Electronic Supplementary Material (ESI) for Soft Matter.

Heat dissipative mechanical damping properties of EPDM rubber composites including hybrid fillers of aluminum nitride and boron nitride

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Fig. S1 shows the digital images of dispersed hydrolyzed and silane-modified ceramic fillers (AlN and BN) at 1 min after vigorous shaking to determine the surface characteristics of the ceramic fillers, where hydrophilic characteristics would allow the fillers to be located in the water phase and *vice versa*. The hydrolyzed fillers are well dispersed in hydrophilic (water) solvent, which may stem from the formation of hydroxyl group on surface. On the other hand, the chemically-treated fillers are dispersed in hydrophobic toluene maintaining a clear phase separation because the number of hydroxyl groups of chemically-treated ceramic fillers is decreased by the reaction with hydrolyzed TESPT, giving rise to hydrophobic characteristics. It is clear that the surface characteristics of ceramic fillers are successfully changed.

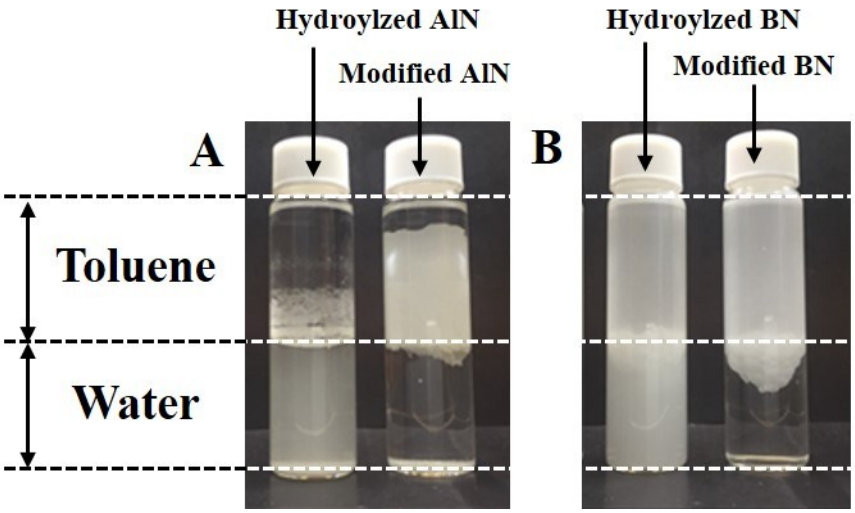

Fig. S1. A photographic image of chemically-treated (A) AlN and (B) BN dispersed in two different solvents, which are toluene (upper) and water (lower).