

Supporting Information (3 pages)

Depletion layer controls photocatalytic hydrogen evolution with p-type gallium phosphide particles

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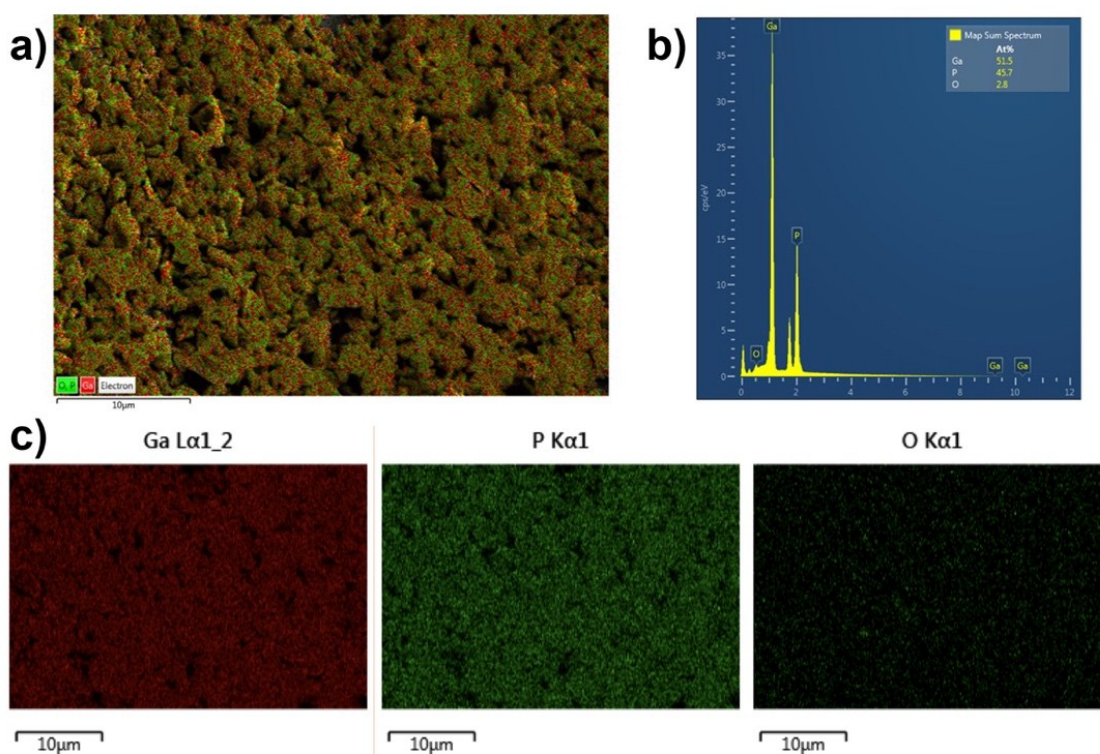


Figure S1 (a) EDX mapping layered SEM image, (b) EDX spectrum and (c) EDX mapping of individual elements of obtained p-GaP particles.

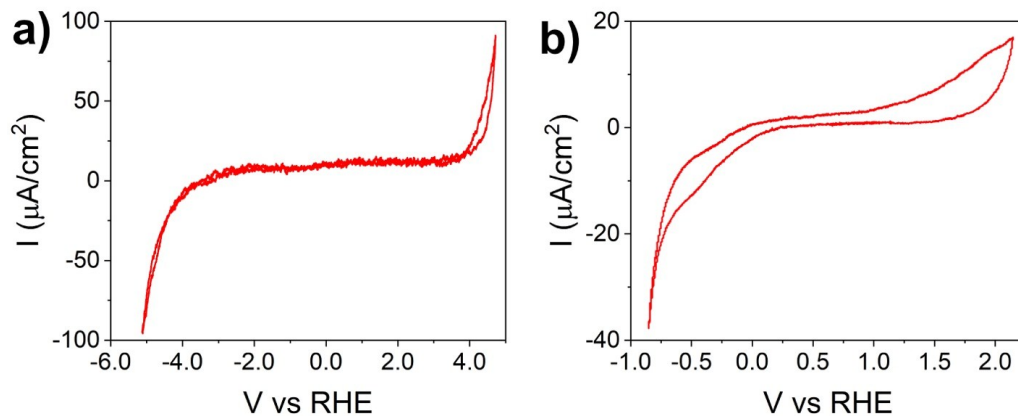


Figure S2 Cyclic voltammetry measurement of (a) p-GaP wafer and (b) p-GaP particle film in 0.1 M K_2SO_4 .

