

Supplementary Materials: Hybrid Materials Based on Nanoparticles Functionalized with Alkylsilanes Covalently Anchored to Epoxy Matrices

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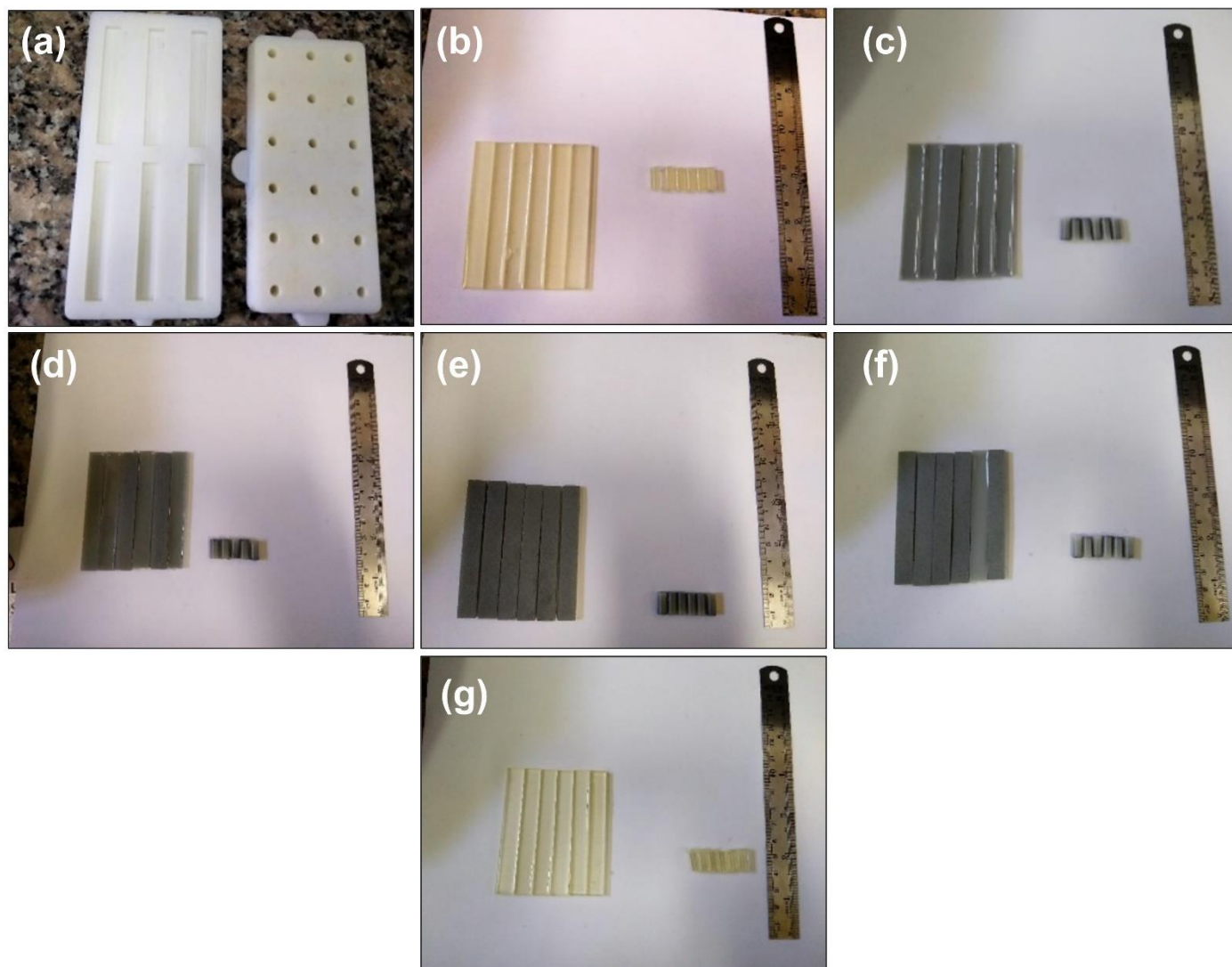


Figure S1. (a) Molds for making specimens for bending and compression tests, respectively. (b) Polymer P1 specimens; (c) HMF1 final hybrid material specimens; (d) NCM1 nanocomposite material specimens; (e) Polymer P2 specimens; (f) HMF2 final hybrid material specimens; (g) NCM2 nanocomposite material specimens.

