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HIGHLY COMPETENT CLAY BASED NANOCOMPOSITE MATERIALS FOR CATALYTIC APPLICATION

An up-front and precise approach for the assembly of small and highly stable mono and bimetallic nanocrystals (NCs) based on noble and non-noble metals by a co-reduction technique in the incidence of clay (synthetic hectorite; Laponite XLG) at ambient temperature is conveyed. Metal-Polymer-Clay nanocomposite hydrogels were also synthesized. Catalytic studies display a strong bimetallic synergistic consequence of the NCs; their catalytic activities are much higher attributed to the well-controlled morphology, small size and extraordinary stability of the bimetallic NCs in the occurrence of clay.