



Fig. S1: Five specimens with different concentrations of GO and OapPOSS, denoted by GOPOS90, GOPOS70, GOPOS50, GOPOS30, and GOPOS10 sol (from left to right).

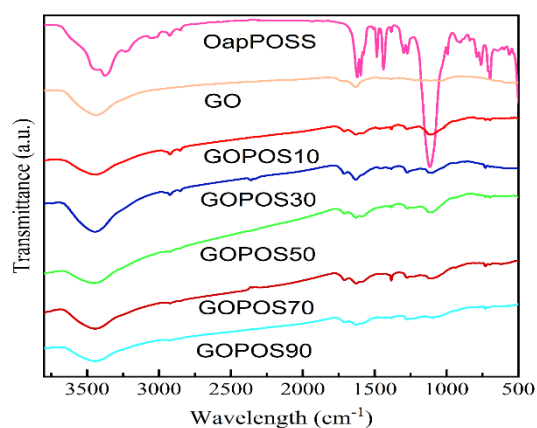


Fig. S4: FTIR spectra of GO, OapPOSS, and GOPOS10, GOPOS30, GOPOS50, GOPOS70, GOPOS90.



Fig. S2: Obtained gels: GOPOS90, GOPOS70, GOPOS50, GOPOS30, GOPOS10 (from left to right).

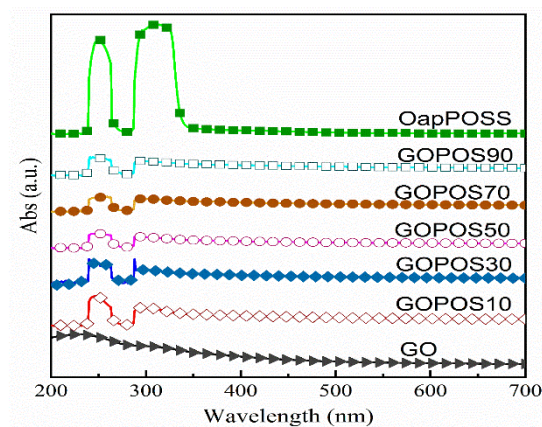


Fig. S5: UV-vis spectra of GO, GOPOS10, GOPOS30, GOPOS50, GOPOS70, GOPOS90, and OapPOSS.



Fig. S3: Ultralight-weight obtained aerogel located on a very light feather.

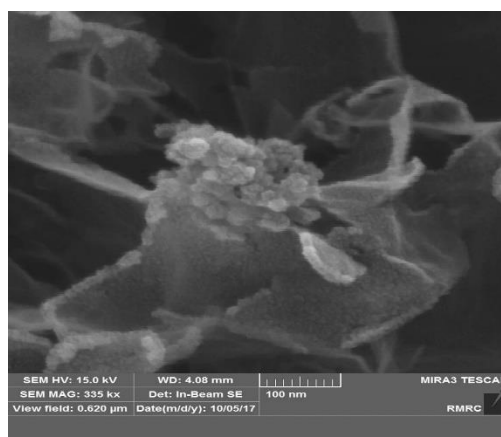


Fig. S6: FESEM micrographs of GOPOS10 with 335 kx magnification.

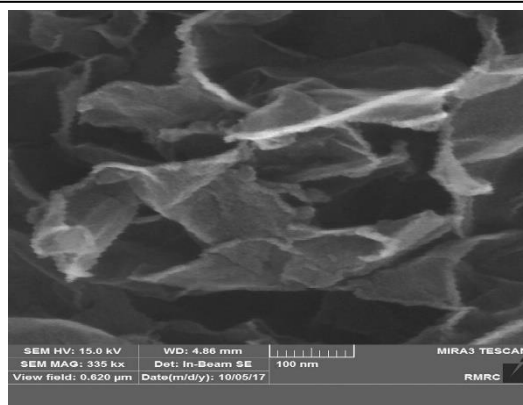


Fig. S7: FESEM micrographs of GOPOS90 with 335 kx magnification.

