Electronic Supplementary Material (ESI) for Nanoscale.

Electronic Supporting Information

for

Linear Control of Oxidation Level on Graphene Oxide Sheets Using Cyclic Atomic Layer Reduction Technique

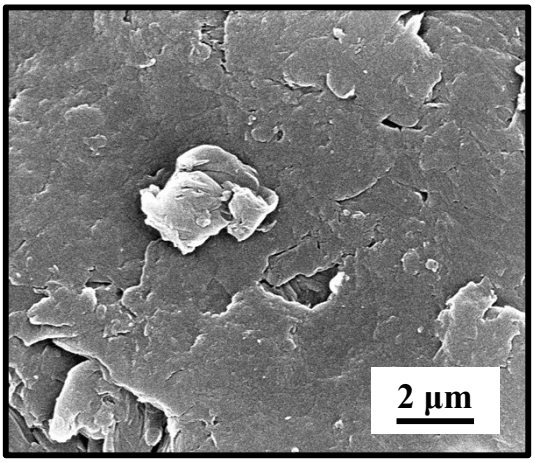

Figure S1. Top-view FE-SEM image of pristine GO sample.

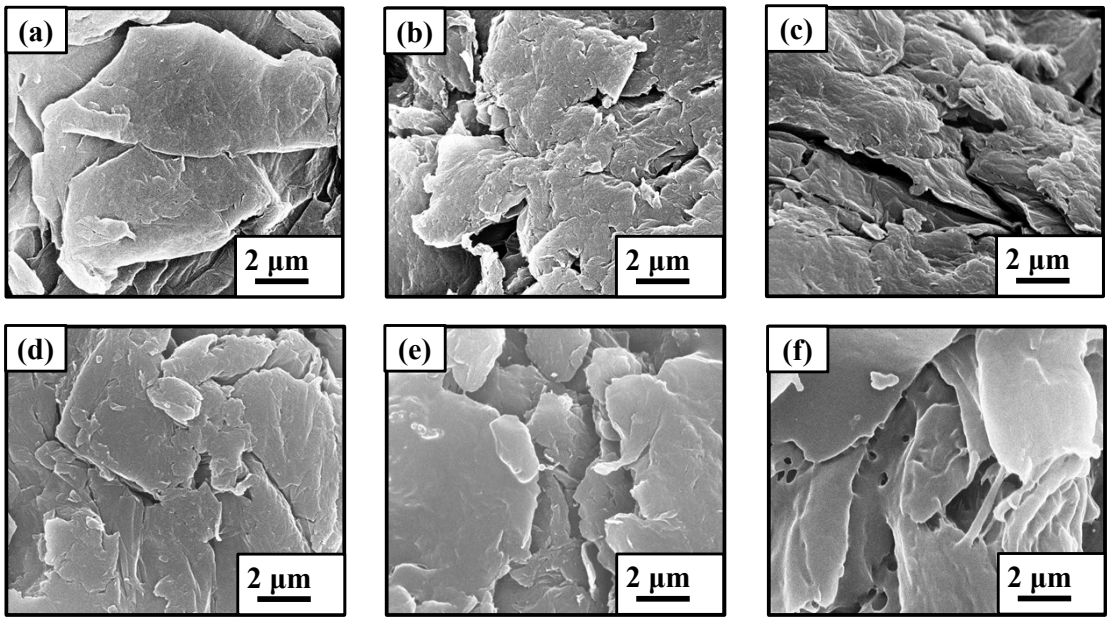

Figure S2. Top-view FE-SEM images of ALR-treated GO samples: (a) G-100-25, (b) G-100-50, (c) G-100-75, (d) G-100-100, (e) G-100-125, and (f) G-100-150.

