# Supplementary Materials

## Optical management of CQD/AgNP@SiNW arrays with highly efficient capability of dye degradation

Po-Hsuan Hsiao[1], Sasimontra Timjan[1], Kuan-Yi Kuo[1], Joon Ching Juan[2], and Chia-Yun Chen[1,3]*

[1]Department of Materials Science and Engineering, National Cheng Kung University, Tainan 70101, Taiwan
[2]Nanotechnology & Catalysis Research Centre, Institute for Advanced Studies, University of Malaya, 50603 Kuala Lumpur, Malaysia
[3]Hierarchical Green-Energy Materials (Hi-GEM) Research Center, National Cheng Kung University, Tainan 70101, Taiwan

S1 Measurement of time-dependent current-voltage (I-V) curves of various SiNW-based samples

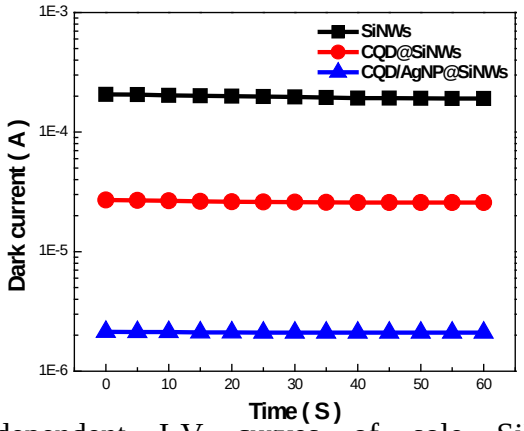


Fig. S1 Time-dependent I-V curves of sole SiNW, CQD@SiNW and CQD/AgNP@SiNW arrays. The results indicate that no obvious hysteresis in the I-V characteristics can be found.

S2 Light-absorption spectra of MB dyes changed with time in the presence of CQD/AgNP@SiNW arrays

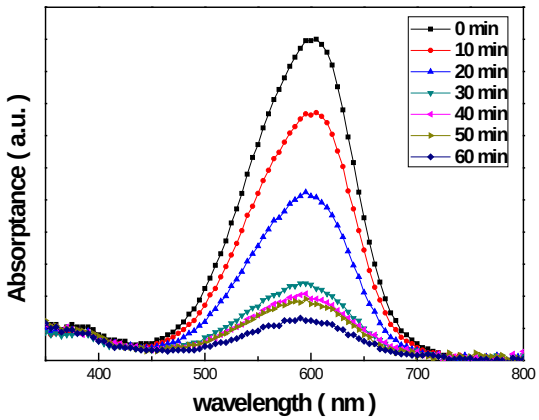


Fig. S2 Light-absorption spectra of MB dyes in the presence of CQD/AgNP@SiNW arrays after experiencing light illuminations.