

Supplementary Materials for:



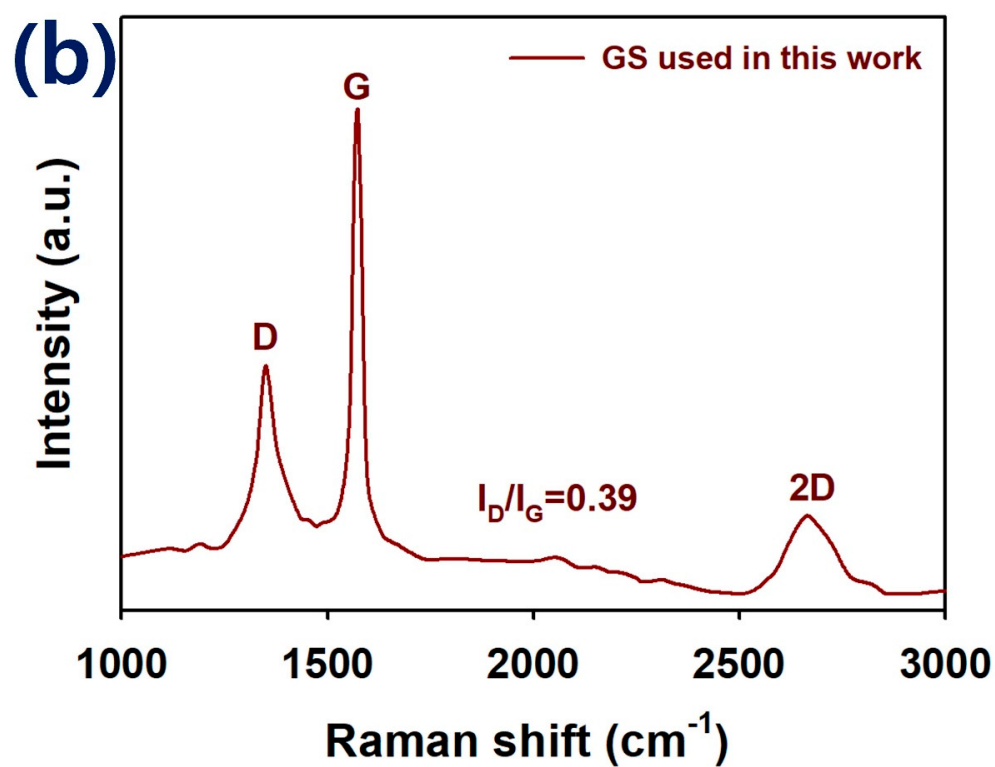
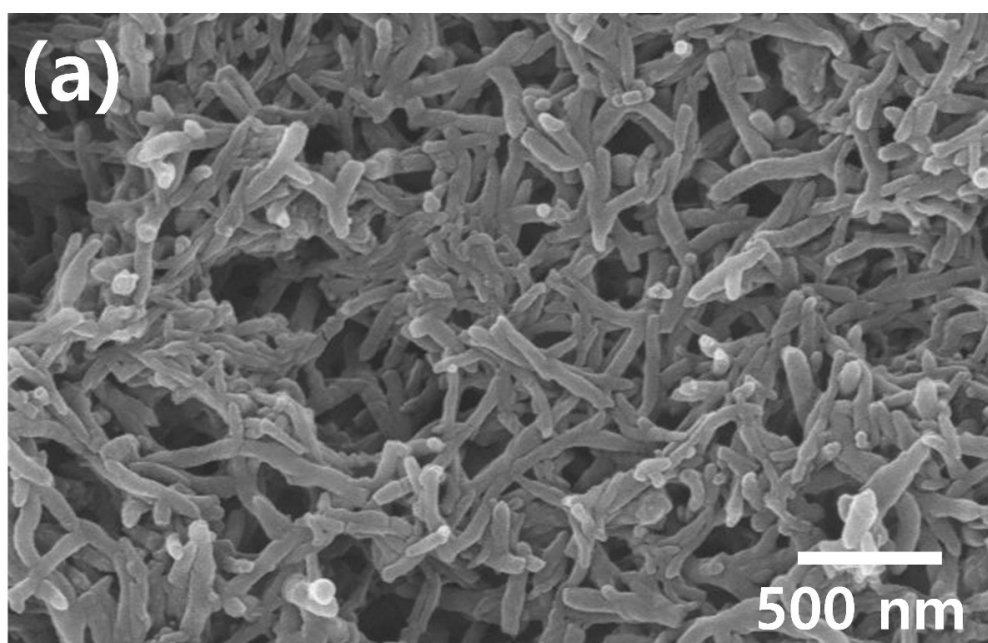
# **Comparative studies on Polyurethane Composites filled with Polyaniline and Graphene for DLP-type 3D Printing**

**Hyeonseo Joo <sup>1</sup> and Sunghun Cho <sup>1,\*</sup>**

<sup>1</sup> School of Chemical Engineering, Yeungnam University, Gyeongsan 38541, Republic of Korea.

\*E-mail: shcho83@ynu.ac.kr

Tel.: +82-53-810-2535



**Figure S1.** (a) FE-SEM image of polyaniline nanofibers (PANI NFs) and (b) Raman spectrum of graphene sheet (GS) used in this work.

**Table S1.** Characteristic bands with specific vibrational modes of PU composites.

| Wavenumber (cm <sup>-1</sup> ) | Vibration                         |
|--------------------------------|-----------------------------------|
| 697, 729                       | C=C out-of-plane bending          |
| 841, 953                       | C-H out-of-plane bending          |
| 1032, 1088                     | C-O-C symmetric stretching        |
| 1112                           | C-O-C asymmetric stretching       |
| 1140                           | C-H in-plane bending              |
| 1235,1359,1442,1510            | C-N stretching, N-H stretching    |
| 1636                           | C=C stretching                    |
| 1726                           | C=O stretching                    |
| 2862                           | C-H symmetric stretching          |
| 2918                           | C-H asymmetric stretching         |
| 3310–3336                      | N-H stretching of secondary amine |