Supporting Information

Reduced to hierarchy: carbon filament supported mixed metal oxide nanoparticles

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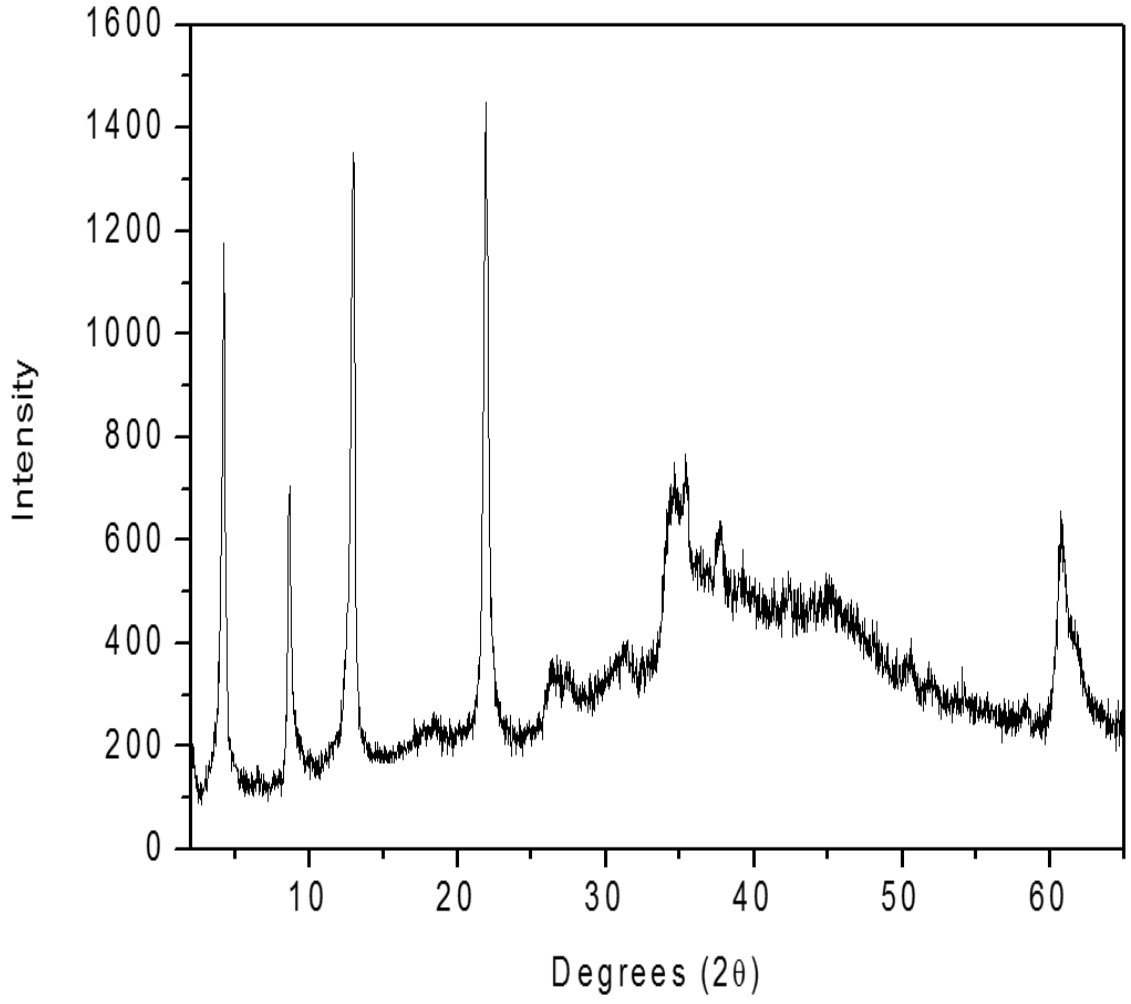

Figure S1. PXRD pattern of adamantanecarboxylate intercalated Mg-Al LDH prepared by hydroxide route.

