Journal Name

SUPPORTING INFORMATION

Remarkable lowering in the synthesis temperature of $LiMn_2O_4$ from citrate solution-gel synthesis facilitated by ethanol

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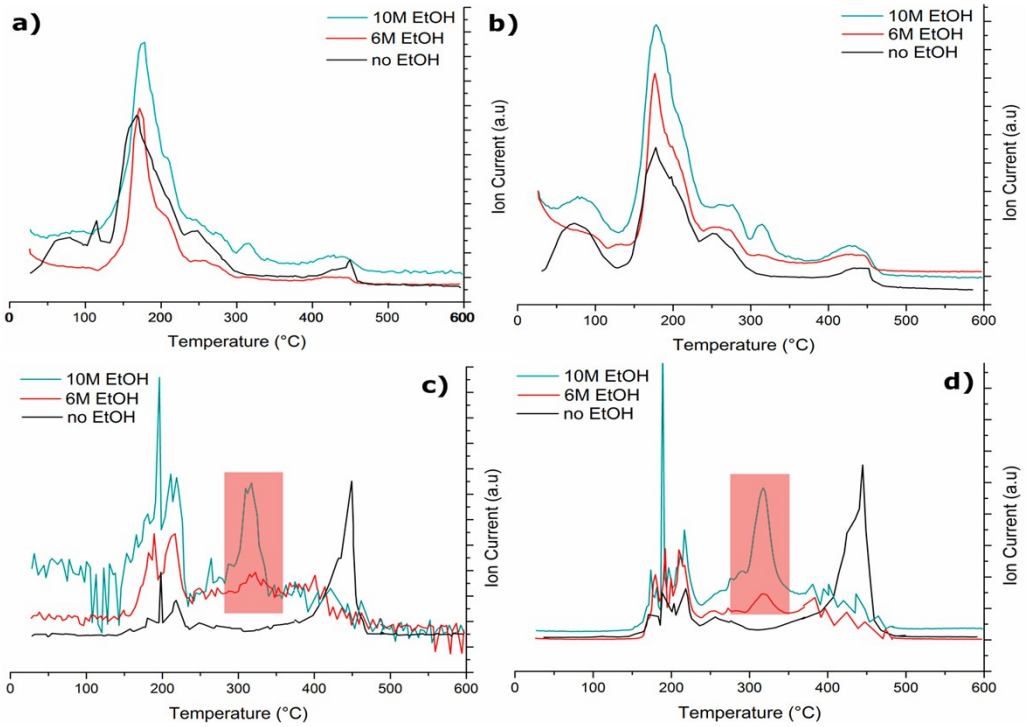

Figure S1: MS profiles of the citrate-Mn^{2+},Li^+ precursor gels with different amount of ethanol, dried at 60°C, recorded at a heating rate of 10°C/min. Ions with a) m/z 17 (OH^+, $NH_3^{+\cdot}$) and b) m/z 18 ($H_2O^{+\cdot}$, NH_4^+) are fragments related to water and ammonia. Ions with c) m/z 22 (CO_2^{++}), d) m/z 44 ($CO_2^{+\cdot}$) are fragments related to the carboxylate groups. Only the most relevant fragments are shown. Note that each sub-figure has its own Ion current scale.

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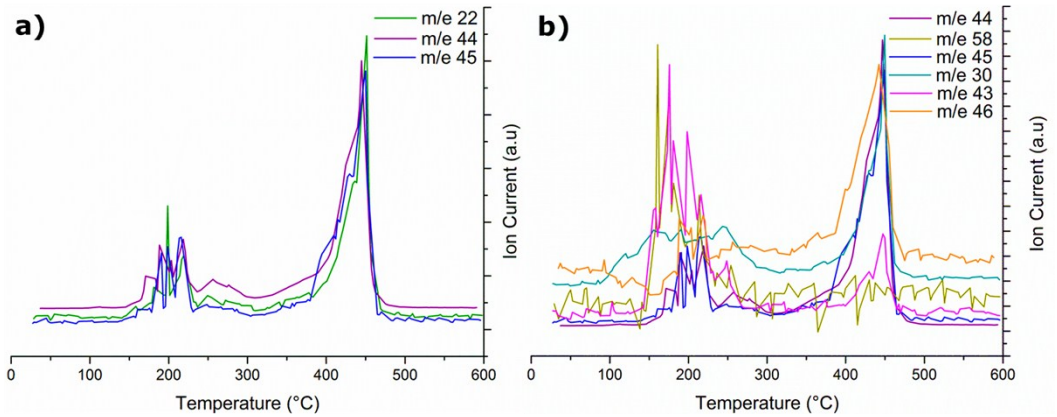

Figure S2: MS profiles of the citrate-Mn^{2+},Li^{+} precursor gel without ethanol dried at 60°C, recorded at a heating rate of 10°C/min: a) fragments related to the carboxylate groups, b) fragments related to the citrate's skeleton. Only the most relevant fragments are shown and cited in the article. Note that each sub-figure has its own Ion current scale.