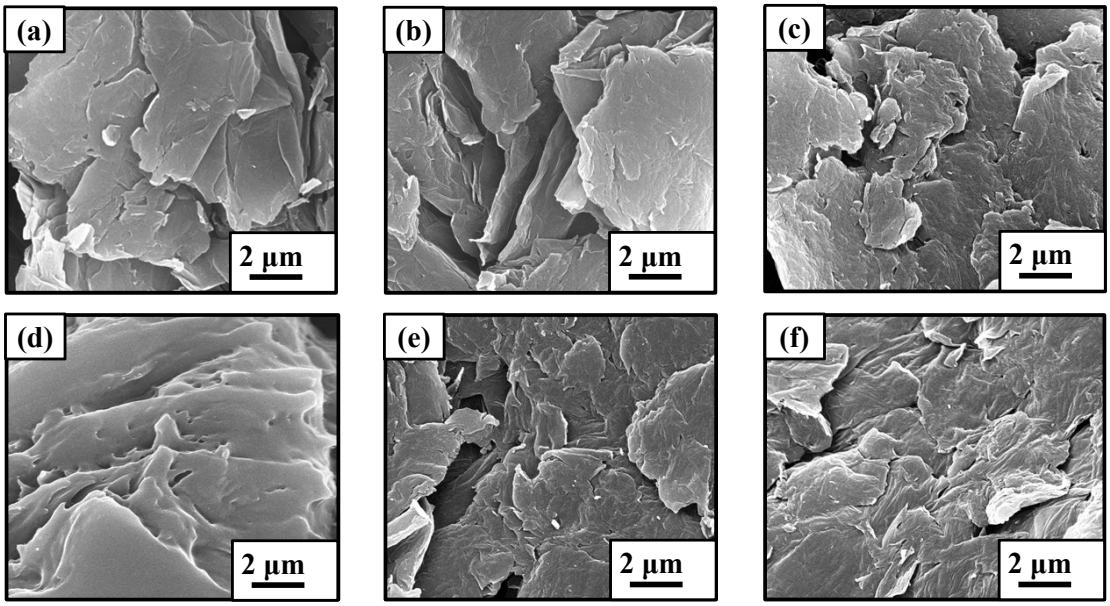

Figure S3. Top-view FE-SEM images of ALR-treated GO samples: (a) GO-150-25, (b) G-150-50, (c) G-150-75, (d) G-150-100, (e) G-150-125, and (f) G-150-150.

