Electronic Supplementary Material (ESI) for Journal of Materials Chemistry B

Supplemental Data

Synthesis of hydroxyapatite-reduced graphite oxide nanocomposites for biomedical applications: oriented nucleation and epitaxial growth of hydroxyapatite

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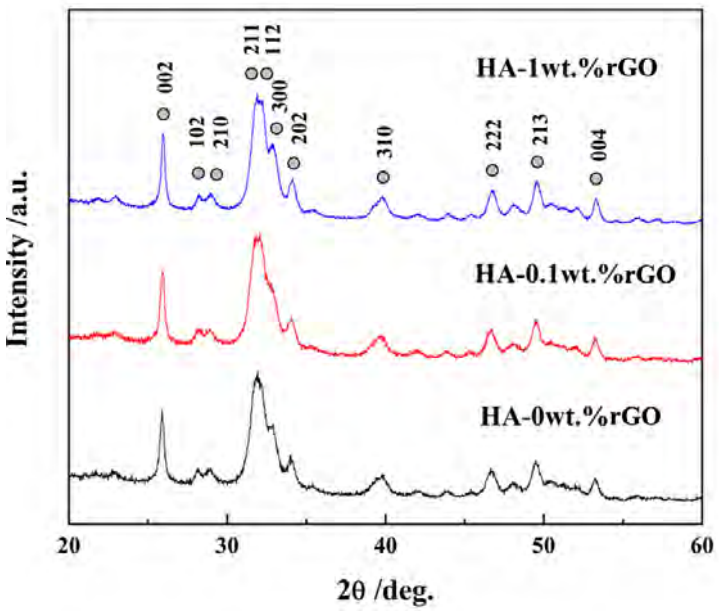

Fig. S1. XRD diffraction spectra of the synthesized pure HA and HA-rGO composite powders.

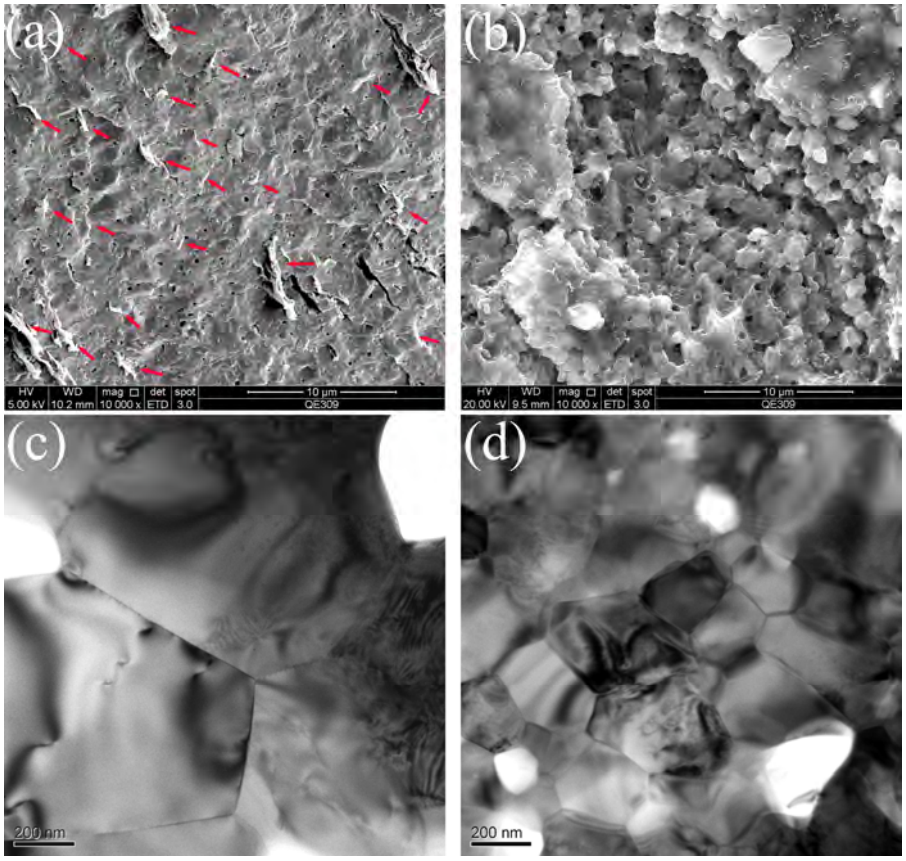

Fig. S2. Microstructural features of the SPS pellets. (a) FESEM image of the HA-rGO pellet showing even distribution of graphene nanosheets in the composites (the red arrows point to graphene sheets); (b) FESEM view of the fractured surface of the SPS HA pellet showing intergranular fracture and the size of 1.5~2μm for HA grains; (c) TEM image of the SPS HA showing large HA grains; (d) TEM image of the HA-0.1 wt.%rGO pellet showing the size of ~100-200nm for HA grains.