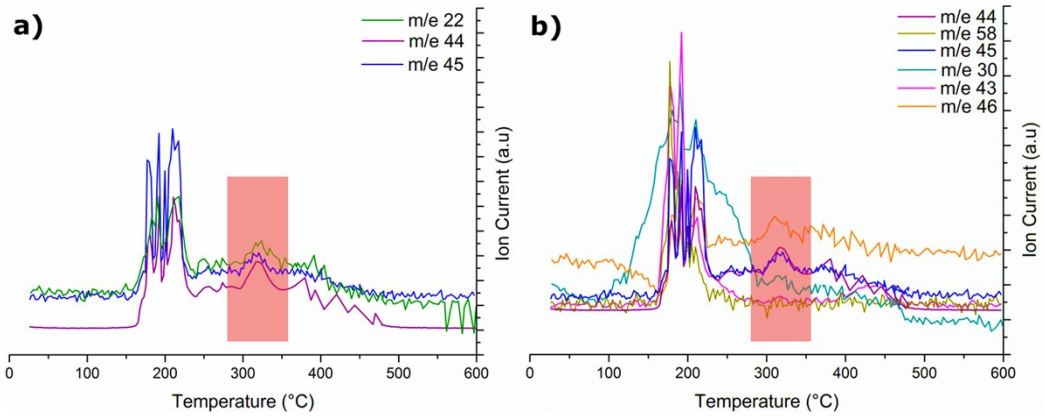

Figure S3: MS profiles of the citrate-Mn^{2+},Li^{+} precursor gel with 6M ethanol final concentration in solution, dried at 60°C, recorded at a heating rate of 10°C/min: a) fragments related to the carboxylate groups, b) fragments related to the citrate's skeleton. Only the most relevant fragments are shown and cited in the article. Note that each sub-figure has its own Ion current scale.

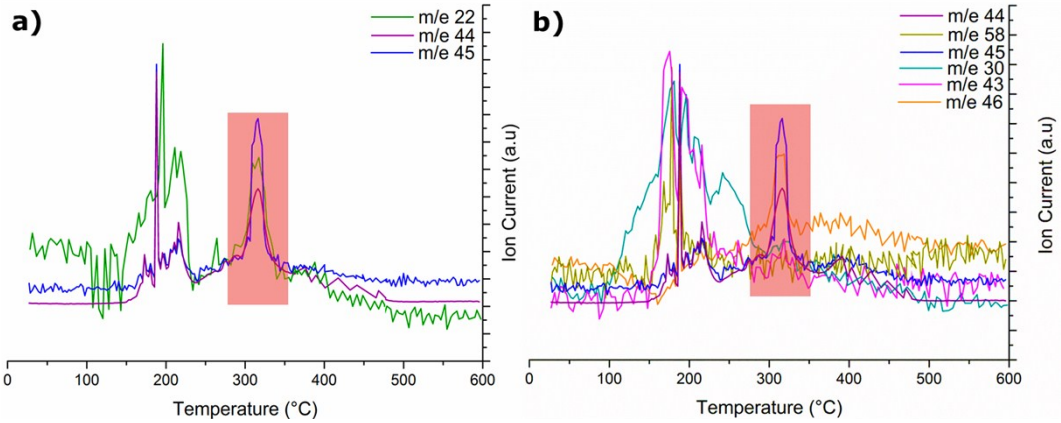

Figure S4: MS profiles of the citrate-Mn^{2+},Li^{+} precursor gel with 10M ethanol final concentration in solution, dried at 60°C, recorded at a heating rate of 10°C/min: a) fragments related to the carboxylate groups, b) fragments related to the citrate's skeleton. Only the most relevant fragments are shown and cited in the article. Note that each sub-figure has its own Ion current scale.

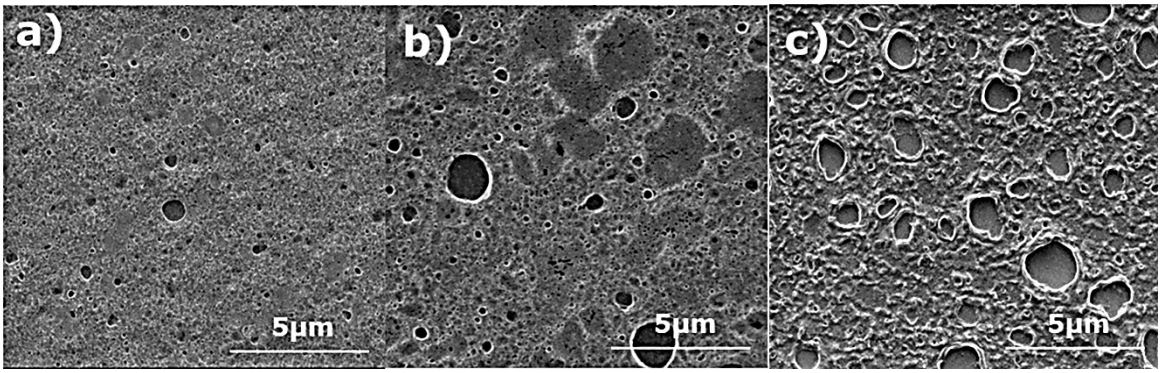

Figure S5: SEM pictures of films deposited on Si/SiO_2 from precursor: a) without ethanol, b) with 6M ethanol final concentration in solution, c) with 10M ethanol final concentration in solution. Films were therefore annealed at: a) 450˚C, b) 350˚C and c) 250˚C in dry air.