Formal Hydroacylation of Alkynes on Mg₃Al–CO₃-Layered Double Hydroxide

Significance: Mg₃Al–CO₃-layered double hydroxide (Mg₃Al–CO₃ LDH) catalyzed the formal hydroacylation of terminal arylalkynes with aromatic aldehydes under argon to give the corresponding diaryl α,β-unsaturated ketones in up to 85% yield (24 examples).

Comment: In the reaction of phenylacetylene with p-anisaldehyde, Mg₃Al–CO₃ LDH was recovered and reused three times with a slight loss of its catalytic activity (fresh: 91% yield; third reuse: 73% yield).