Electronic Supplementary Material (ESI) for RSC Advances.

Supporting Information

The Influence of Carbon Nanotubes and Graphene Oxide Sheets on the Morphology, Porosity, Surface Characteristics and Thermal and Electrical Properties of Polysiloxane Derived Ceramics

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Figure S1. Monolithic structure of filler incorporated ceramic sample pyrolyzed at 1000 °C

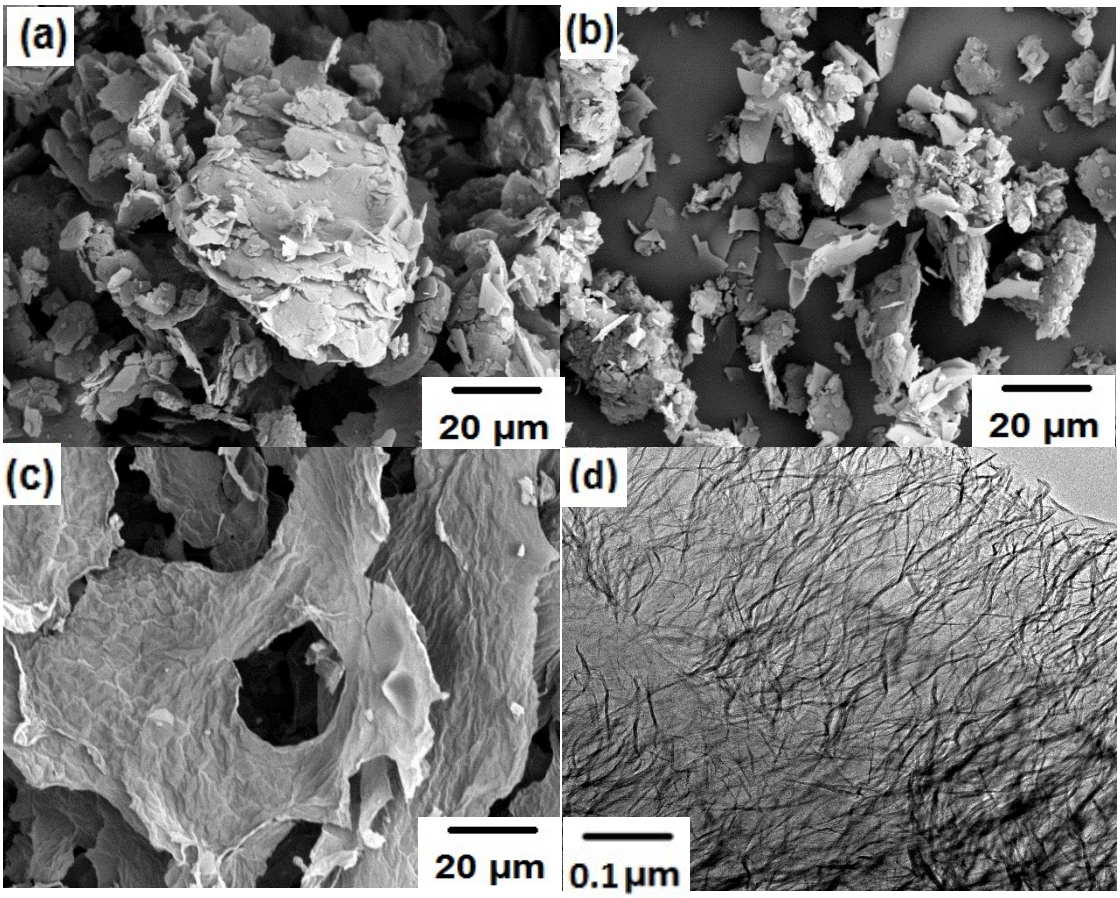
(a)
20 μm
(b)
20 μm
(c)
20 μm
(d)
0.1 μm

Figure S2. SEM images of (a) Graphite from Sigma-Aldrich; (b) Graphene oxide prepared from modified Hummer method; (c) Thermally treated Reduced Graphene oxide by pyrolyzed at 1000 °C for 4h; and (d) TEM image of Reduced Graphene oxide

