SUPPLEMENTARY DATA:

Realization of predicted exotic materials: The burden of proof

Supplementary S1: Methods

Convex hull calculations: For the Bi-O system

the Ba-Bi system

For

Supplementary section S3: Spontaneous formation of Bi vacancy in Ba_4Bi_3 resulting in the splitting of the Dirac cone in Ba_4Bi_3

Figure S2.

Supplementary section S4: Energy stabilization by various magnetic arrangements in $\mbox{CuBi}_2\mbox{O}_4$

Table SI

	Magnetic	Relative total
Space Group	configuration	energy (meV/f.u.)

Supplementary section S5: n-type doping destroying excited state band inversion in \mbox{BaBiO}_3

Figure S3.

References