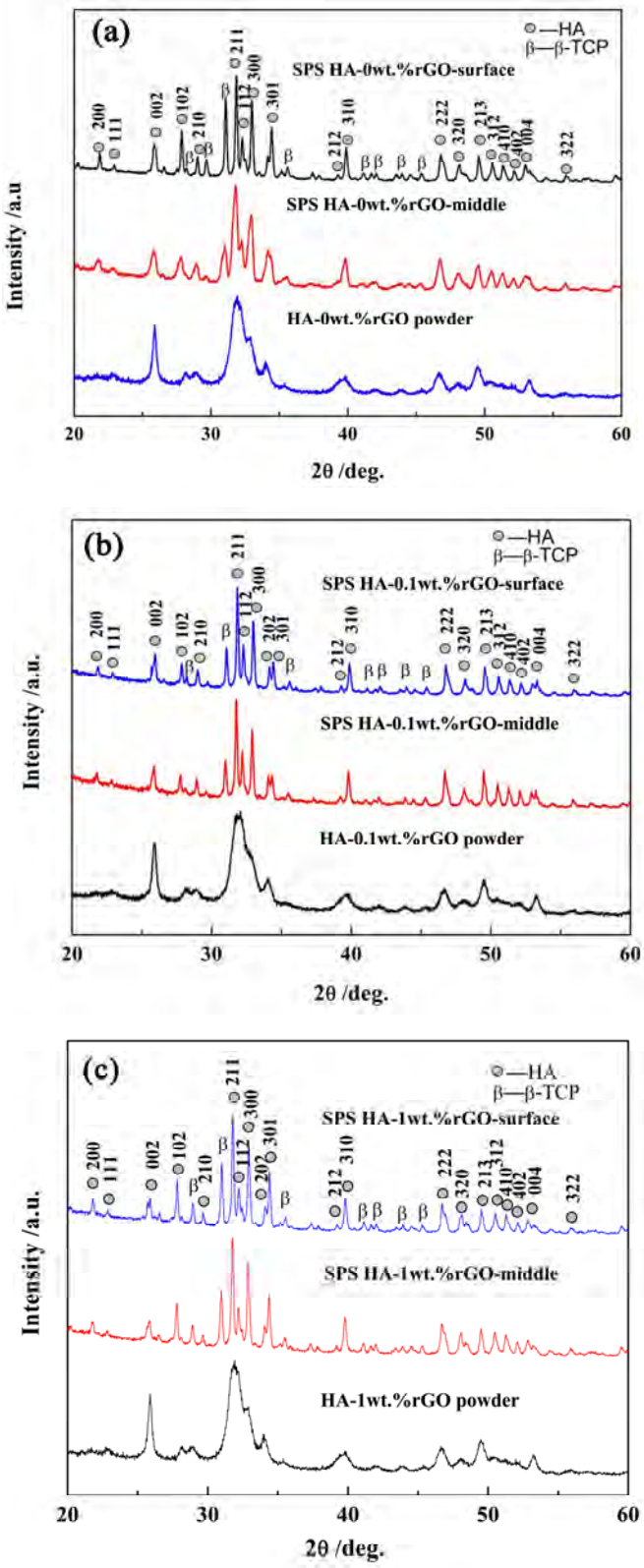

Fig. S3. XRD patterns of the SPS consolidated HA (a), HA-0.1wt.%rGO (b) and HA-1.0wt.%rGO (c).

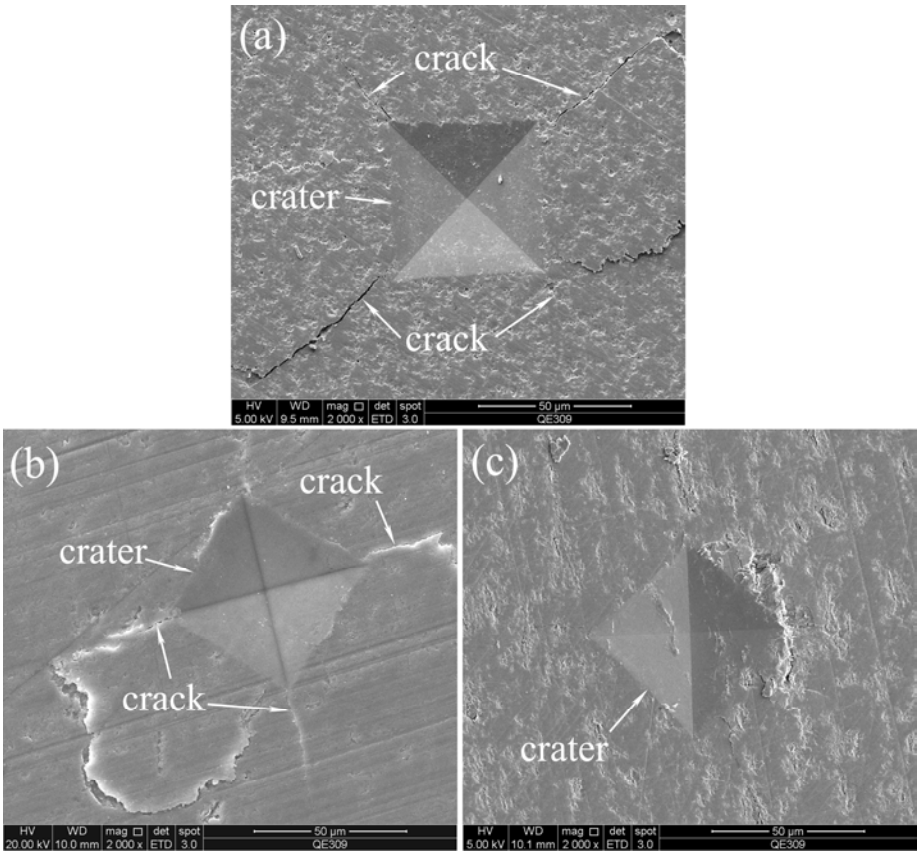

Fig. S4. SEM images of the Vicker's indentation craters and cracks on the polished cross-sections of the SPS processed HA (a), HA-0.1wt.%rGO (b) and HA-1.0wt.%rGO (c). (Indentation load: 1000 gf)