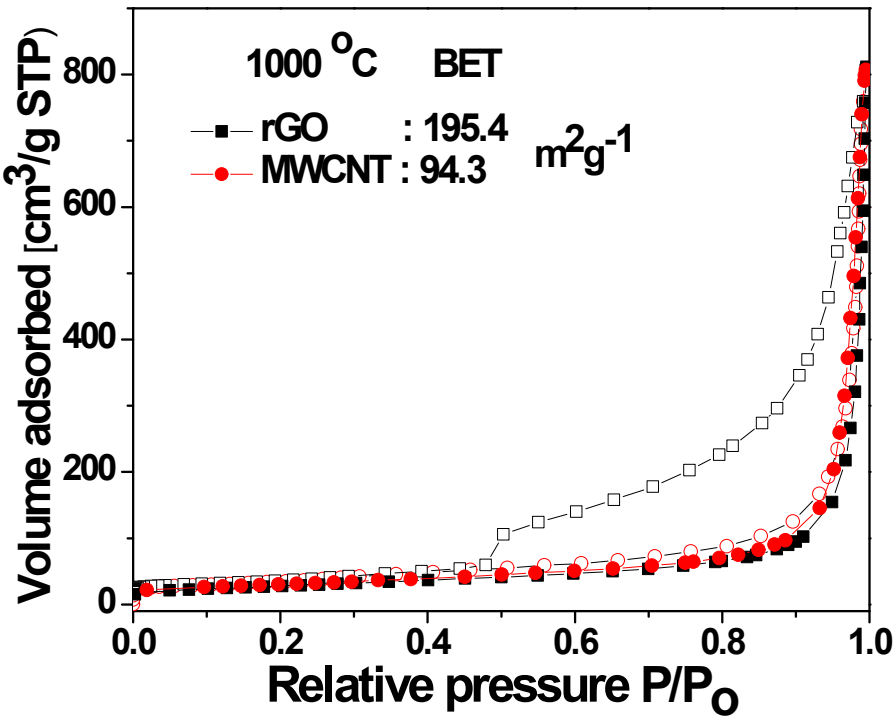

Figure S3. N_2 adsorption–desorption isotherms of thermally treated conductive fillers (rGO and MWCNT) pyrolyzed at 1000 °C for 4h with corresponding specific BET surface areas