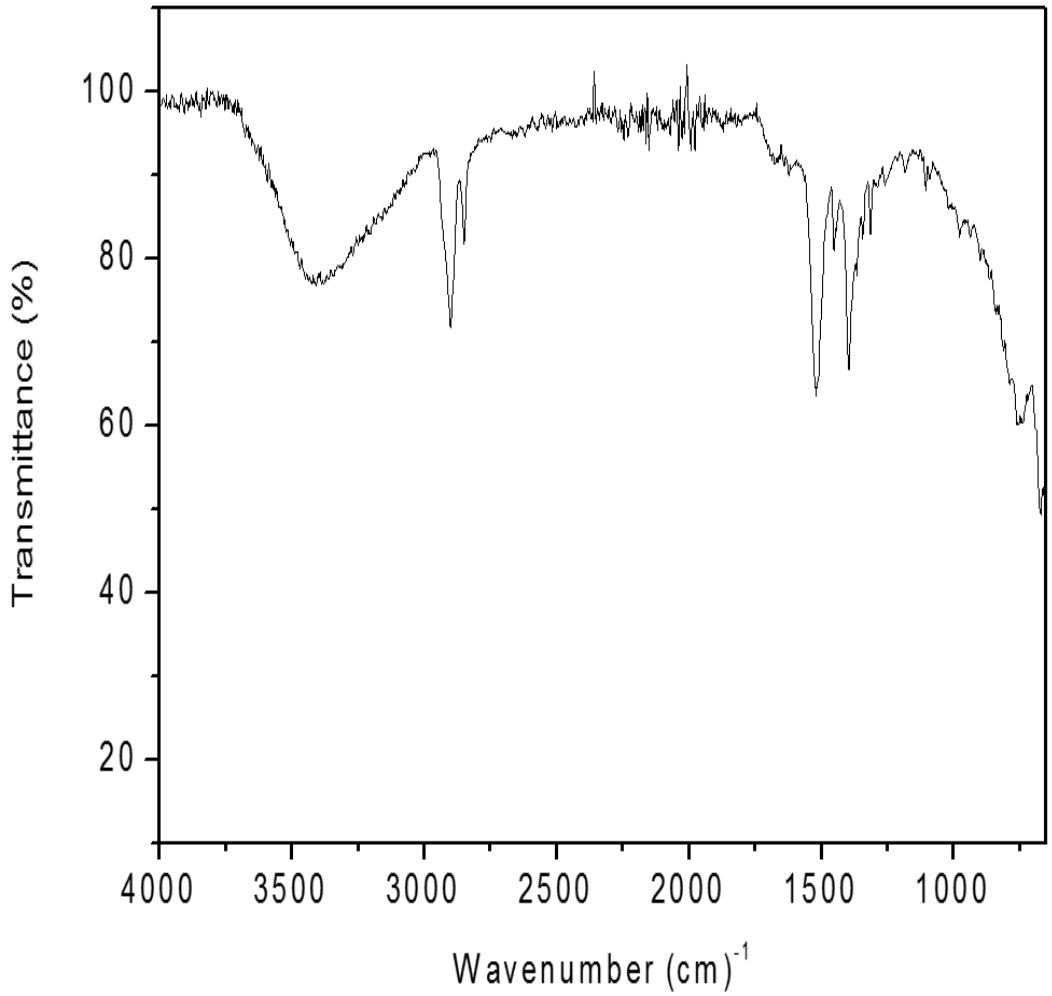

Figure S2. FTIR spectrum of adamantanecarboxylate intercalated Mg-Al LDH prepared by hydroxide route.