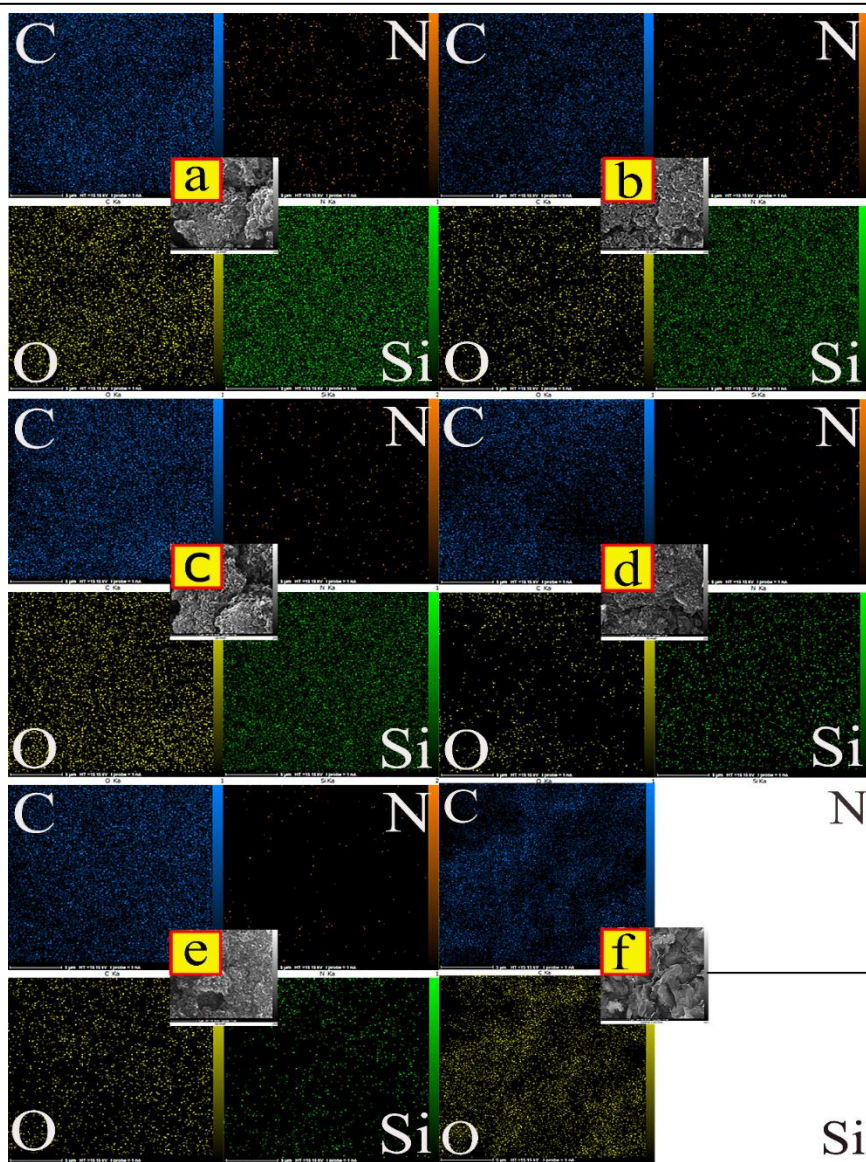


Fig. S8: EDS elemental mapping and FE-SEM images (center) of the GOPOS10 (a), GOPOS30 (b), GOPOS50 (c), GOPOS70 (d), GOPOS90 (e), and GO (f).