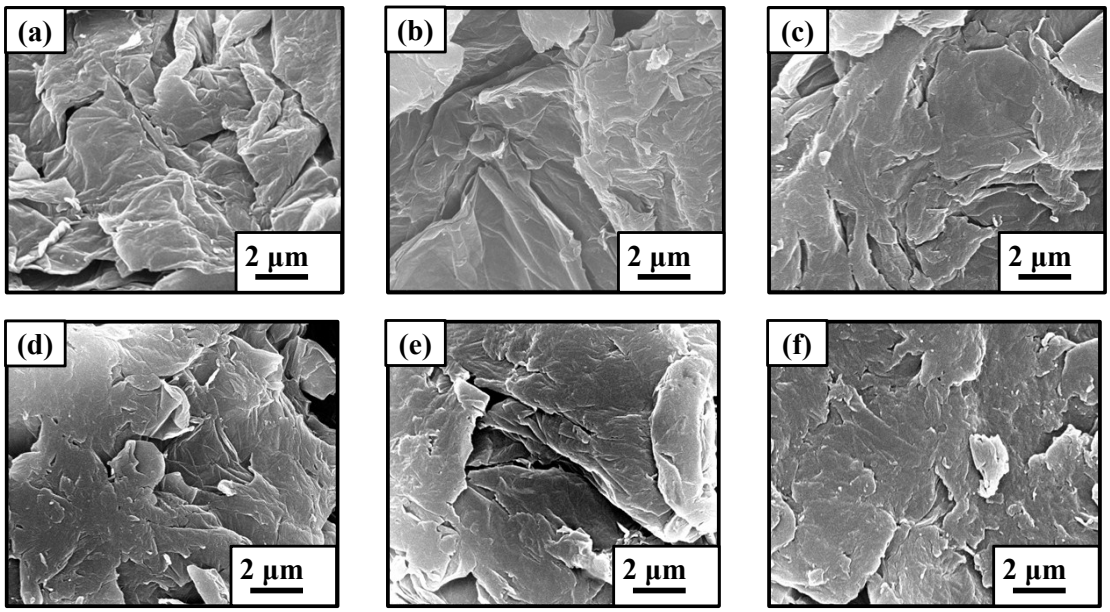

Figure S4. Top-view FE-SEM images of ALR-treated GO samples: (a) GO-200-25, (b) G-200-50, (c) G-200-75, (d) G-200-100, (e) G-200-125, and (f) G-200-150.