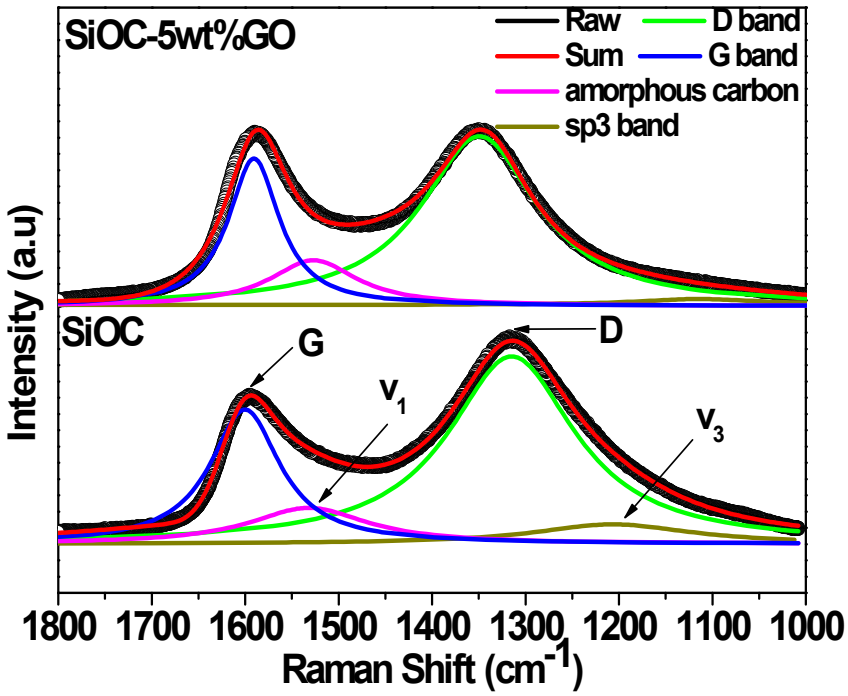

Figure S4: Raman spectra of pure and 5wt% GO-incorporated SiOC ceramics

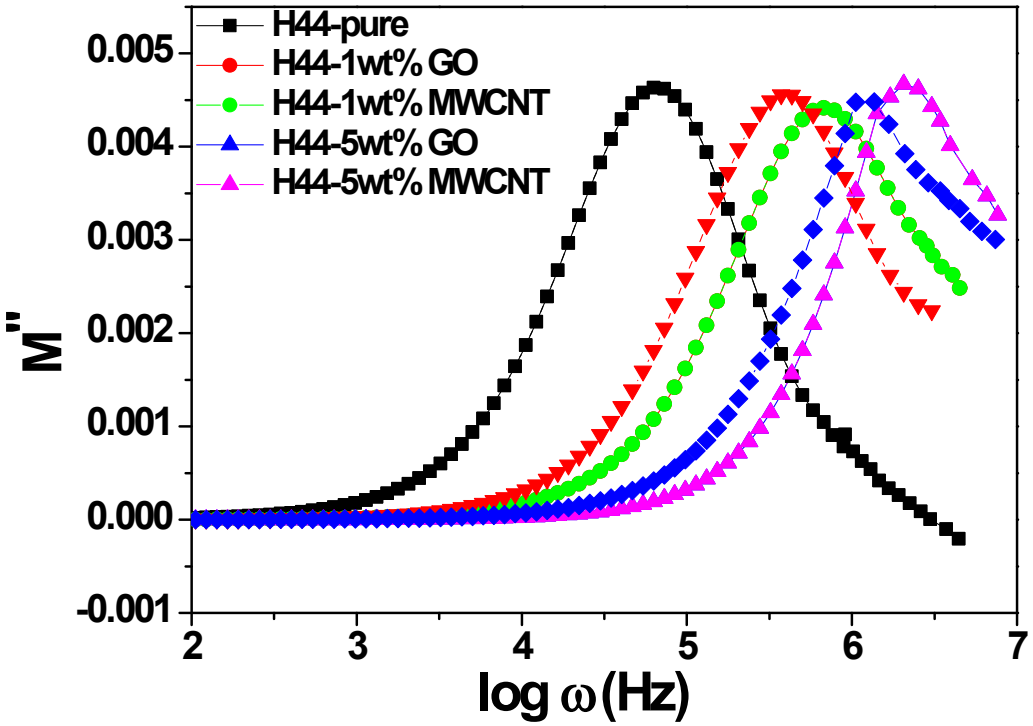

Figure S5: Modulus spectrum of nanofillers (GO and MWCNT) incorporated SiOC ceramics at room temperature

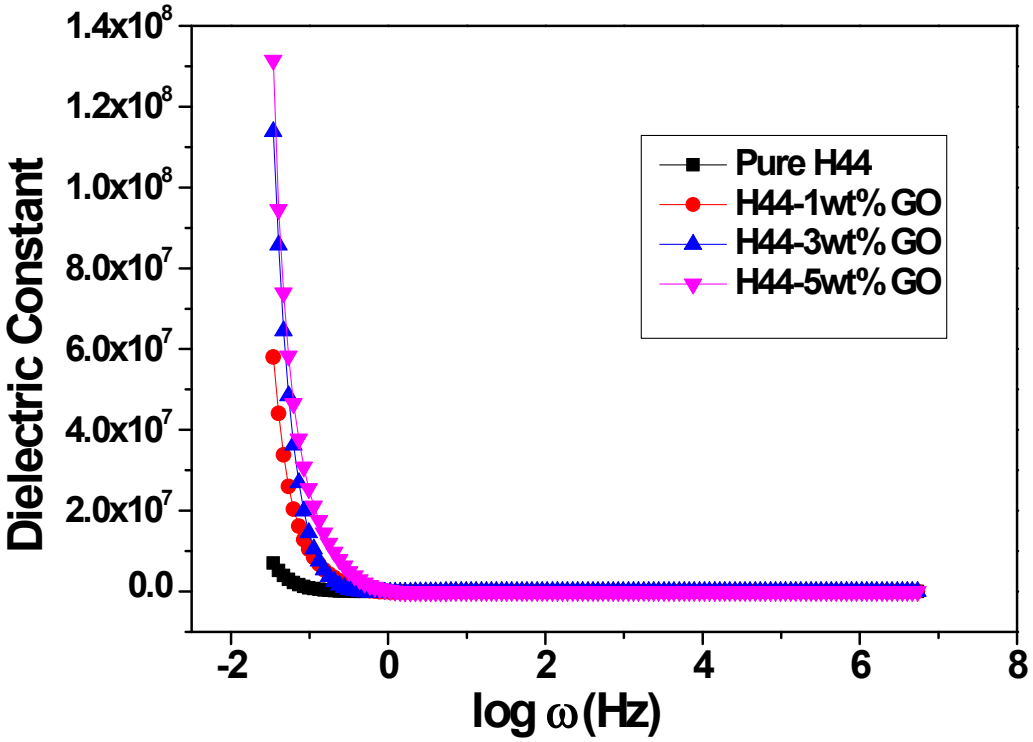

Figure S6: Dielectric spectra of GO incorporated SiOC ceramics at room temperature

