

Supporting information for

K₂Ti₆O₁₃ Nanoparticles Loaded porous rGO Crumples for Supercapacitors

Chongmin Lee^{1,2}, Sun Kyung Kim², Hankwon Chang^{1,2}, Hee Dong Jang^{1,2,*}

¹Department of Nanomaterials Science and Engineering, University of Science and Technology, Yuseong-gu, Daejeon 34113, Republic of Korea

²Resources Utilization Research Center, Korea Institute of Geoscience and Mineral Resources, Yuseong-gu, Daejeon 34132, Republic of Korea

*Corresponding author. E-mail: hdjang@kigam.re.kr (Hee Dong Jang)

Supplementary Figures

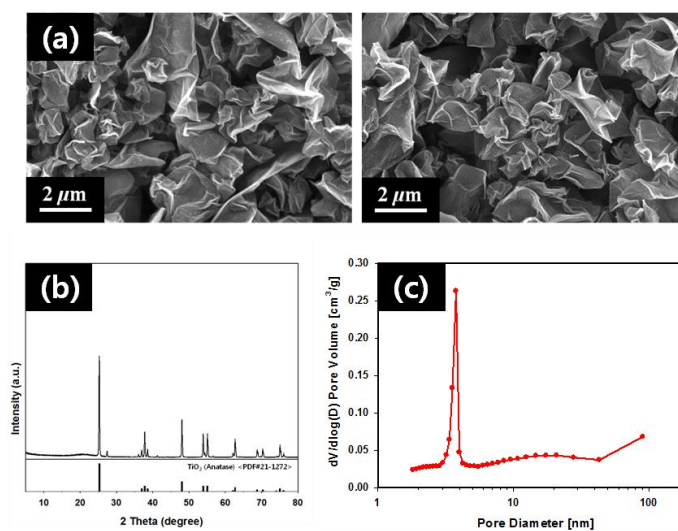


Fig. S1 (a) FE-SEM images, (b) XRD, and (c) pore size distribution of the as-fabricated KOH/TiO₂/GO composites at the weight ratios of GO:KOH:TiO₂ for 1:3:0.25

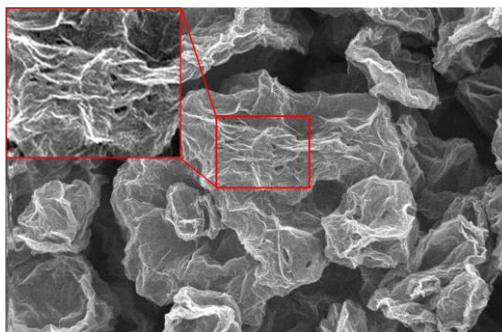


Fig. S2 FE-SEM image of the KTO NP/PGC composites prepared at the weight ratio of GO:KOH:TiO₂ = 1:3:0.25 (reaction temperature: 200°C, gas flow rate: 10 L min⁻¹, post heat treatment: 700°C, 2 h)

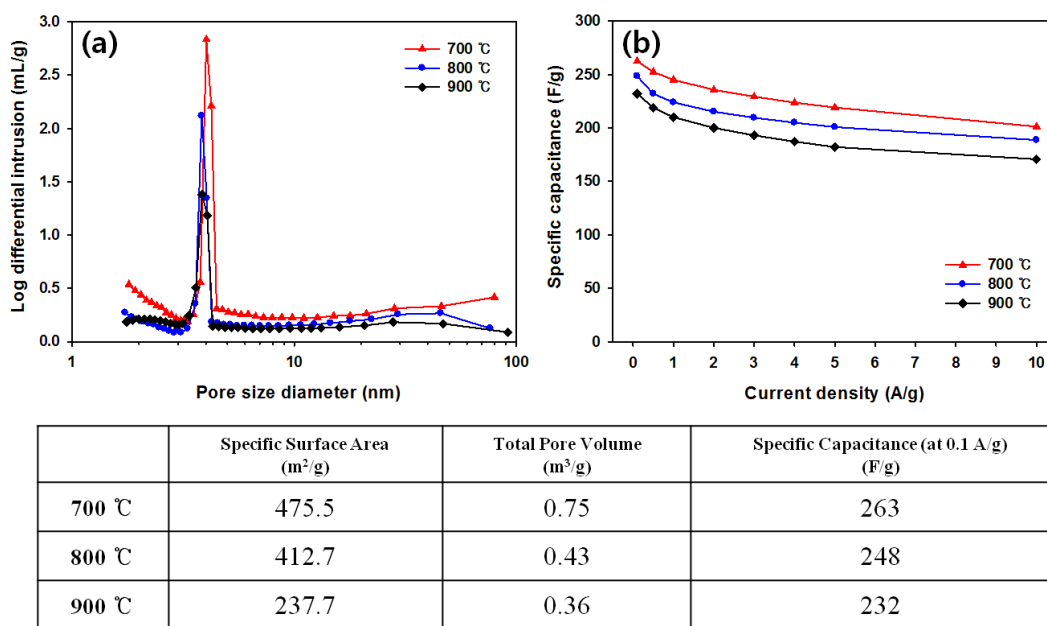


Fig. S3 Specific surface area and specific capacitance of the KTO NPs/PGC composites (GO:KOH:TiO₂ = 1:3:0.25) prepared at different post heat temperatures (reaction temperature: 200°C, gas flow rate: 10 L min⁻¹, post heat treatment: 600, 700, or 800 °C, 2 h)