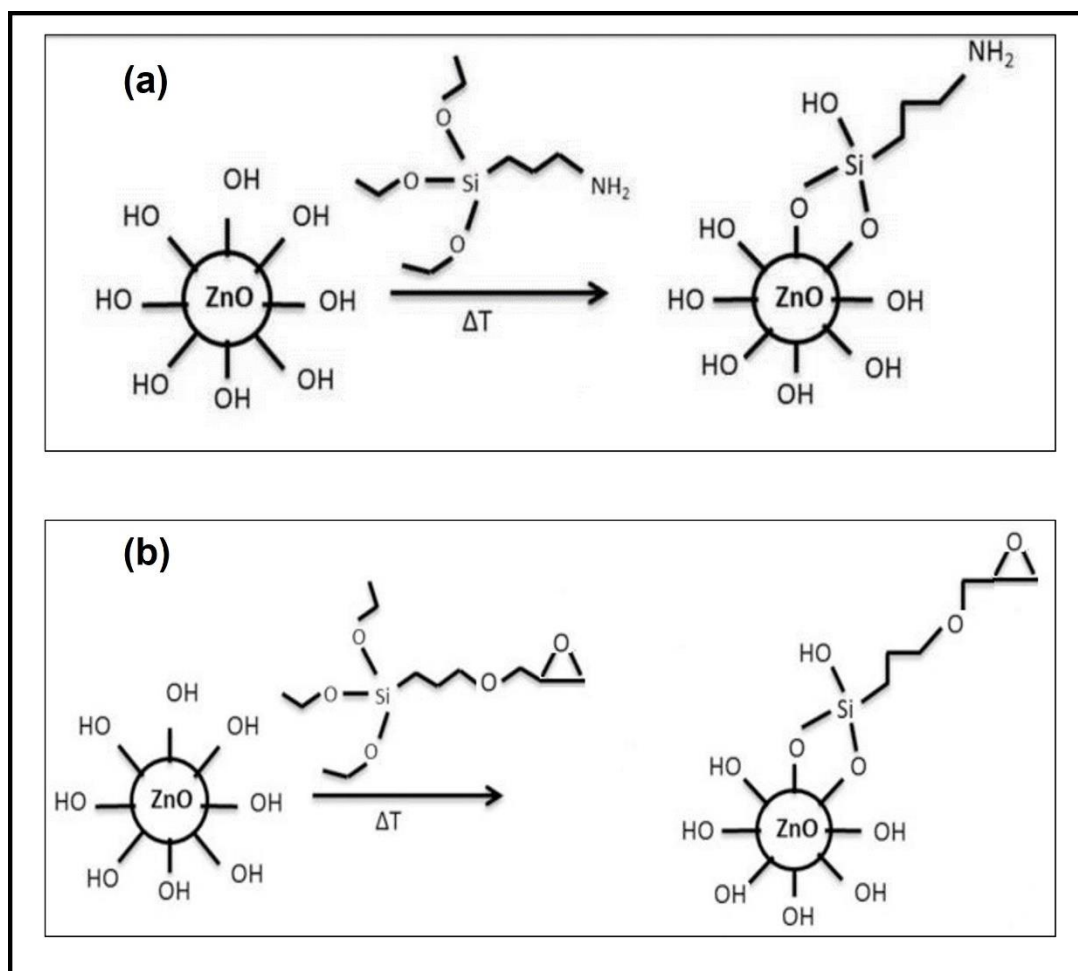


Figure S2. (a) Functionalization scheme proposed by Jaramillo et al. [37] and (b) proposed functionalization scheme with GPTMS.