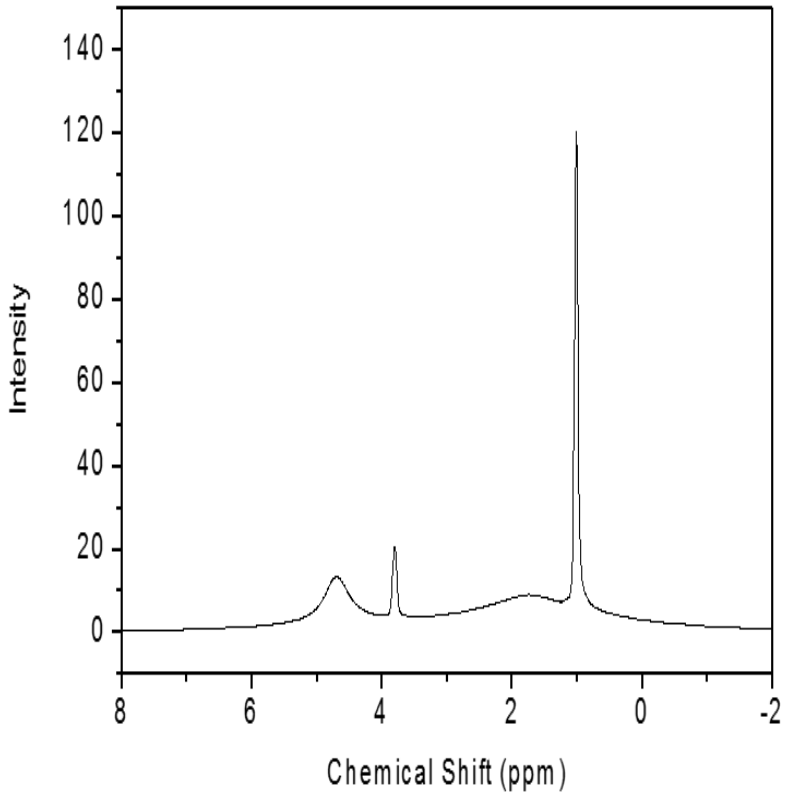

Figure S3. ^{1}H NMR spectrum of adamantanecarboxylate intercalated Mg-Al LDH prepared by hydroxide route.

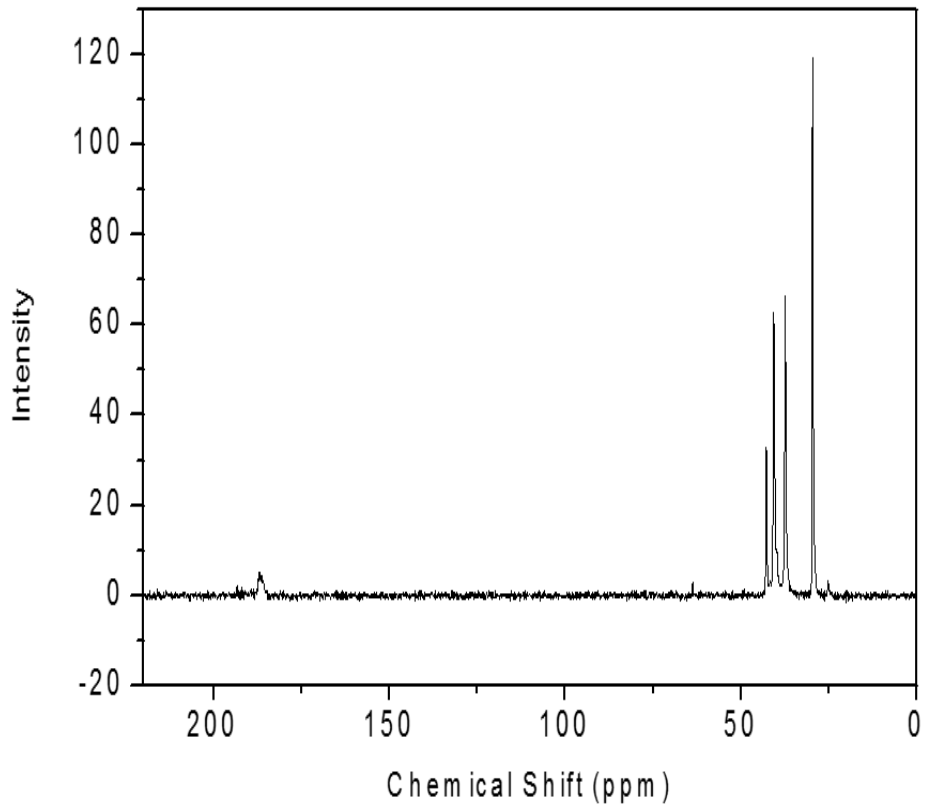

Figure S4. ^{13}C NMR spectrum of adamantanecarboxylate intercalated Mg-Al LDH prepared by hydroxide route.