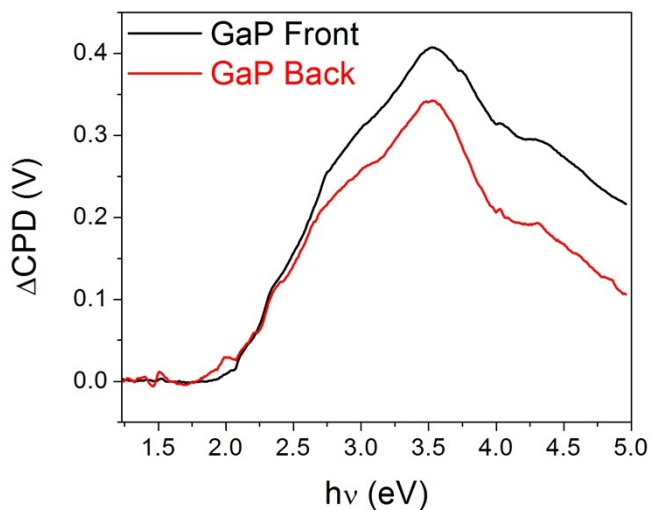


Figure S3 SPS spectra of p-GaP wafer with front side or back side illuminated.

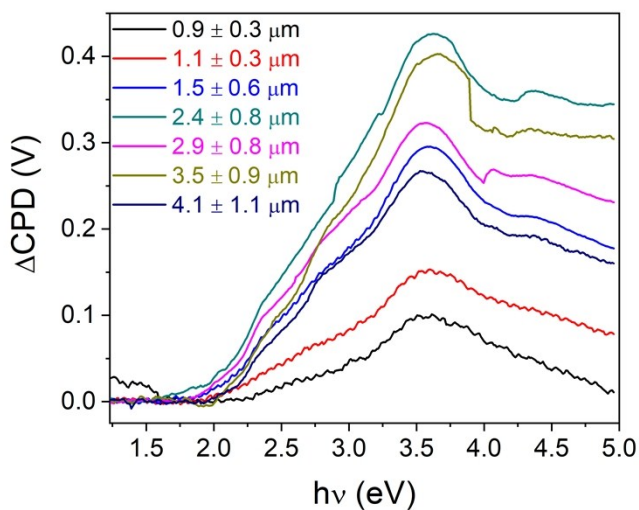


Figure S4 SPS spectra of p-GaP particle films with different film thickness.

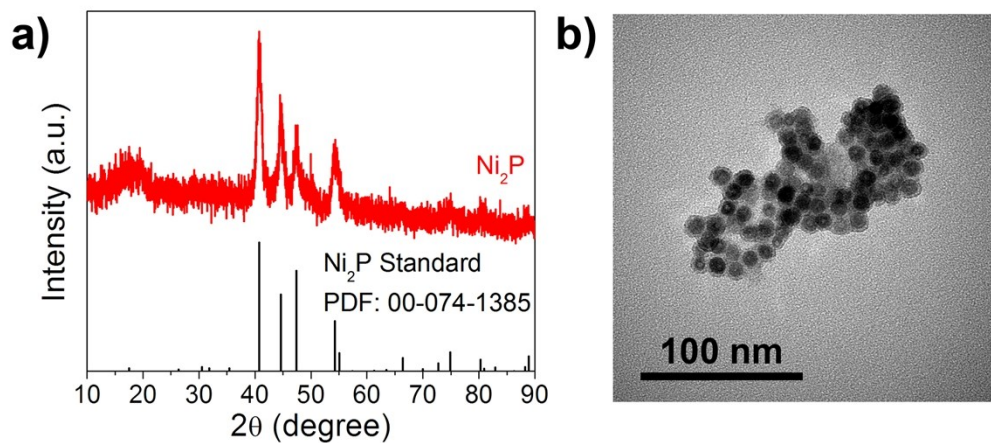


Figure S5 (a) PXRD pattern and (b) TEM image of Ni_2P capped with PVP.

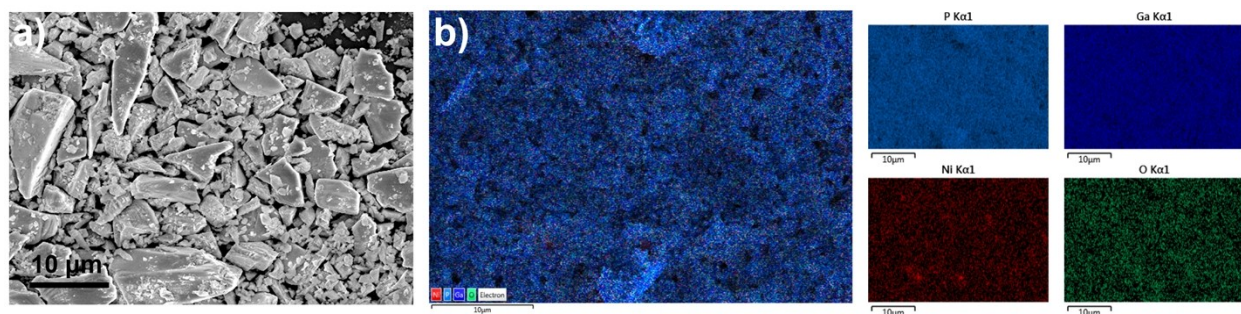


Figure S6 (a) SEM and (b) EDX mapping of individual elements in optimized 4 wt% Ni_2P /p-GaP photocatalyst particles. According to energy dispersive X-ray analysis, the Ni_2P loading is 4.3 %.