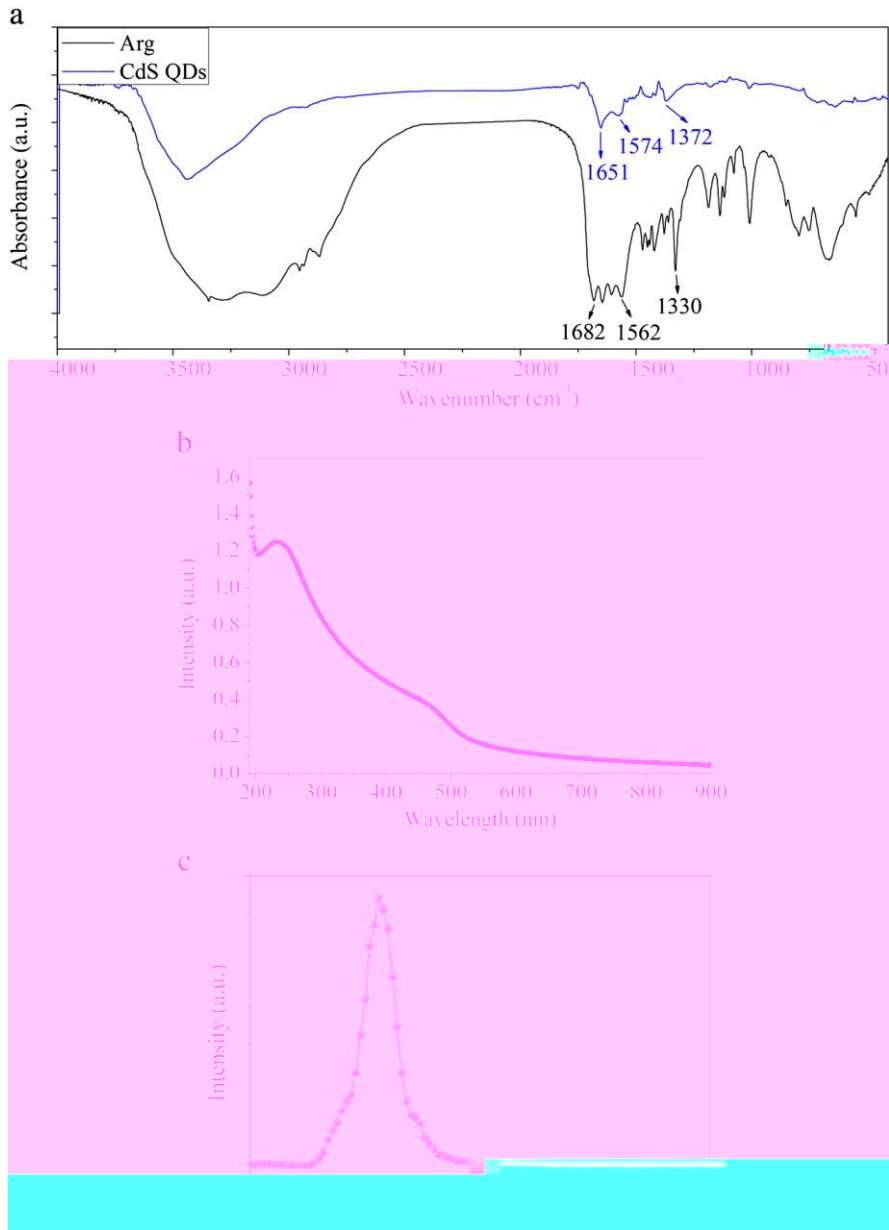
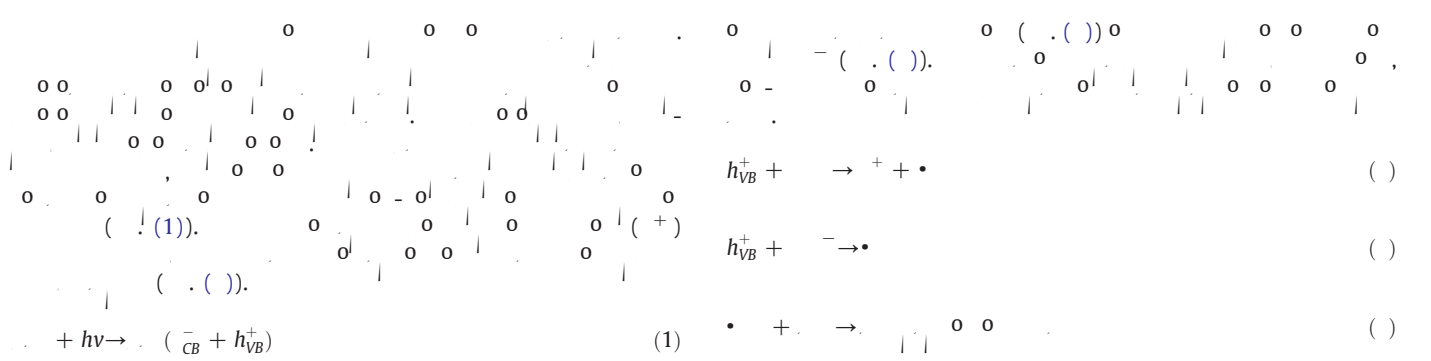


Fig. 2. (a) FTIR spectra of Arg and CdS QDs. (b) PL intensity vs wavelength. (c) Zoomed-in PL peak.



4. Conclusions

The CdS QDs synthesized in this work show a strong photoluminescence peak at 220 nm, which is attributed to the recombination of photo-generated electron-hole pairs. The PL intensity is significantly higher than that of the bulk CdS, indicating the presence of surface states or defects in the QDs.