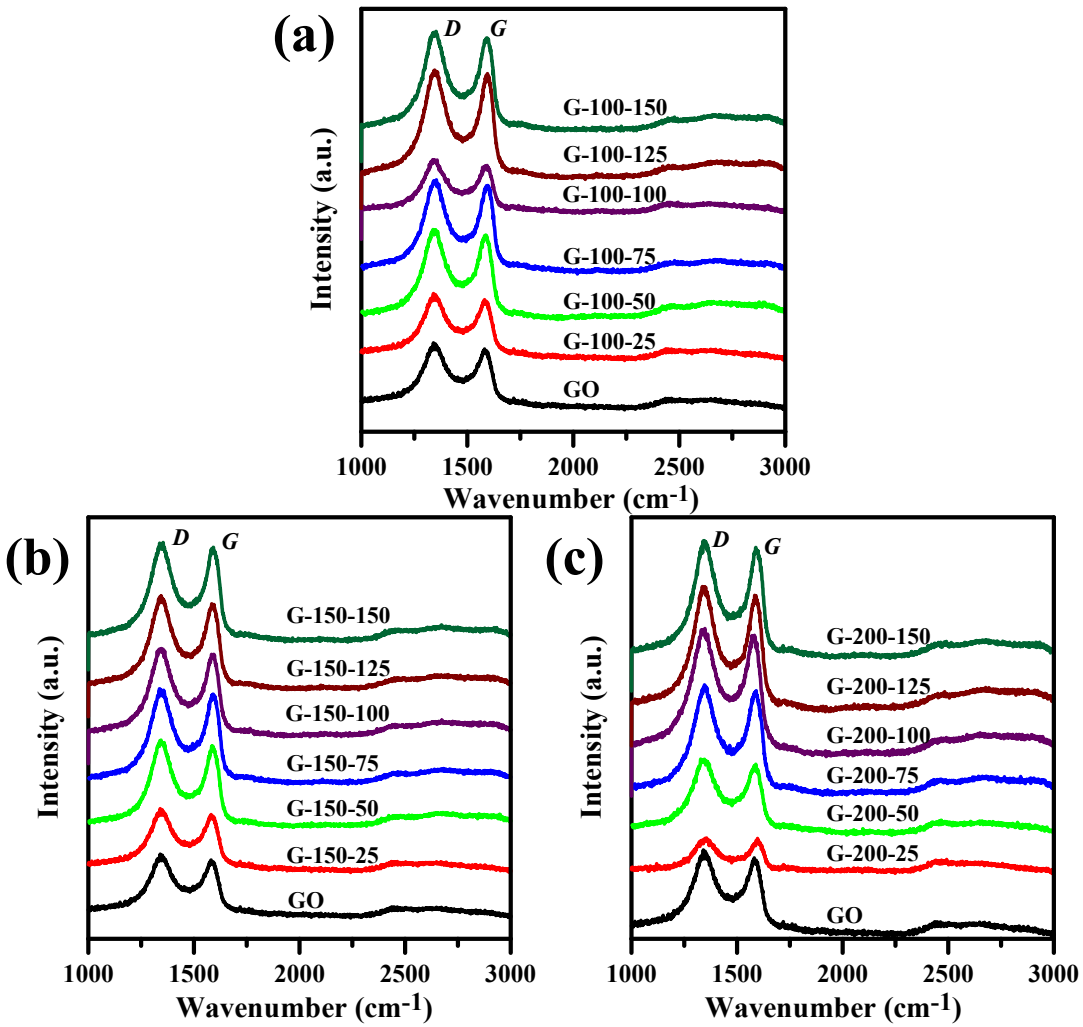

Figure S5. Typical Raman spectra of pristine and ALR-treated GO samples at (a) 100, (b) 150, and (c) 200°C.