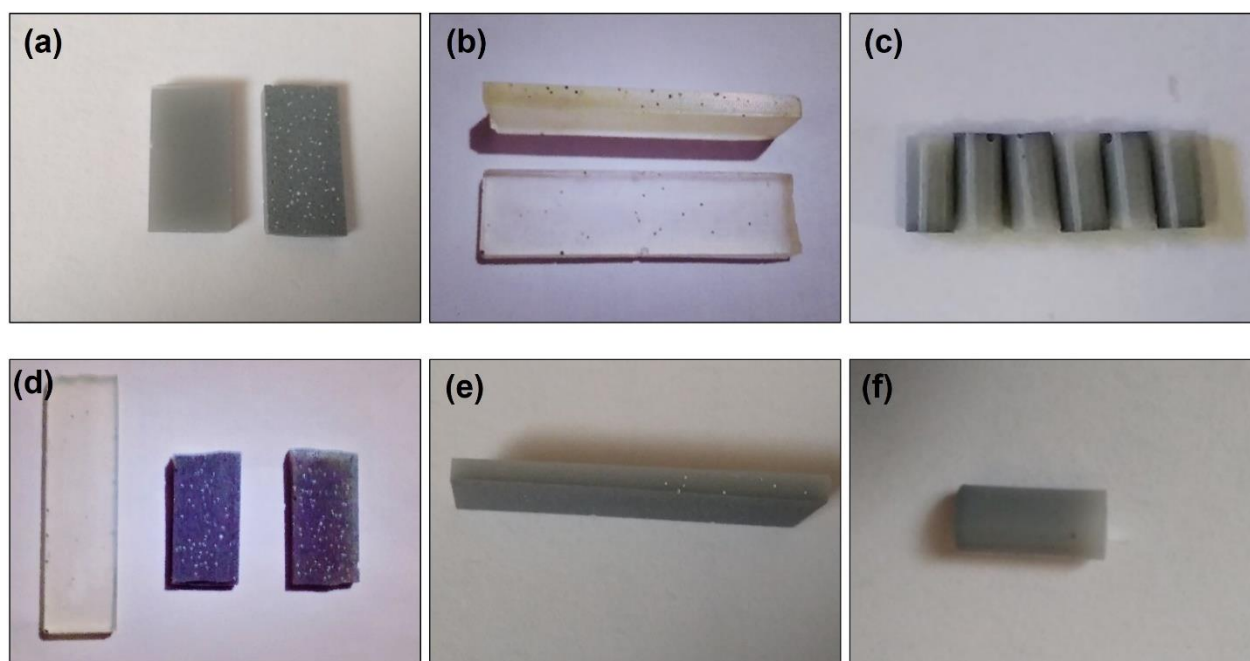


Figure S3. (a) Inhomogeneity of the ZnO-NP within the matrix (NCM1); (b) Surface defects of the specimen and small difference in thickness in specimen (P1), (c) Final hybrid material compression specimens MHF1, (d) Surface defects of the specimen (P2 and NCM2); (e) Differences in thickness in the specimen (MHF2), (f) Inhomogeneity of the ZnO-NP-funct-GPTMS within the matrix (HM2-G).

