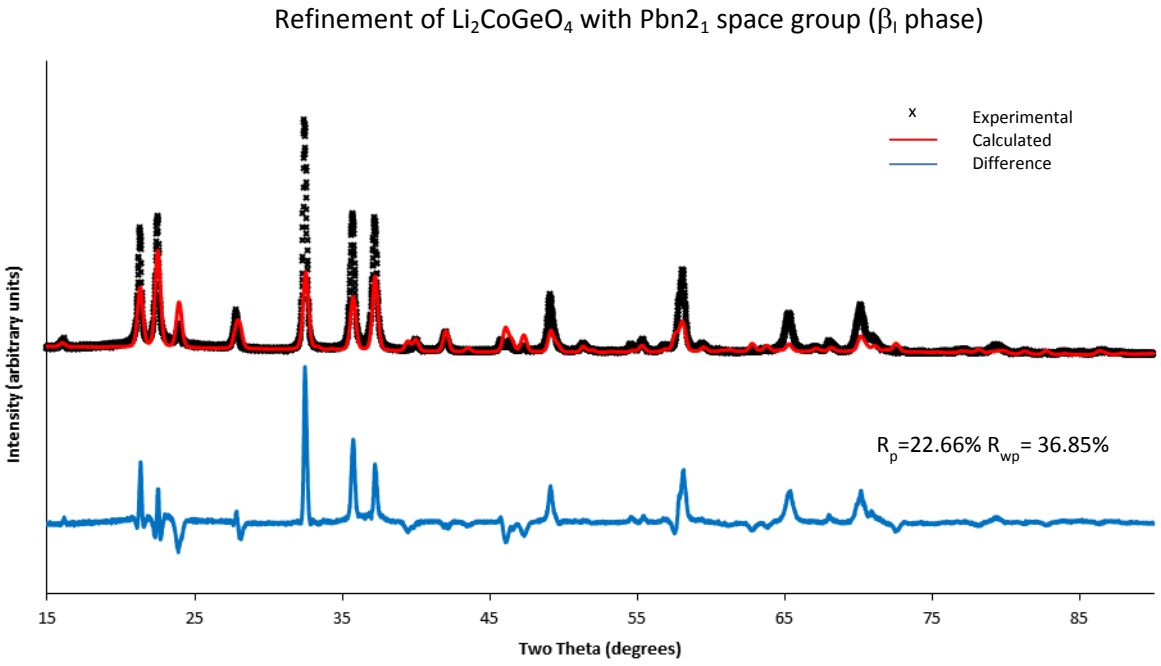
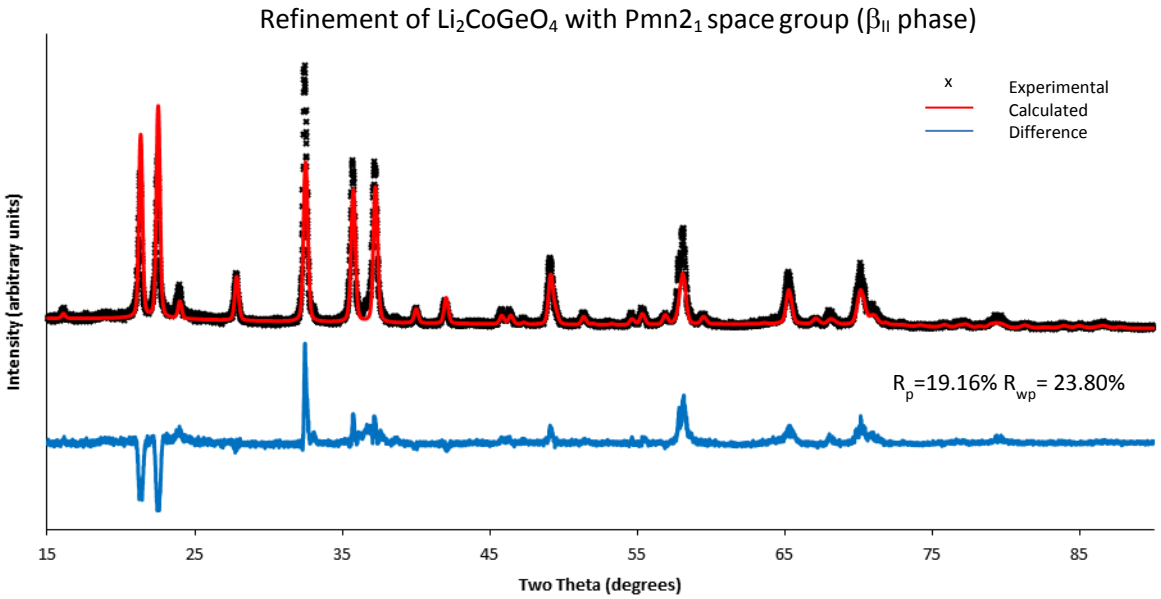
Electronic Supplementary Material (ESI) for Journal of Materials Chemistry A.