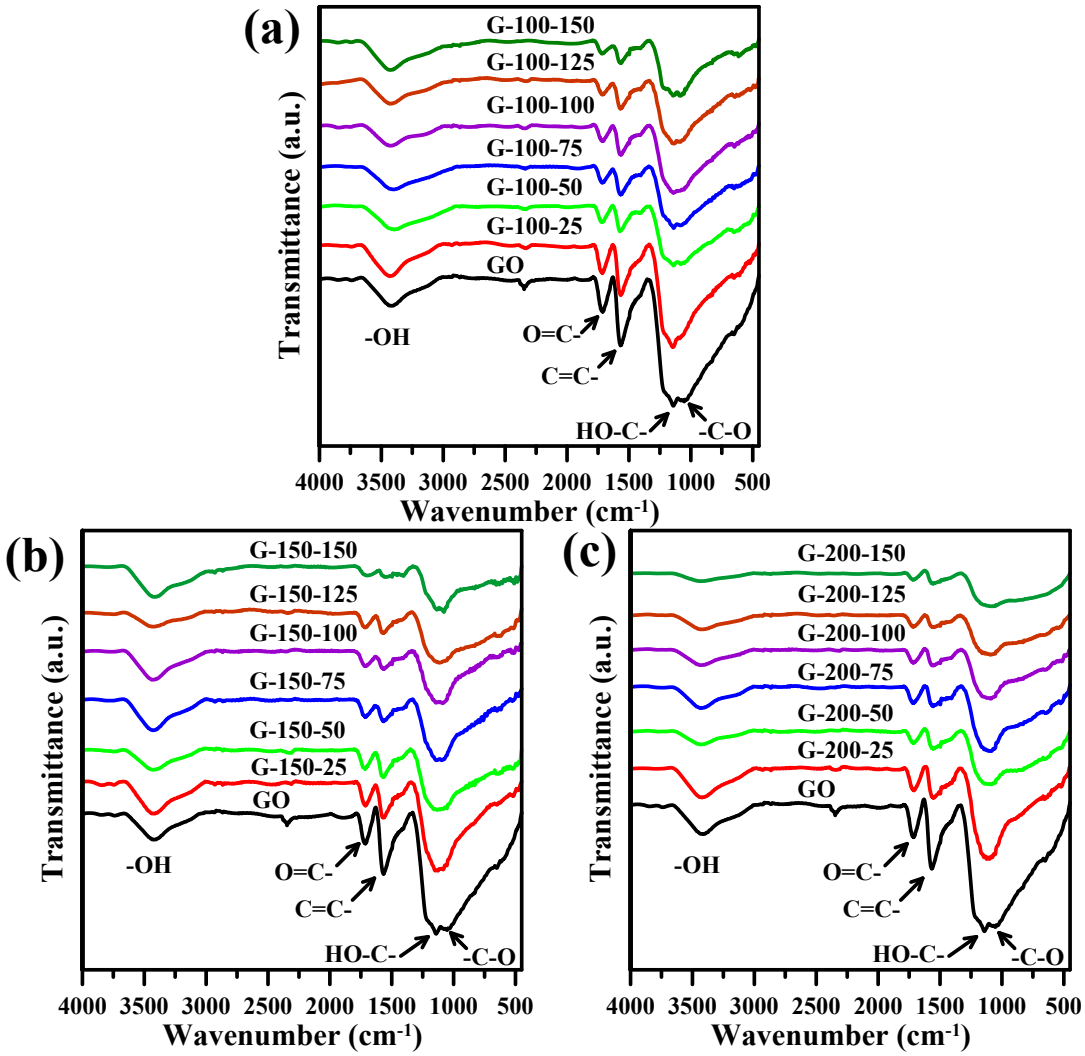

Figure S6. FT-IR spectra of pristine and ALR-treated GO samples at (a) 100, (b) 150, and (c) 200°C.

