SUPPLEMENTARY MATERIAL

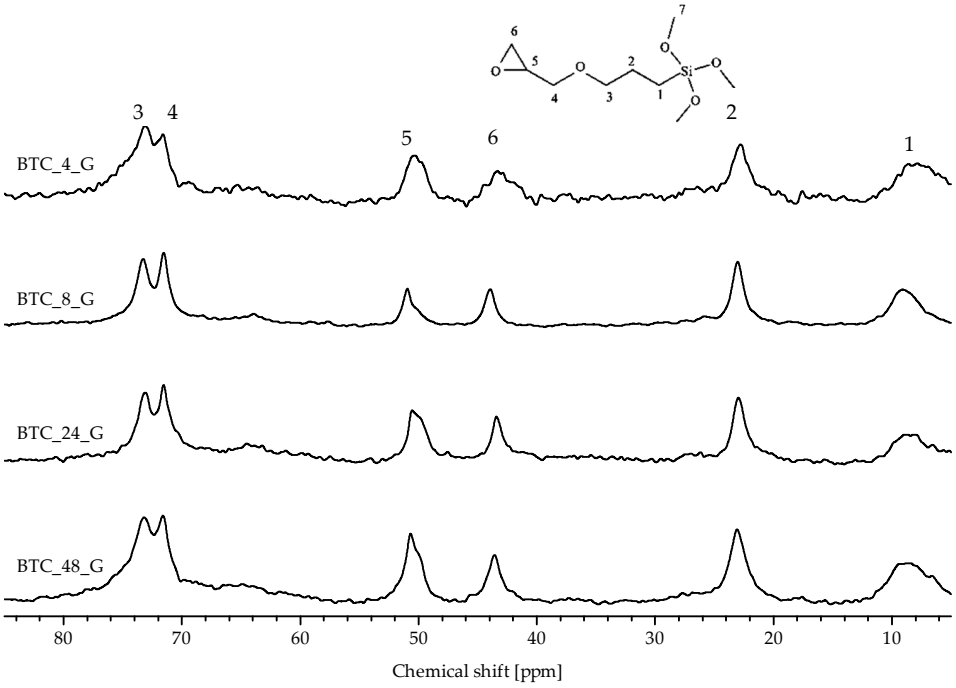
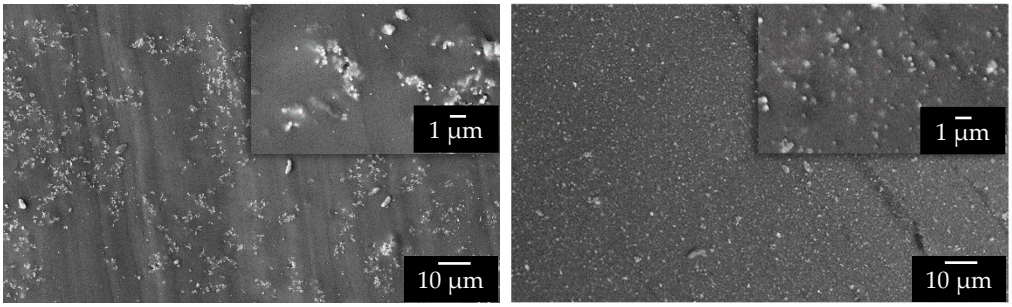


Figure S1. ^{13}C CPMAS NMR spectra of G-functionalized BTC particles hydroxylated for different time

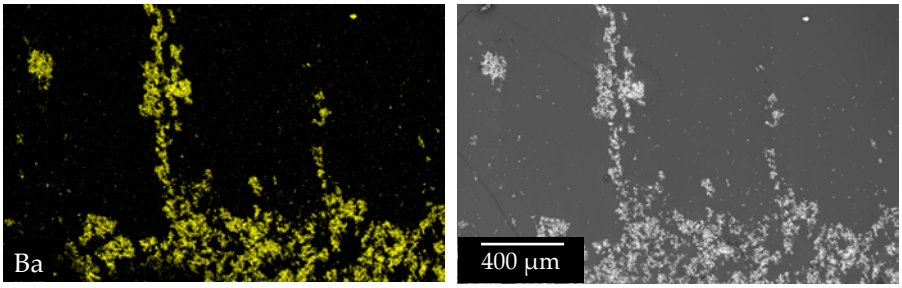
Table S1. Results from DSC analysis on cured polymer-ceramic nanocomposites