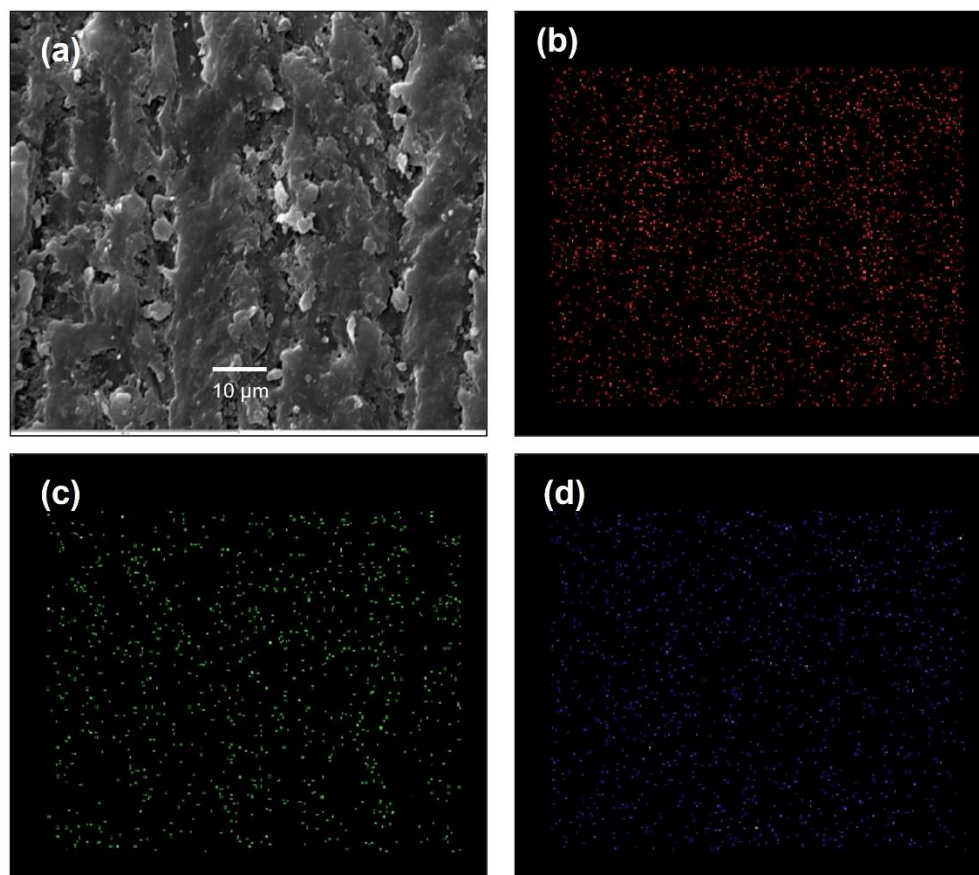


Figure S4. (a) SEM-mapping analysis micrograph for final hybrid material HMF1, (b) Carbon element; (c) Oxygen element; (d) Zinc element.

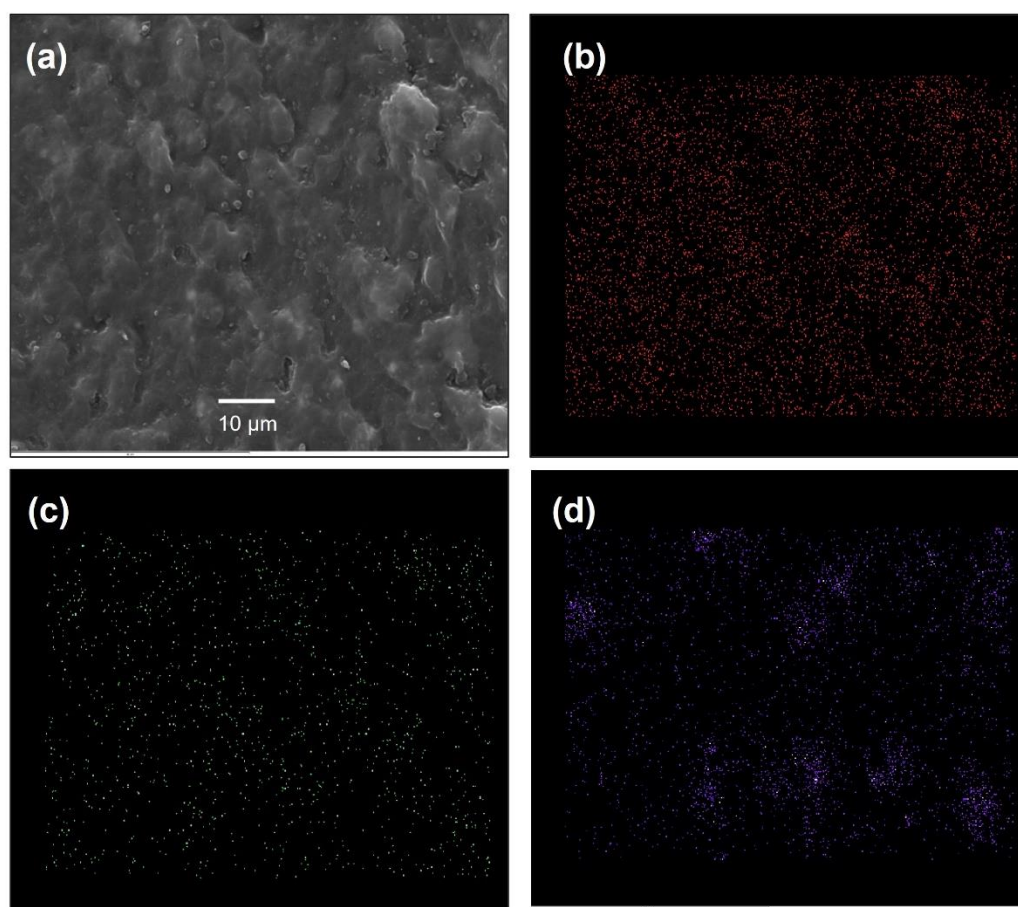


Figure S5. (a) SEM-mapping analysis micrograph for final hybrid material HMF2, (b) Carbon element; (c) Oxygen element; (d) Zinc element.