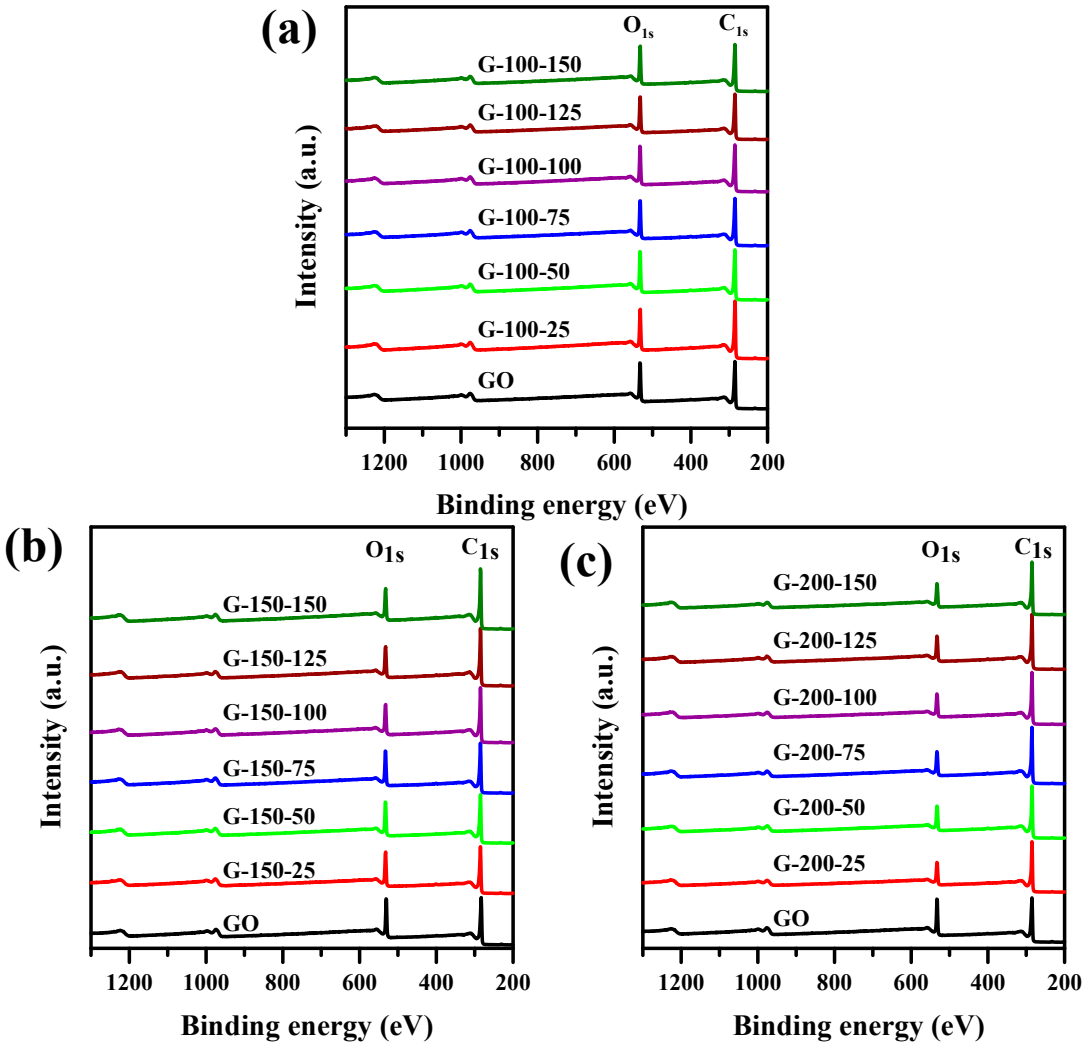

Figure S7. Survey XPS spectra of pristine and ALR-treated GO samples at (a) 100, (b) 150, and (c) 200°C.

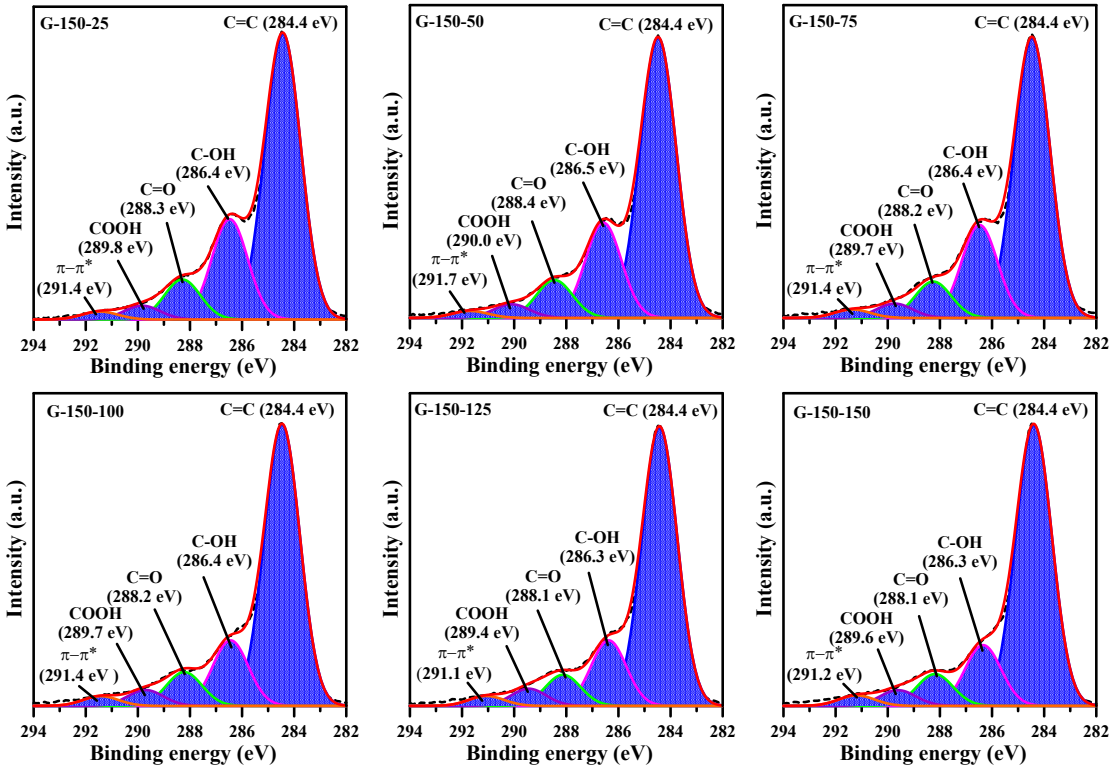

Figure S8. XPS C 1s peaks of ALR-treated samples at 150°C, deconvoluted by a multiple Gaussian function.

