Electronic Supplementary Information

Fabrication and properties of high-performance chlorine doped graphene quantum dots based photovoltaic detector

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Figure S1. The cyclic voltammetry curve of Cl-GQDs dispersed in N-methylpyrrolidone (NMP) using Na$_2$SO$_4$ as electrolyte.

Figure S2. (a) AFM phase image of Al film, inset: size distribution of particles in Al film. (b) The AFM topographic image of Al film with the RMS roughness of 2.84 nm.
Figure S3. The $C$-$V$ curves for P3HT and P3HT/Cl-GQDs devices under illumination at various frequencies, (a) 20 kHz, (b) 100 kHz.

Figure S4. The $C$-$f$ characteristics of the P3HT (a) and P3HT/Cl-GQDs (b) devices measured at different voltages. The $G$-$f$ characteristics of the P3HT (c) and P3HT/Cl-GQDs (d) devices measured at different voltages ranging from -0.5 to 0.5 V with a voltage step of 0.1 V.