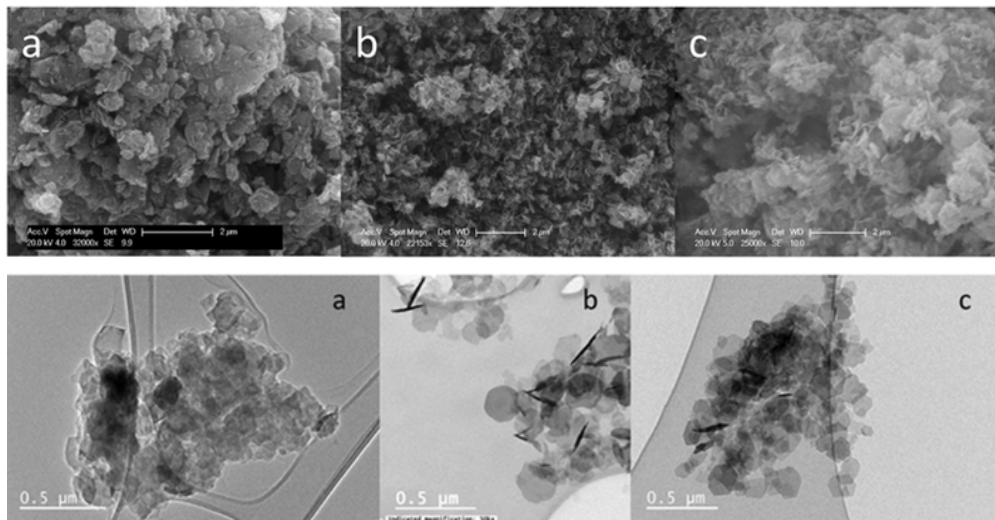


# Continuous synthesis of $Zn_2Al-CO_3$ layered double hydroxides: a comparison of bench, pilot and industrial scale syntheses

$Zn_2Al-CO_3$  was produced continuously at bench ( $g\ h^{-1}$ ), pilot ( $100s\ g\ h^{-1}$ ) and industrial scale ( $10s\ kg\ h^{-1}$ ). Crystal domain length and BET surface area were similar at all three scales although there was a small increase at pilot scale. Platelet size increased from 120 nm at bench to 177 nm and 165 nm at pilot scale and industrial scale, respectively. Overall this paper shows that the increase in scale by almost  $2000\times$  does not impact on the overall product quality which is an excellent indicator that continuous hydrothermal synthesis is a route for nanomaterials synthesis.



TOP: SEM images of bench (a), pilot (b) and industrial (c) scale LDH samples.. BOTTOM: TEM images of bench (a), pilot (b) and industrial (c) scale LDH samples.

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