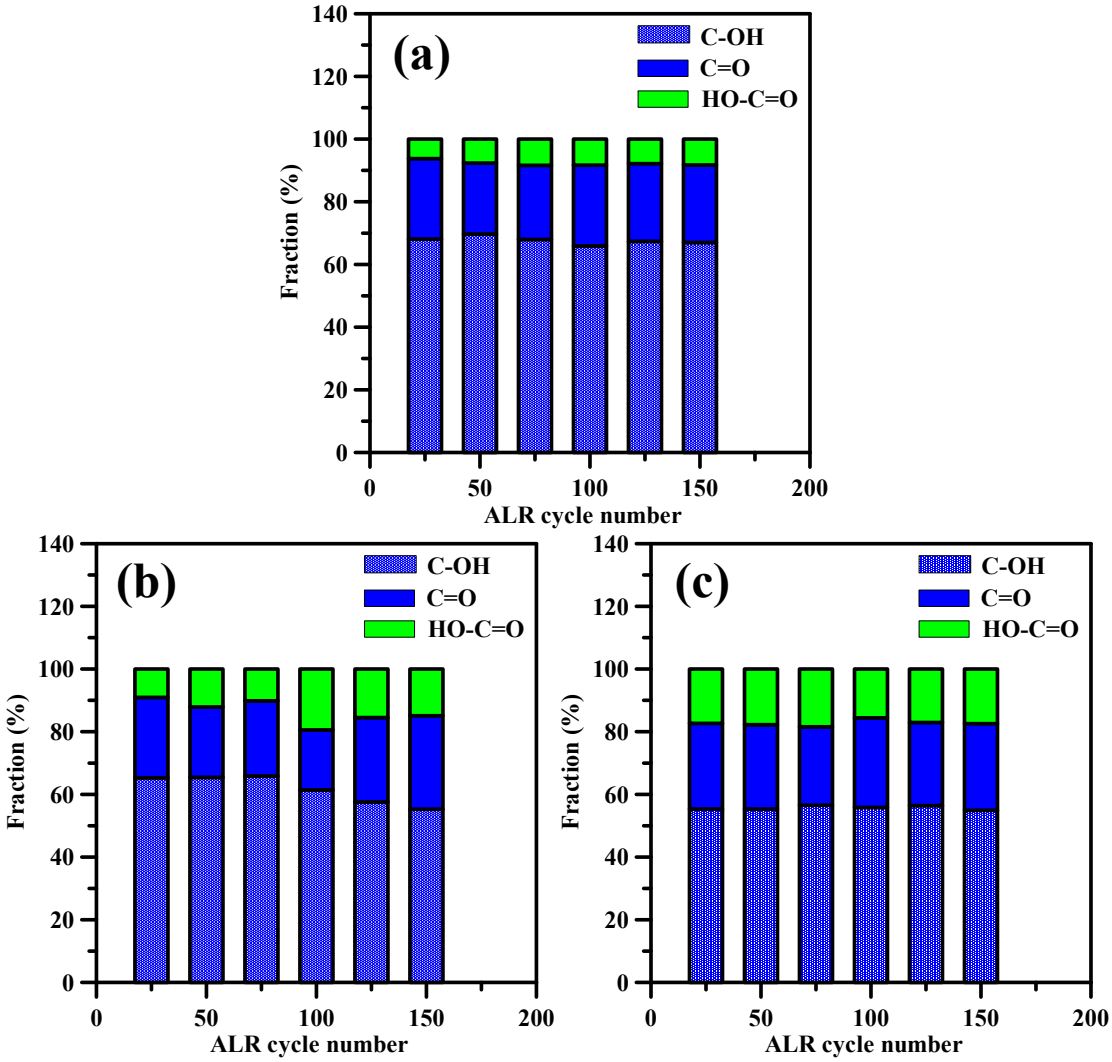

Figure S9. Oxygen group distributions of ALR-treated GO samples at (a) 100, (b) 150, and (c) 200°C.