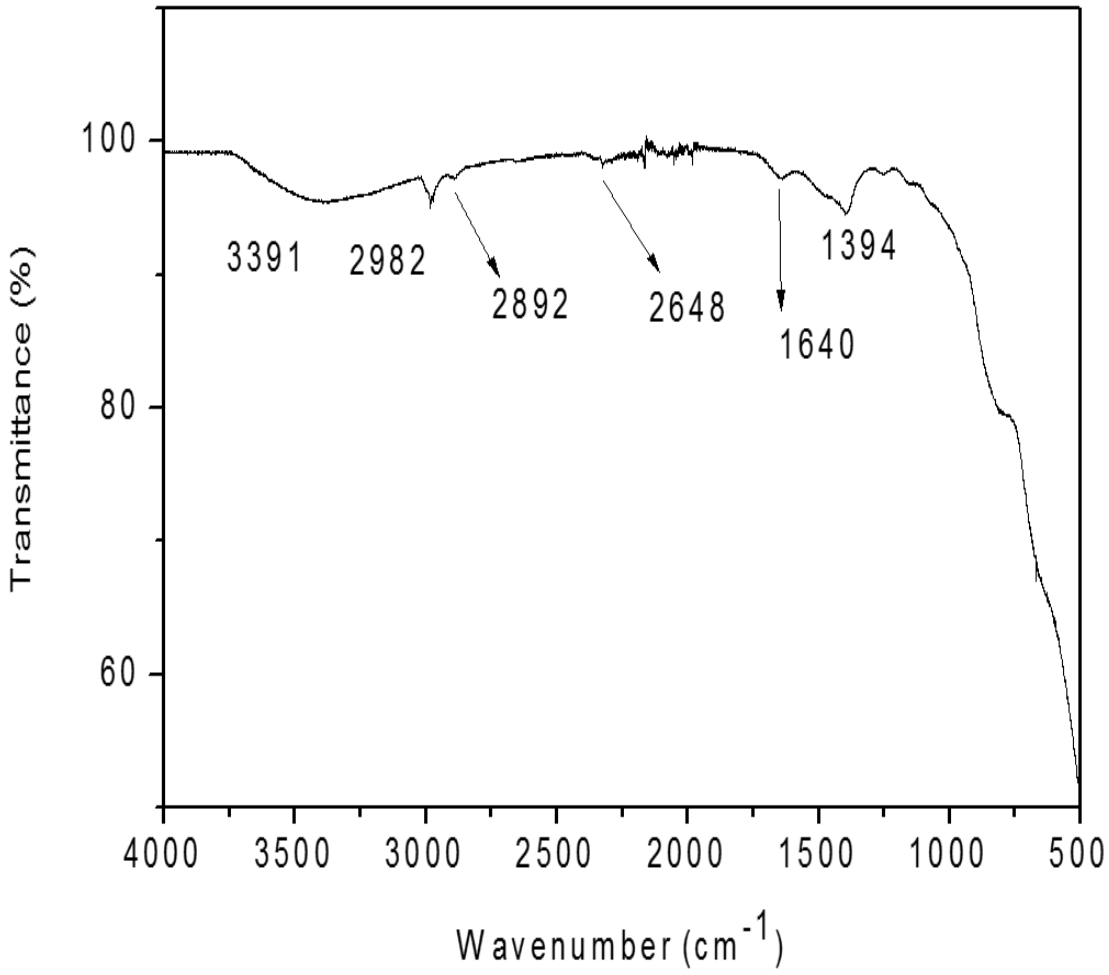

Figure S5. FTIR spectrum of the compound generated from reductive decomposition of adamantanecarboxylate intercalated Mg-Al LDH.

