**ABSTRACT**

Pristine and Co‐doped LiMnPO4 have been synthesized by the sol‐gel method using glycine as a chelating agent and the carbon composites were obtained by the wet ball mill method. The advantage of this method is that it does not require an inert atmosphere (economically viable) and facilitates a shorter time for synthesis. The LiCo0.09Mn0.91PO4/C nanocomposites exhibit the highest coulombic efficiency of 99 %, delivering a capacity of approximately 160 mAhg−1 and retain a capacity of 96.3 % over the investigated 50 cycles when cycled between 3–4.9 V at a charge/discharge rate of 0.1 C.