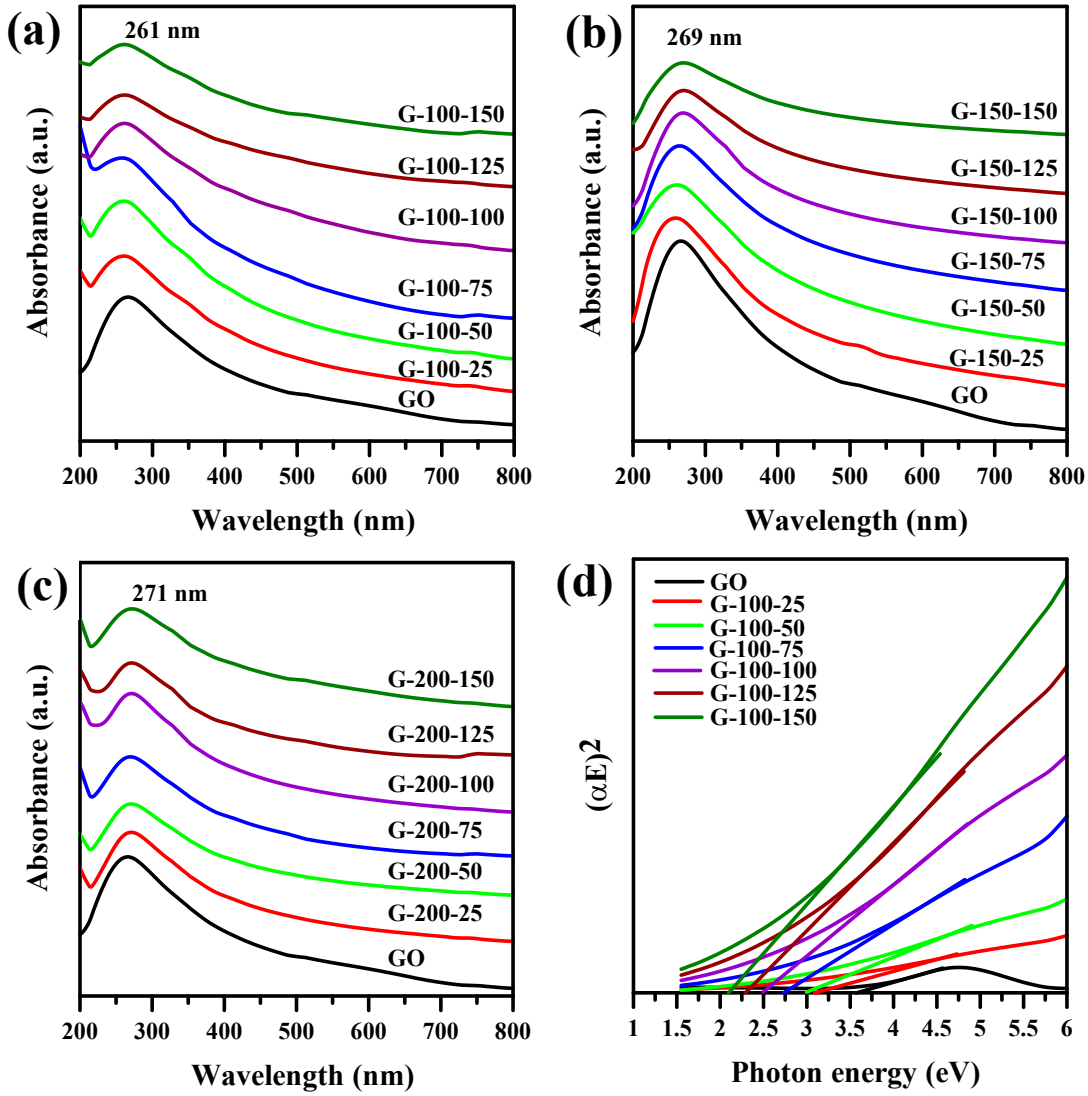

Figure S10. UV-vis absorption spectra of pristine and ALR-treated GO suspensions at (a) 100, (b) 150, and (c) 200°C. (d) Tauc's linear plots of pristine and ALR-treated GO (at 100°C) suspensions.