Sample label	T_g [°C] (first heating)	T_m [°C]	ΔH_m [J/g]	T_{cc} [°C]	ΔH_{cc} [J/g]
Epoxy	9	-	-	-	-
Epoxy_3.5_BTH	6	-	-	-	-
Epoxy_3.5_BTH_G	8	-	-	-	-
Epoxy_21_BTH	8	-	-	-	-
Epoxy_21_BTH_G	26	-	-	-	-
PDMS	-125	-41	-28.24	-81	27.49
PDMS_3.5_BTH	-120	-37	-23.66	-84	24.14
PDMS_3.5_BTH_G	-124	-42	-23.52	-79	24.21
PDMS_21_BTH	-125	-42	-11.12	-82	10.73
PDMS_21_BTH_G	-127	-43	-13.67	-79	13.75



(**a**) (**b**)

Figure S2. Cross section SEM images of epoxy composites with 3.5 vol% filler content. The particles employed are (a) BTH and (b) BTH_G.



(**a**) (**b**)

Figure S3. EDXS barium elemental map (a) and image of the reference area (b) of the PDMS composite at 3.5 vol% filler content loaded with bare BTH particles.

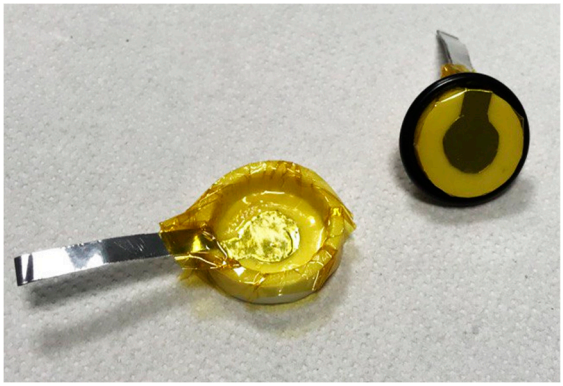


Figure S4. The modified mold used for poling during the cross-linking. Each part is equipped with an aluminum electrode and covered with a dielectric film. The positive mold has an O-ring tighten around to control the thickness of the final composite.

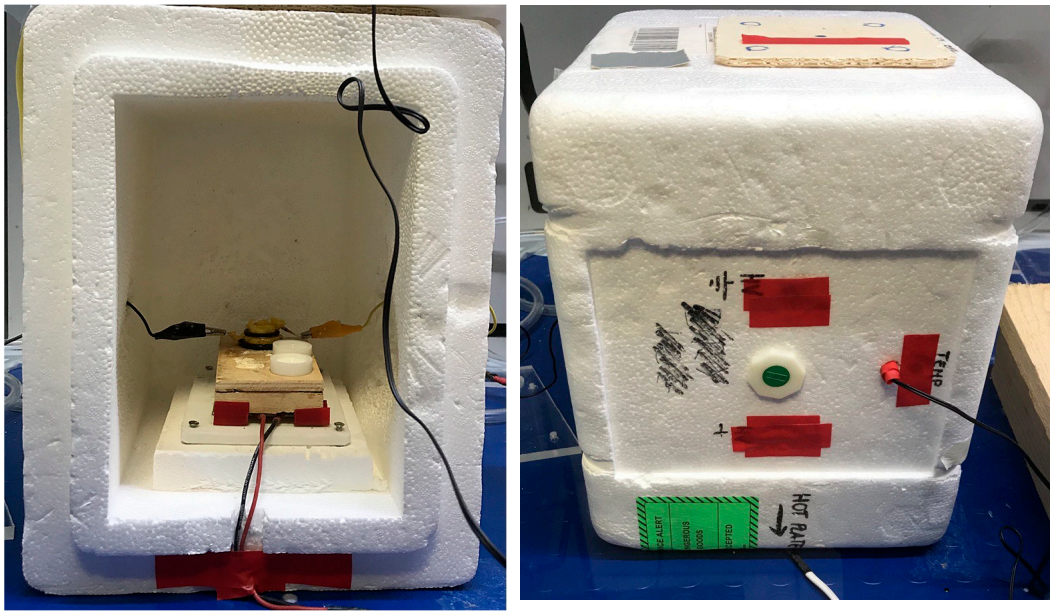


Figure S5. Experimental apparatus employed for combined poling/thermal curing of the nanocomposites; the filled molds are placed inside a polystyrene box equipped with the high voltage connectors and a heating plate controlled by a thermostat.