Electronic Supplementary Material (ESI) for New Journal of Chemistry.

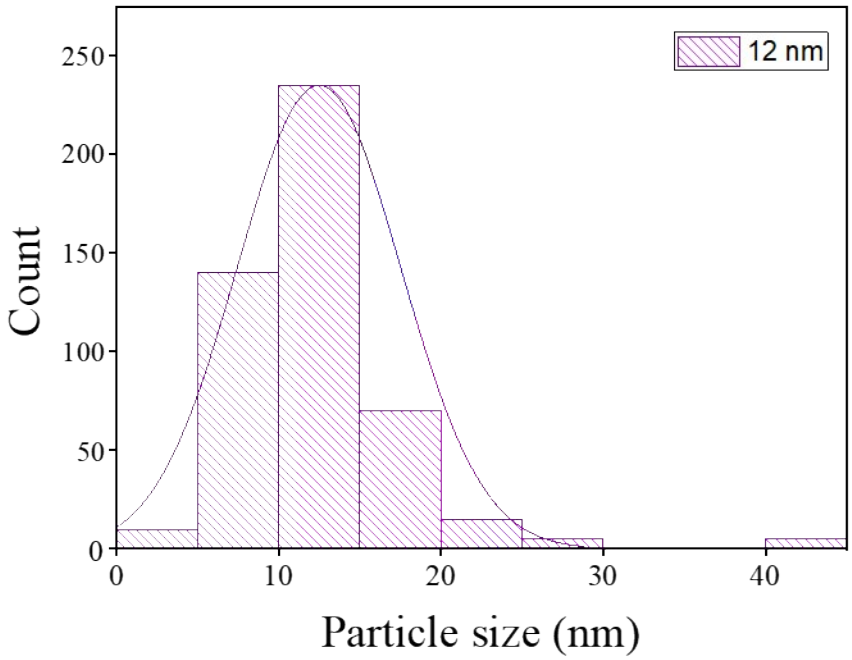

Figure 1S: Size distribution curve for g-C_3N_4@ZnHCC nanoparticles (using imageJ software)

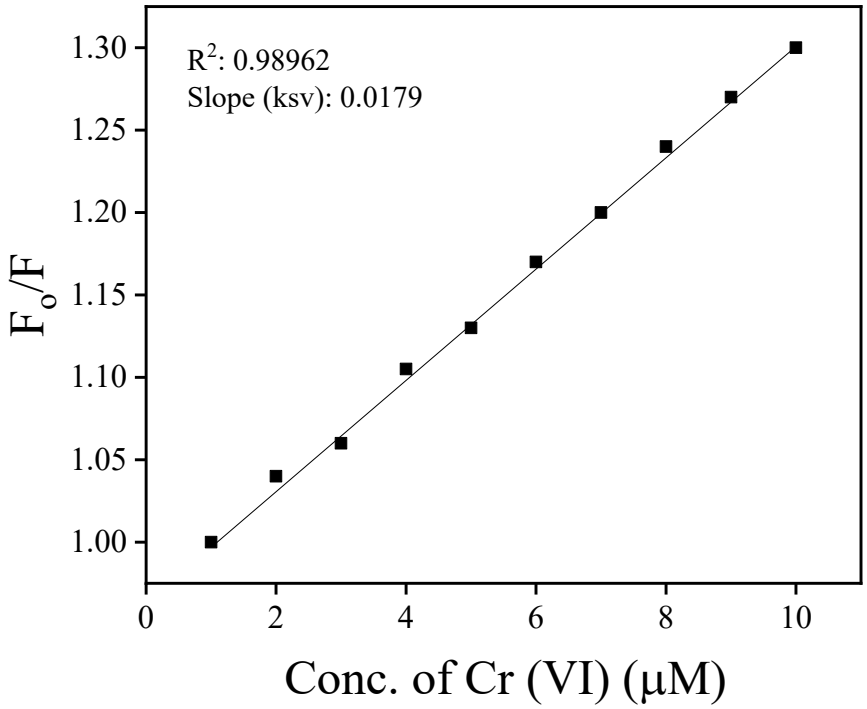

Figure 2S: Calibration graph for the determination of the Cr (VI)

Instrument Details

PXRD analysis of the samples were performed with PAN analytical X-PRT PRO instrument:USA using CuKa radiation having k = 1.5406 Á. The samples in powdered form (properly grinded and symmetrically distributed) were placed in the sample holder co-planarly. Surface morphology of fabricated samples were obtained using field emission gun equipped FEI-Nova Nano SEM 450 microscope (Kensington UNSW Sydney NSW 2052). Element weight percent in material was calculated using Electron dispersive spectroscopy. The powdered sample was deposited on carbon tape before being mounted on the microscope sample holder for analysis. Brunauer-Emmett-Teller (BET) analysis used for calculation of surface area (N2 physisorption) was done by using SMART Instruments, SMART SORB 93 model after degassing at 150 °C for 3 h. The stability of the photocatalyts was determined by measuring the zeta potential using Malvern Zetasizer (Zetasizer Ver. 7.11). The band gap calculation was done by obtaining Diffuse Reflectance Spectra data using Shimadzu UV–Vis spectrometer and converting it into Tauc's plot. Infrared spectra of the synthesized nanoparticles were recorded in the range 400–4000 cm−1 (Agilent ATR model). Absorbance of samples was measured with UV Spectrophotometer (Agilent Pro). XPS spectra were recorded with Al Kα (1486.6eV) radiation source at the total instrumental resolution of 0.8eV for Al Kα excitation source.