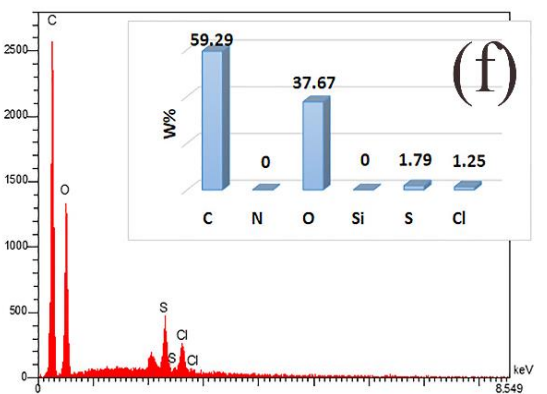
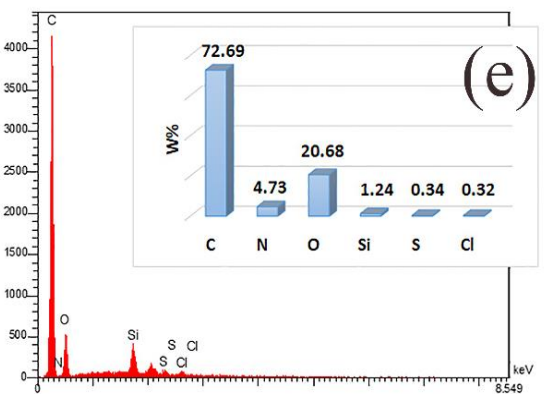
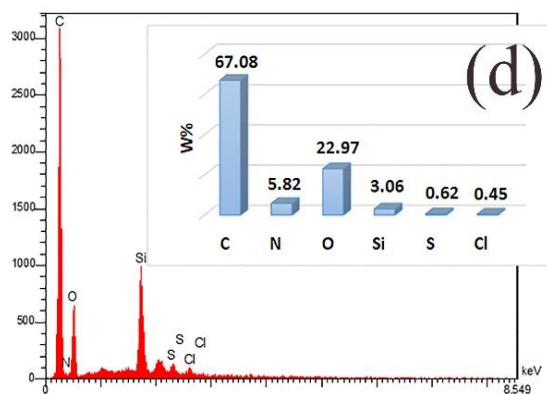
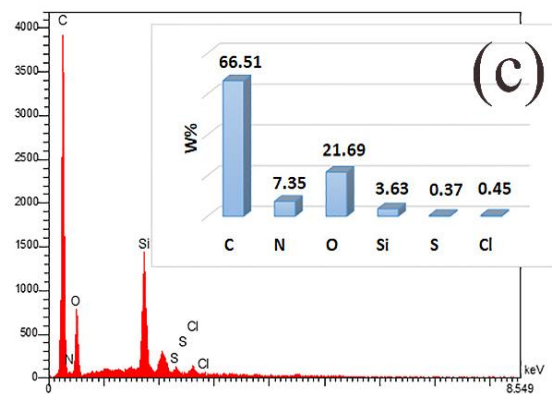
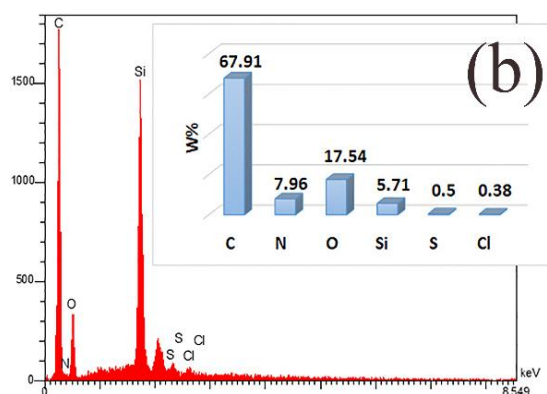
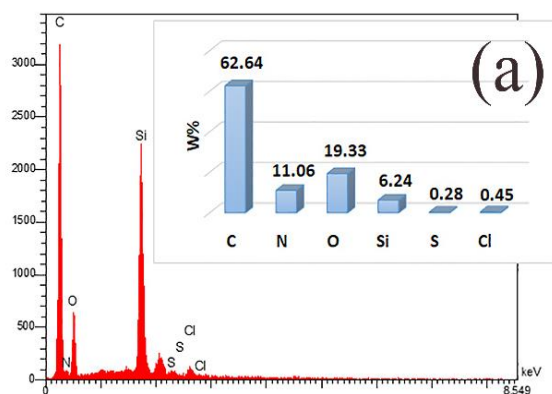


Fig. S9: Quantitative EDS X-ray results of FESEM micrographs of GOPOS10 (a), GOPOS30 (b), GOPOS50 (c), GOPOS70 (d), GOPOS90 (e), and GO (f).