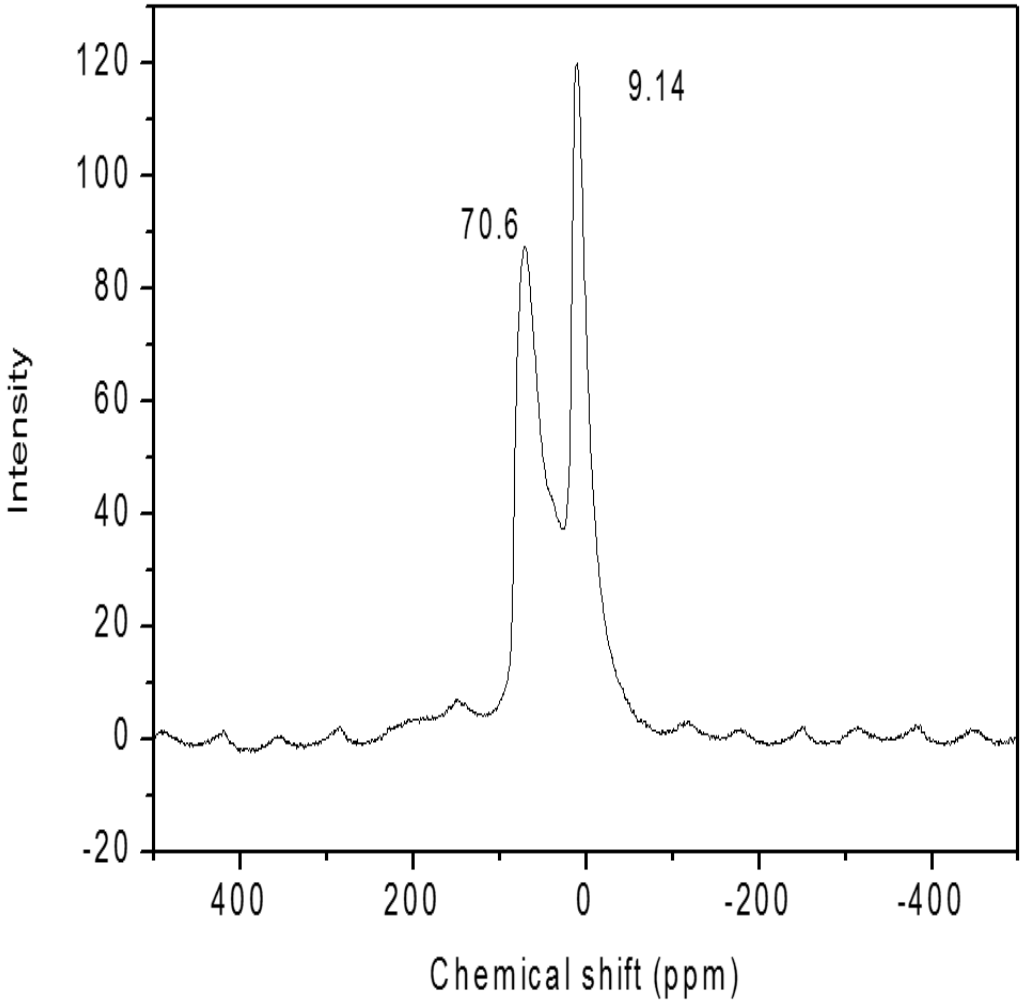

Figure S6. ^{27}Al NMR spectrum of the compound generated from reductive decomposition of adamantanecarboxylate intercalated Mg-Al LDH.

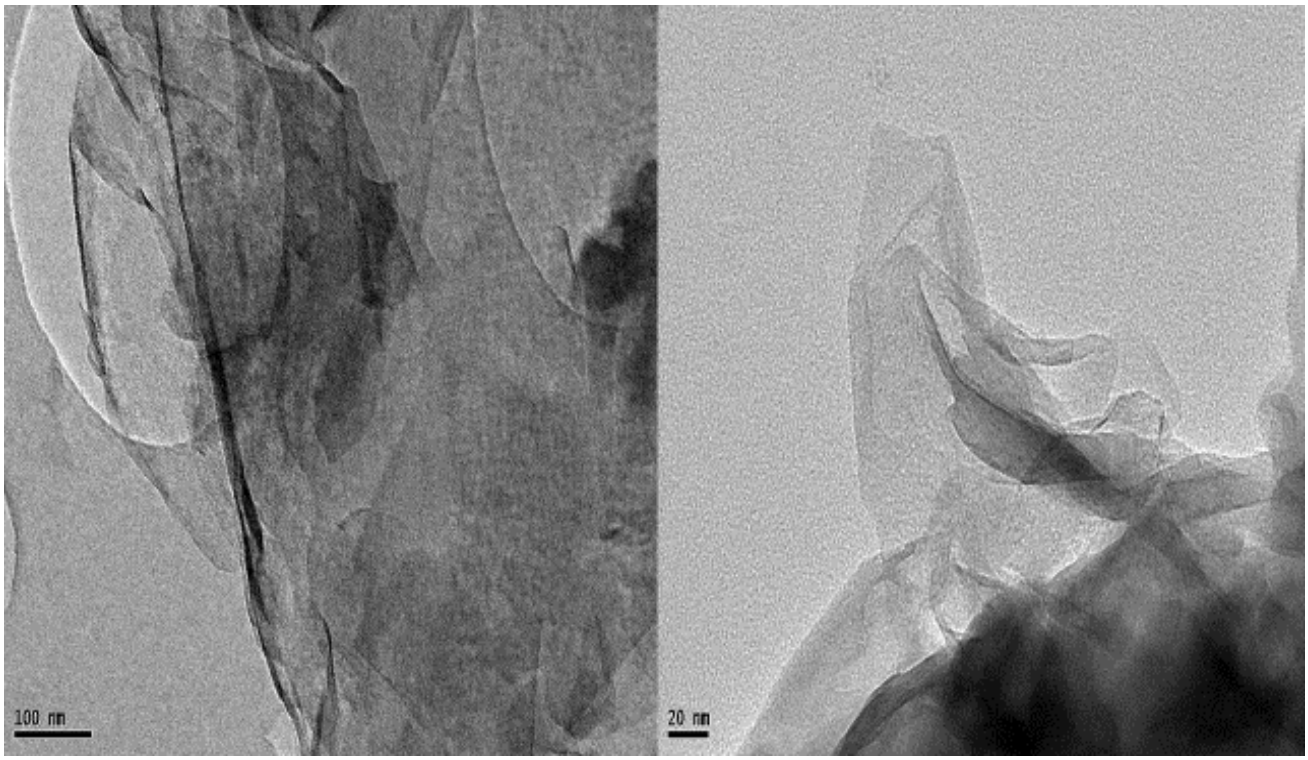

Figure S7. TEM images of adamantanecarboxylate intercalated Mg-Al- LDH.