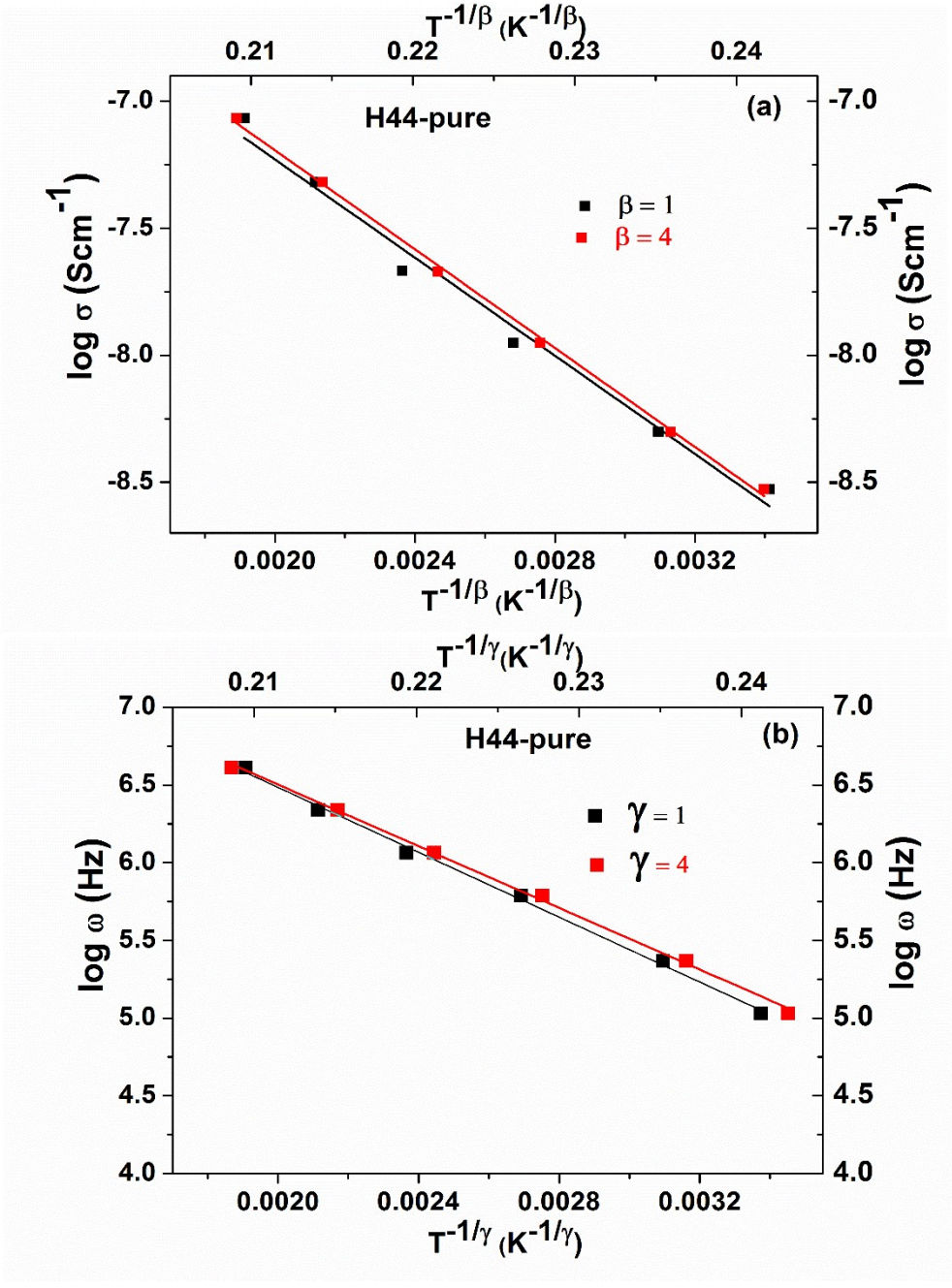

Figure S7: (a) Low

frequency conductivity variation and (b) characteristic frequency variation pure SiOC ceramics at various measuring temperature

Table S1. Specific BET surface areas and density of graphite, graphene oxide, and reduced graphene oxide

	Graphite	Graphene Oxide	Reduced Graphene Oxide
BET Surface Area (m^2g^{-1})	4.8	54	195
Density (g/cm^3)	2.180	1.883	1.671