ELECTRONIC SUPPLEMENTARY INFORMATION

S1. XRD Refinement using different space groups





Refinement of Li_2CoGeO_4 with $P2_1/n$ space group (γ_0 phase)

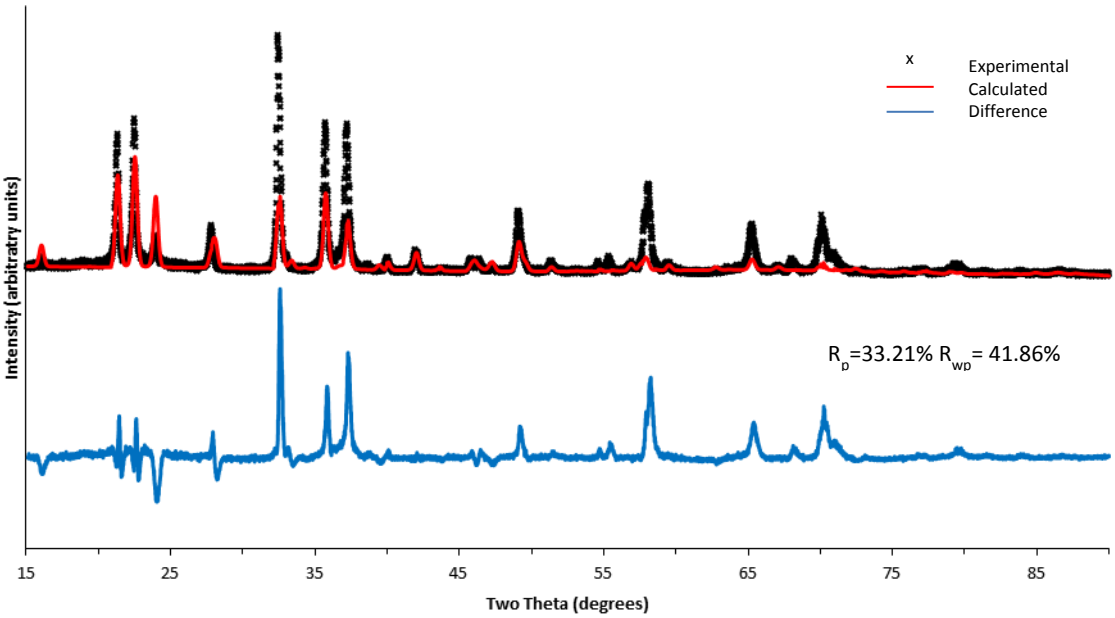


Figure S2. X-ray diffraction pattern comparison of hydro-LCG to simulated diffraction patterns of different LCG polymorphs from 15-90 ° two theta.

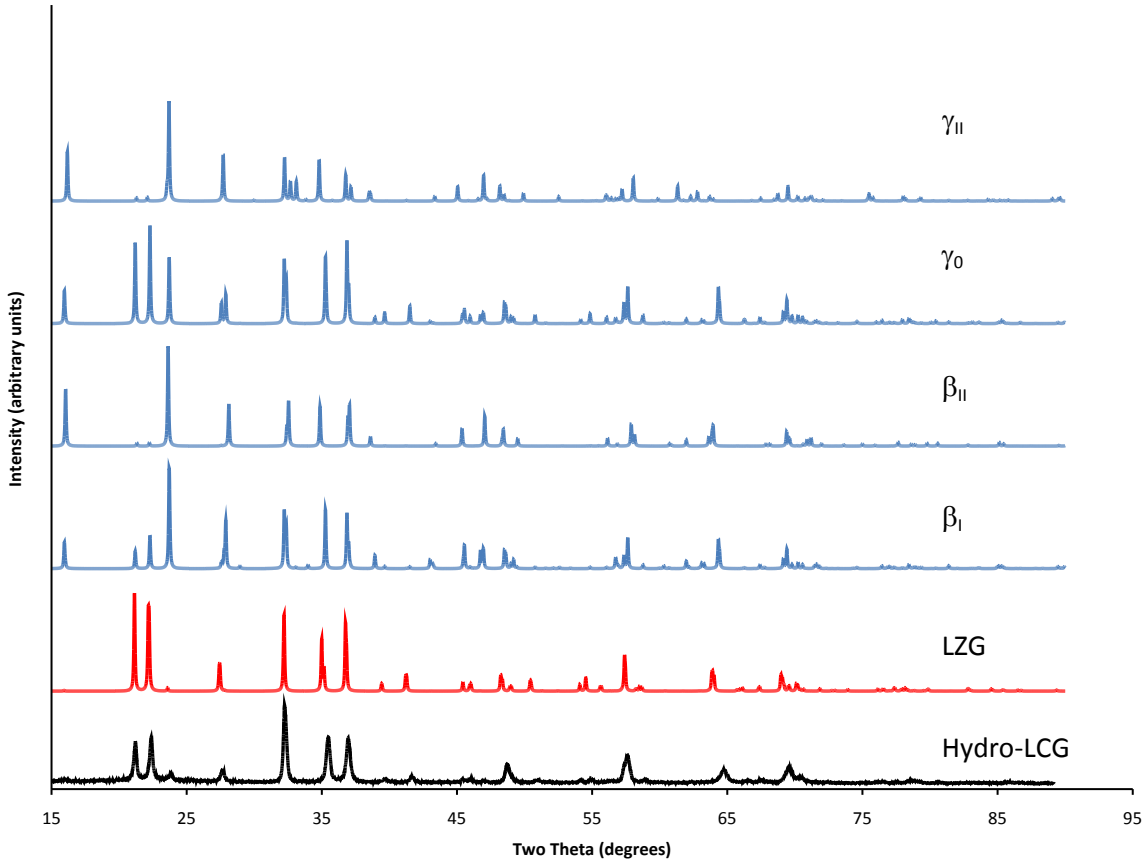


Figure S3. Table of simulated stabilization energies for LCG in different polymorph structures relative to LZG polymorph

Space Group (polymorph)	Calculated Energy Relative to LZG Polymorph (meV)
$P2_1/n$ (γ_0)	69
Pmna (γ_{II})	244
$Pmn2_1$ (β_{II})	89
$Pbn2_1$ (β_I)	28

Figure S4. Cyclic voltammagrams at a 1 mVs^{-1} scan rate for (a) hydro-LCG and (b) Co_3O_4 as well as a 10 mVs^{-1} scan rate for (c) hydro-LCG and (d) Co_3O_4 in 0.1 M NaOH. (Replica of Figure 5, but all data are plotted at same scale)