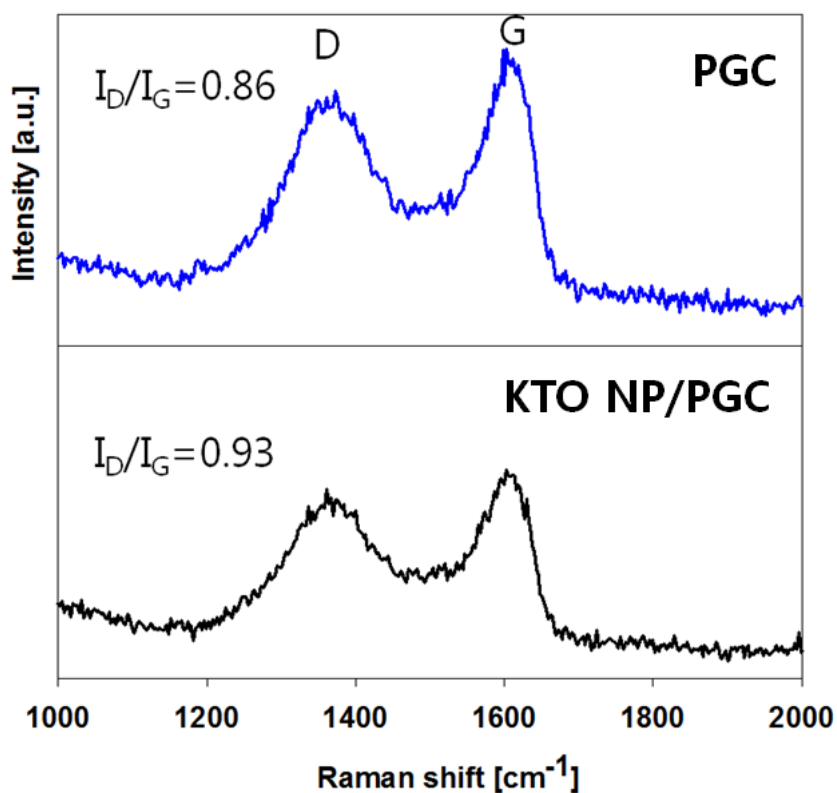


Fig. S4 Raman patterns of the PGC and KTO NP/PGC composites (GO:KOH:TiO₂ = 1:3:0.25)

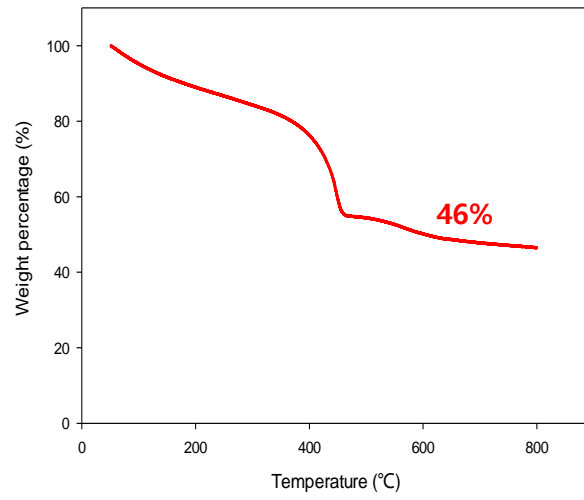


Fig. S5 TG curves of KTO NP/PGC composites (GO:KOH:TiO₂ = 1:3:0.25), under air atmosphere

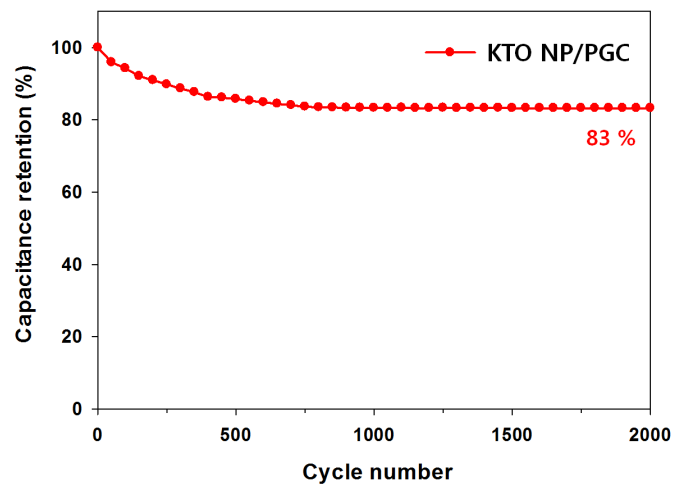


Fig. S6 Cycle stability tested at 1 A g⁻¹ for symmetric KTO NP/PGC supercapacitors