Supporting information for

$LaMTeO_6$ (M = Ga^{3+} and Mn^{3+}): the critical role of electronic configuration and cation ordering in crystal structures

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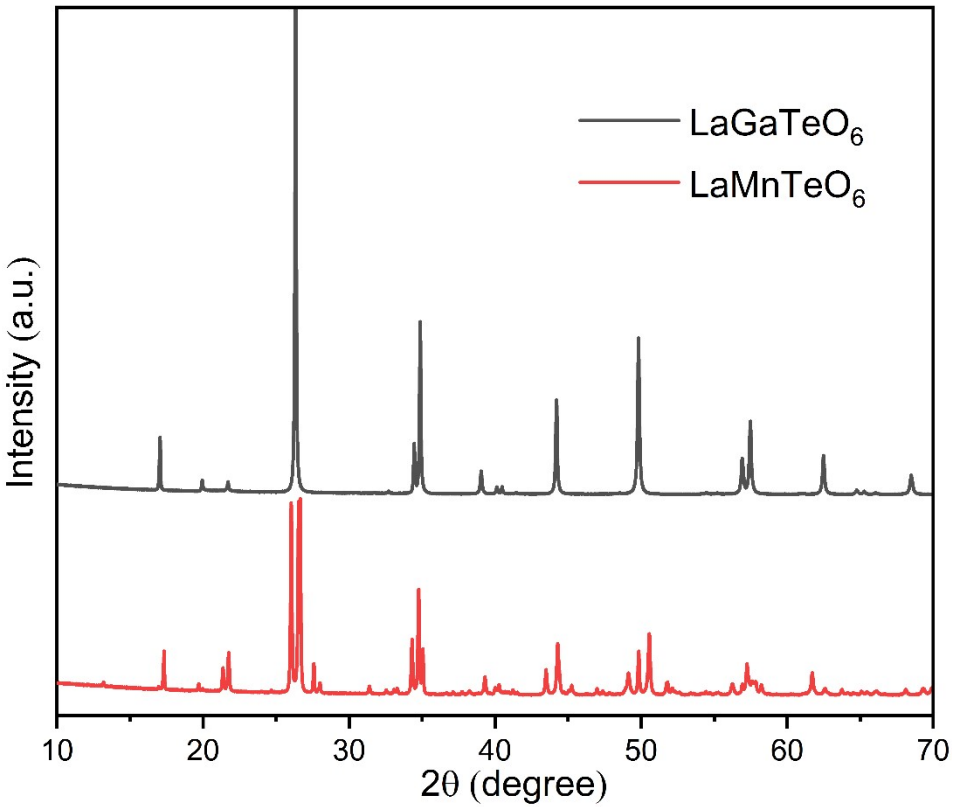

Fig. S1 High-resolution XRPD patterns for LaMTeO$_6$ with M = Ga^{3+} and Mn^{3+}.

Table S1. Selected interatomic bond distances for trigonal LaGaTeO$_6$.

bond	length (Å)
La-O1 × 6	2.413(2)
Ga-O1 × 6	1.980(2)
Te-O1 × 6	1.972(2)

Table S2. Selected interatomic bond distances for monoclinic $LaMnTeO_6$.

bond	length (Å)
La-O1	2.494(8)
La-O2	2.489(8)
La-O3	2.373(8)
La-O4	2.41(1)
La-O5	2.386(8)
La-O6	2.53(1)
<La-O>	2.446
Mn-O1	2.017(8)
Mn-O2	1.868(8)
Mn-O3	1.909(9)
Mn-O4	2.10(1)
Mn-O5	2.09(1)
Mn-O6	2.004(7)
<Mn-O>	1.997
Te-O1	1.940(7)
Te-O2	2.042(8)
Te-O3	2.044(9)
Te-O4	1.944(7)
Te-O5	1.94(1)
Te-O6	1.88(1)
<Te-O>	1.964