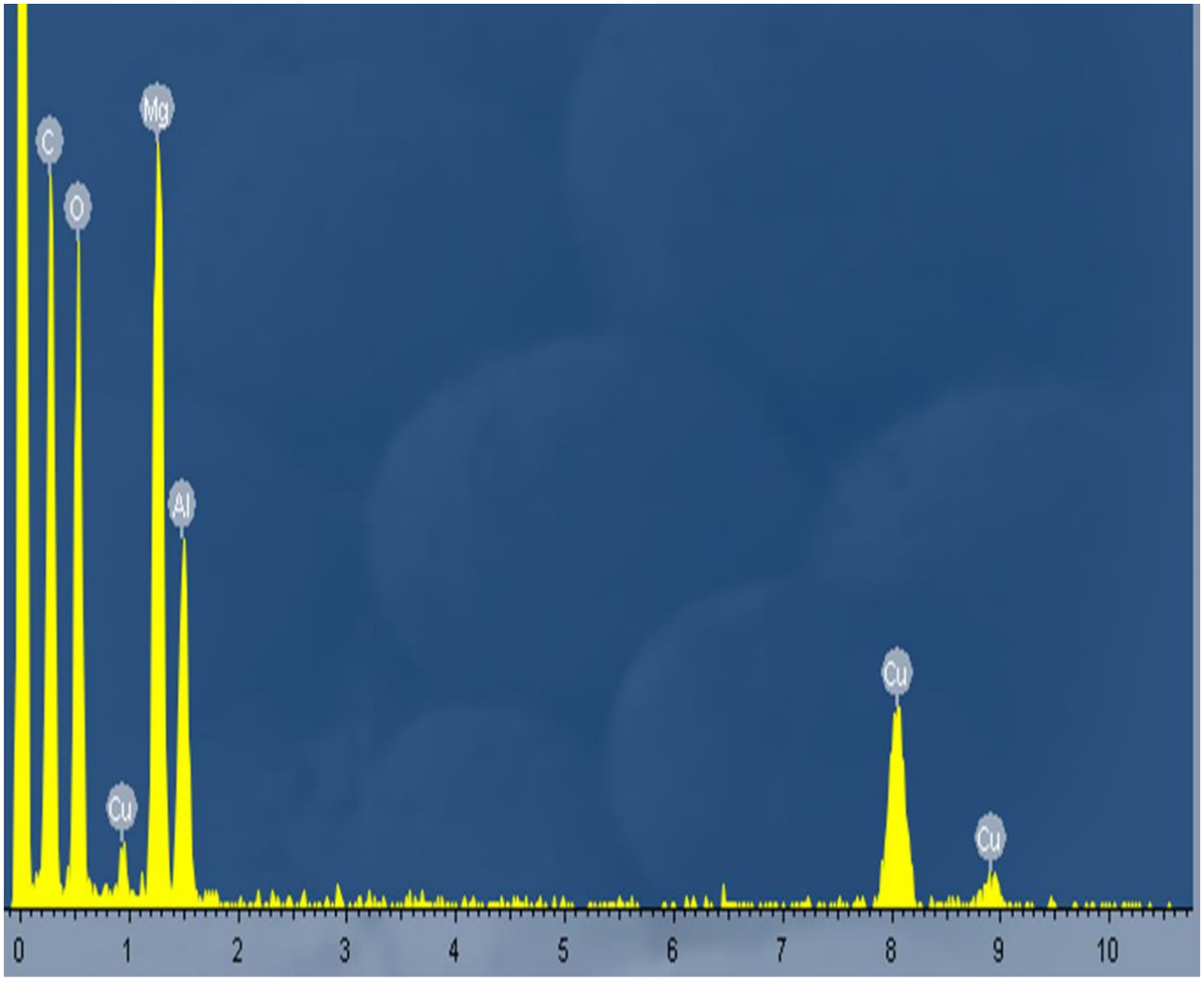

Figure S8. EDX spectrum of the compound generated from reductive decomposition of adamantanecarboxylate intercalated Mg-Al LDH.